# Fake news on drugs: post-truth and misinformation

# Fake news sobre drogas: pós-verdade e desinformação

#### Heitor Pasquima

https://orcid.org/oooo-ooo2-4994-7399 E-mail: hpasquim@gmail.com

#### Marcos Oliveirab

https://orcid.org/0000-0002-1000-2902 E-mail: marcosflavioifg@gmail.com

#### Cássia Baldini Soaresc

https://orcid.org/0000-0002-8457-3775 E-mail: cassiaso@usp.br

<sup>a</sup>Universidade Federal de Goiás. Faculdade de Educação Física e Dança. Goiânia, GO, Brasil.

bInstituto Federal de Goiás. Departamento de Áreas Acadêmicas. Aparecida de Goiânia, GO. Brasil.

<sup>c</sup>Universidade de São Paulo. Escola de Enfermagem. Departamento de Enfermagem em Saúde Coletiva. São Paulo, SP, Brasil.

#### **Abstract**

The aim of this article is to analyze the discourses about illicit drugs in internet publications whose content was identified as false in fact-checking platforms. This is a qualitative study based on discourse analysis procedures. From an internet search, 85 false news articles about drugs were selected. The analysis indicates that negative and alarmist approaches are the most common. The tragic outcome most frequently cited was death. Other negative outcomes were cited, such as: robberies, turning into a zombie, cancer, prostitution, sexually transmitted diseases, and even cannibalism. Three units of discourse were identified: satire about drugs with the potential to deceive; 'drughead' as a category of accusation; and an epidemic of illicit drug use. As a background to the problematization of the fake news phenomenon, we question conceptions that advocate the impossibility of understanding the real world and allow the academic/scientific knowledge to be equated with personal convictions, reinforcing irrational subjectivities that tend to strengthen the reception and spread of fake news in the most varied fields of knowledge.

**Keywords:** Collective Health; Drug Users; Communication in Health; Qualitative Research.

#### Correspondence

Heitor Pasquim

Av. Esperança, s/n, Chácaras de Recreio Samambaia, Goiânia, GO, Brasil. CEP 74690-900.



#### Resumo

O objetivo deste artigo é analisar os discursos sobre drogas em publicações da internet cujo conteúdo foi identificado como falso em plataformas de checagem de dados. Trata-se de estudo de abordagem qualitativa, que seguiu procedimentos de análise do discurso. A partir de pesquisa na internet, selecionaram-se 85 notícias falsas sobre drogas. A análise indica que o tom negativo e alarmista é o mais comum. O desfecho trágico mais citado foi a morte. Outros desfechos negativos também foram lembrados, como: assalto, transformar-se em zumbi, câncer, prostituição, infecções sexualmente transmissíveis e até mesmo canibalismo. Foram identificadas três unidades de discurso: sátira sobre drogas com potencial para enganar; drogado como categoria de acusação; e epidemia das drogas ilícitas. Como pano de fundo da problematização acerca do fenômeno fake news, questionam-se concepções que advogam a impossibilidade da compreensão do real, abrindo espaço para que o conhecimento acadêmicocientífico seja equiparado a convicções pessoais, reforçando subjetivismos e irracionalismos que tendem a fortalecer a recepção e a proliferação de fake news nos mais variados campos do conhecimento.

Palavras-chave: Saúde Coletiva; Usuários de Drogas; Comunicação em Saúde; Pesquisa Oualitativa.

#### Introduction

The fake news phenomenon became popular in the U.S. presidential election. This neologism, resumed in the 2016 elections, was elected the "word of the year 2017" by the British dictionary Collins ('Fake news'..., 2017).

The growing eminence of fake news in the media evidences the need to understand them. Allcott and Gentzkow (2017) define fake news as intentional and demonstrably false news, which could induce the reader into error. For Paula, Silva and Blanco (2018), fake news relates to the theme of post-truth, which, in turn, was elected the word of the year in 2016 by the Oxford dictionary. Post-truth may explain the phenomenon in which objective facts have less power of persuasion and formation of public opinion in the face of personal beliefs (Harsin, 2018).

Derakhshan and Wardle (2017) identified seven types of fake news: satire or parody; false connection; misleading content; false context; imposter content; manipulated content; and fabricated content. In this sense, not every fake news creates new, totally false content, which makes it difficult to verify the veracity of information.

Fact-checking itself is not immune to distortions. After all, the definition of what is true, lie, inaccurate, exaggerated or unsustainable information is also crossed by interests and convictions.

Some institutional responses have been organized against fake news, for example, the publication of tips to help people identify virtual rumors, such as the diagram of the International Federation of Library Associations and Institutions (IFLA, 2019), translated into 41 languages, as well as the formation of collaborative fact-checking networks. However, to identify and scotch every photo, video and news seems a herculean task, even if accompanied by a massive process of digital literacy.

Although consciousness-raising measures are in prominence recently, fake news is not something new, as rumors and scams have always been in traditional media (Count, 2018). Its rapid spread and the relative ease of access by wide strata of the population is new, given the new media's power of reach.

Global growth and the direct influence of fake news in public opinion and everyday behavior have concerned various sectors of society. This is so serious that it was associated with the drop in vaccination coverage rates worldwide (Jervelund, 2018), which led Brazilian Ministry of Health to create its own channel to combat "fake news on health" in 2018.

Fake news content that directly or indirectly addresses health and drugs can vary a lot, covering a broad spectrum between sensationalism and social panic.

Noticeably, in the area of drugs, the genesis of U.S. prohibitionism was also based on dissemination of questionable research and information in the first decades of the 20<sup>th</sup> century (Hari, 2018). Because of the many stigmas surrounding drug use (Baratta, 1994), news related to it seems especially susceptible to the proliferation of false and prejudiced information.

This study aims to analyze drug discourses in online publications whose content has been identified as false on data verification platforms.

#### Method

This is a qualitative study that used critical discourse analysis (Meurer, 2005), which understands a discursive occurrence as text, as a manifestation of discourses, and as a social practice.

According to Bakhtin (2011), the discourse unit is the utterance, not a phrase or a clause disconnected from social totality. As a concrete process,

communication comprises active interlocutors, who, inserted in the reality, turn to the response and to the other's discourses.

Therefore, starting from critical discourse analysis studies, this article comprises fake news as a mediation of reality. That is, it expresses the speaking subjects' intentionality and their social positioning, because it is full of ideology.

Two fact-checking agencies were used to investigate news, namely *E-farsas.com* and *Boatos. org.* Both compile and elucidate all kinds of rumors and fake news circulating on social networks. They are the largest active agencies specialized in fact-checking in Brazil, disregarding *Apublica.org*, which exclusively investigates public administration.

To ensure scientific rigor for this research, exhaustive searches were carried out. We tried to compose the empirical corpus with broad search of news on these fact-checking sites. In December 2018, the news was surveyed on each platform, using the words: droga (drug); maconha (marijuana); álcool (alcohol); cocaína (cocaine); crack; cerveja (beer); cigarro (cigarette). The pieces of news were selected after reading title, subtitle and full text. Those who did not address the themes of drug, vaccines and other medicines used for therapeutic purposes were excluded from the corpus.

Initially, we only used the *E-farsas.com* portal to search news. For presentation purposes, each news was numbered, adding the letter "f".

Table 1 - Selected articles from the E-farsas.com portal

#	Title of the article
fı	Misturar cerveja com limão mata! (Mixing beer with lemon can kill you!)
f2	Relato da falecida ex-Paquita Patrícia do programa da XUXA! (Report of the deceased former Paquita Patrícia of XUXA's program!)
f3	Vídeo de animais bêbados com marula é verdadeiro? (Is the video of animals drunk with marula true?)
f4	Aconteceu no Barra Shopping (droga Burundanga ou escopolamina) (It happened at Barra Shopping (Burundanga or scopolamine drug)
f5	SPTV faz matéria com estudantes brisados! Será? (SPTV news publishes a feature with stoned students! Is it true?)
f6	Ator Gary Dourdan do seriado CSI consumido pelas drogas! (Gary Dourdan, "CSI", ruined by drugs!)
f7	É verdade que a maconha ajuda a curar o ebola? (Is it true that marijuana helps cure Ebola?)
f8	37 morreram de overdose no Colorado após legalização da maconha! (37 died from an overdose in Colorado after marijuana legalization!)

# Table 1 - continuation

Table I -	continuation
#	Title of the article
f9	Brasileiro executado na Indonésia ganha estátua no Rio de Janeiro! (Brazilian man executed in Indonesia gets a statue in Rio de Janeiro!)
fio	Pílula faz gari virar técnico da Receita Federal! Será? (Pill makes street cleaner become Federal Revenue technician! Is it true?)
fii	Neymar é flagrado fumando maconha! Será verdade? (Neymar is spotted smoking marijuana! Is it true?)
fı2	A Souza Cruz vai lançar o cigarro de maconha Marley? (Is Souza Cruz industry going to release Marley's marijuana cigarette?)
fı3	Neurofos: O golpe da pílula que te deixa mais inteligente! (Neurofos: The pill that makes you smarter fraud!)
f14	Arlindo Cruz é preso com cocaína no Rio de Janeiro! (Musician Arlindo Cruz is arrested with cocaine in Rio de Janeiro!)
f15	Festinha regada a drogas com atores da Globo! Será? (Globo TV celebs spotted in party full of drugs! Is it true?)
fı6	Jovens incendeiam carro após acenderem lança perfume! (Young people set a car on fire after lighting lança-perfume drug!)
fı7	Nova droga "Docinho" está se espalhando pelas escolas? (Is new drug "Docinho" spreading in schools?)
fı8	Adriano Imperador virou mendigo na favela por causa das drogas? (Has Adriano, the Emperor, become a beggar in the favela because of drugs?)
f19	A NASA vai pagar 70 mil pra voluntários fumarem maconha? (Is NASA going to pay volunteers R\$ 70.000 to smoke marijuana?)
f20	Estudo revelou que miojo é pior pra saúde do que maconha? (Study revealed that instant noodle is worse for health than marijuana?)
f21	Russo bebeu demais, ressuscitou no necrotério e voltou pro bar? (Russian man drank too much, resurrected in the morgue and returned to the bar?)
f22	Senador com saquinho de cocaína durante impeachment de Dilma? (Senator with cocaine bags during Dilma's impeachment?)
f23	Consumo da bebida Skol Beats causa câncer? (Does Skol Beats cause cancer?)
f24	Droga que mata em 3 dias chegou no Brasil? (Has drug that kills in three days arrived in Brazil?)
f25	Nova droga é usada nos olhos e mata de overdose! Será verdade? (New drug is used in the eyes and kills with overdose! Is it true?)
f26	Mineiro coloca boca de fumo à venda! Será verdade? (Minas Gerais man puts drug house for sale! Is it true?)
f27	Alcoólatra morre após beber água pensando que era cachaça! Será verdade? (Alcoholic dies after drinking water thinking it was cachaça! Is it true?)
f28	O Burger King vai imprimir notas no papel de seda durante a Marcha da Maconha? (Will Burger King print invoices on silky paper during Marijuana March?)
f29	Um casal gay foi flagrado ensinando o filho adotivo a fumar e a beber? (Was a gay couple caught teaching their adopted son to smoke and drink?)
f30	A Polícia capturou uma mulher zumbi sob efeitos da droga Cloud Nine? (The police captured a zombie woman under the effects of Cloud 9 drug?)
f3ı	Pirulito Energy contém energético e quase causou a morte de crianças? (Energy Lollipops contain energy drink and almost cause the deaths of children?)
f32	Marielle Franco foi esposa do Marcinho VP? Era do Comando Vermelho? (Was Marielle Franco Marcinho VP's wife? Was she in the drug gang Comando Vermelho?)
f33	Imagens mostram médica antes e depois do vício no crack! Será verdade? (Footage shows doctor before and after crack addiction! Is it true?)

#### Table 1 - continuation

#	Title of the article
f34	Um menino ficou com a boca cheia de feridas após consumir a nova droga Morango Rápido? (A boy got his mouth full of wounds after consuming the new drug Strawberry Quick?)
f35	Cogumelos alucinógenos causaram distúrbio grave em uma pizzaria? (Psilocybin mushrooms caused severe disturbance in a pizzeria?)
f36	Gustavo Perrella, do helicóptero com cocaína, foi nomeado para o Ministério do Esporte de Bolsonaro? (Was Gustavo Perrella, famous for the helicopter with cocaine, appointed to Bolsonaro's Ministry of Sport?)
f37	Dois coroinhas foram presos por colocar maconha no incensário da igreja? (Were two altar boys arrested for putting marijuana in the church censer?)
f38	Propaganda antiga dos cigarros Winston falava sobre benefícios para as grávidas? (Winston's old cigarette advertisement talked about benefits for pregnant women?)

After this first selection, we started another news survey, using the *Boatos.org* platform, which were also numbered, adding the letter "b".

Table 2 - Selected articles from the Boatos.org portal

#	Title of the article
bı	Boato aponta que Aécio Neves seria usuário de cocaína (Rumor points out Brazilian politician Aécio Neves as a cocaine user)
b2	Hoax – Ex-paquita Patrícia morre aos 17 anos de aids após se envolver com drogas (Hoax—Former paquita Patrícia dies at age 17 after getting involved with drugs)
b3	Notícia falsa: overdose de maconha matou 37 pessoas no Colorado (Fake news: marijuana overdose killed 37 people in Colorado)
b4	Boato aponta que Monsanto quer plantar maconha transgênica no Uruguai (Rumor points out Monsanto wants to plant transgenic marijuana in Uruguay)
b5	Balela: maconha pode ser liberada para plantio no Brasil em 2014 (Sham: marijuana may be released for planting in Brazil in 2014)
b6	Notícia de que Marlboro vai lançar cigarro de maconha é falsa (News that Marlboro will release marijuana cigarette is fake)
b7	Pegadinha: Aplicativo LIVR só pode ser acessado por bêbados (Prank: LIVR app can only be accessed by drunks)
b8	Mentira: Dilma diz que consumo de cocaína mostra crescimento econômico (Bullshit: Brazilian President Dilma says cocaine use shows economic growth)
b9	Lenda: Branca de Neve e os Sete Anões leva mensagem sobre cocaína (Myth: Snow White and the Seven Dwarfs takes message on cocaine)
bıo	História falsa: PSDB quer processar Heineken por usar estrela vermelha (False story: PSDB party wants to sue Heineken for using red star)
bıı	Foto falsa: Gary Dourdan, ator de CSI, perde a luta contra o crack (Fake photo: Gary Dourdan, "CSI", loses fight against crack)
bı2	Boato: Aécio Neves concede entrevista bêbado ao Estadão (Rumor: Drunk, Aécio Neves grants an interview to Estadão newspaper)
bıз	Lenda: Lucy in The Sky With Diamonds é a canção do LSD (Myth: Lucy in The Sky With Diamonds is a LSD song)
bı4	Balela: fumar maconha pode ajudar na cura do vírus ebola (Sham: smoking marijuana can help healing Ebola virus)
bı5	Colocar limão no copo de cerveja é fatal (Putting lemon in the beer glass is fatal)
bı6	Bandidos usam droga burundanga (escopolamina) para assaltos (Bandits use burundanga (scopolamine) for robberies)

# Table 2 — continuation

	continuation
#	Title of the article
b17	Projeto de legalização da maconha de Jean Wyllys é arquivado, diz hoax (Marijuana legalization project is shelved, says hoax)
bı8	Usuários de drogas podem ter 10% de vagas em concurso, diz informação falsa (Drug users may have 10% slots in public service, says false information)
bı9	Arlindo Cruz é preso por porte de cocaína, afirma boato (Arlindo Cruz arrested for cocaine possession, says rumor)
b20	NASA encontra planeta coberto de maconha (NASA finds marijuana-covered planet)
b21	Fumar narguilé é como fumar 100 cigarros? (Is smoking hookah like smoking 100 cigarettes?)
b22	Festa de fim de ano da Globo tem Tonico Pereira, drogas e prostitutas, diz boato (Globo's year-end party has the actor Tonico Pereira, drugs and prostitutes, says rumor)
b23	Adolescentes usam absorventes para ficarem bêbados (Teenagers use tampons to get drunk)
b24	so Cent emagreceu após fumar maconha (50 Cent lost weight after smoking marijuana)
b25	Cigarro faz fumaça colorida como um arco-íris (Cigarette makes colored smoke like a rainbow)
b26	Docinho: nova droga está chegando às escolas (Docinho: new drug is coming to schools)
b27	Cloud Nine, droga que causa canibalismo, chega ao Brasil (Cloud 9, a drug that causes cannibalism, gets to Brazil)
b28	Senador é flagrado com cocaína em sessão do impeachment (Senator is spotted with cocaine in impeachment session)
b29	Ivete Sangalo é flagrada cheirando cocaína em vídeo (Singer Ivete Sangalo spotted smelling cocaine on video)
p30	Lei Seca será revogada! É o fim do bafômetro (Brazilian Dry Law will be repealed! It is the end of breathalyzer)
рзі	Adriano Imperador, viciado em drogas, virou mendigo na praia (Soccer player Adriano, the Emperor, drug addict, became a beggar in the beach)
b32	Beber vinagre altera resultado do teste do bafômetro (Drinking vinegar changes breathalyzer test result)
b33	Filho de casal gay bebe cerveja e fuma cigarro em vídeo (Gay couple's son drinks beer and smokes cigarette on video)
b34	Filho de Bonner e Fátima dirigia bêbado e sem habilitação (Son of William Bonner and Fátima Bernardes—Brazilian journalists—drunk-driving and without a license)
b35	Droga que mata em três dias chega ao Brasil (Drug that kills in three days arrives in Brazil)
b36	Chaveiro cachimbo colorido é a nova moda para consumo de drogas (Colorful pipe keychain is the new trend for drug use)
b37	Estão oferecendo papel com droga para cheirar no Walmart (Walmart is offering paper with drugs to smell)
b38	Budweiser falsificada é fabricada por chineses e vendida no Brasil (Fake Budweiser is manufactured by Chinese and sold in Brazil)
b39	Fábrica clandestina de Heineken falsificada é descoberta (Fake Heineken clandestine factory discovered)
b40	Dr. Paulo Ubiratan dá entrevista sobre saúde a TV de Porto Alegre (PhD Paulo Ubiratan grants a TV interview on health in Porto Alegre, Brazil)
b41	Droga Manga Rosa chegou ao Brasil, parece açúcar e é mortal (Drug Manga Rosa arrived in Brazil, looks like sugar and is deadly)
b42	Nova droga DOFE é usada nos olhos e vendida nas raves (New drug DOFE is used in the eyes and sold in raves)
b43	Burger King vai imprimir nota fiscal em seda para Marcha da Maconha (Burger King will print silky invoices for Marijuana March)
b44	Pílula zumbi chegou ao Brasil: vídeo mostra efeito da droga em mulher (Zombie pill arrived in Brazil: video shows effect of drug on woman)
b45	Primo de Marcelo Freixo, Gustavo, deu drogas e estuprou alunos (Brazilian politician Marcelo Freixo's cousin, Gustavo, gave drugs and raped students)
b46	Caminhão do deputado Romanelli foi apreendido com drogas (Congressman Luiz Claudio Romanelli's truck apprehended with drugs)

Table 2 - continuation

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#	Title of the article
b47	Dirigir alcoolizado é crime com pena de 5 a 8 anos de prisão, diz Lei 13.546 (Drunk-driving is a crime with a sentence of 5 to 8 years in prison, says Law 13,546)
b48	Não beba Skol! Marca de cerveja está contaminada e causando doenças (Don't drink Skol! Beer brand is infected and causing diseases)
b49	Nova droga Strawberry Quick está sendo distribuída em escolas (New drug Strawberry Quick is given in schools)
b50	Rússia libera uso de maconha e cocaína em estádios na Copa do Mundo (Russia allows marijuana and cocaine use in stadiums at the World Cup)
b51	Governo está pagando Bolsa Crack de R\$ 1.500 para todos os viciados (Government is paying R\$ 1,500 "Crack Assistance" for all addicts)
b52	Droga e armas são achadas em acampamento dos Sem Terra em Descalvado (Drugs and weapons are found in Landless Workers' Movement (MST) camp in Descalvado, SP, Brazil)
b53	Balas de ursinho com droga levam crianças ao óbito no Brasil (Gummy bear with drugs leads children to death in Brazil)
b54	Lula teve crise de abstinência de álcool na sede da PF e quase morreu (Brazilian former President Lula experienced an alcohol withdrawal syndrome at Federal Police headquarters and almost died)
b55	Cerveja Heineken patrocina briga de cães em rinha na Mongólia (Heineken sponsors dog fight in Mongolia)
b56	Bruno Maranhão do MST foi preso em flagrante com armas e drogas (MST's Bruno Maranhão was caught in the act and arrested with weapons and drugs)
b57	Governo paga Bolsa Usuário de R\$ 1.000 pelo resto da vida para drogados (Government pays R\$ 1,000 "User's Assistance" for the entire drug addicts' lives)
b58	Atestado médico para quem estiver com ressaca é aprovado por conselho (Paid sick leave for those with hangovers is approved by Council)
b59	Bolsonaro é flagrado com camisa do PT e cigarro de maconha em foto (Bolsonaro is spotted with Workers' Party (PT) shirt and marijuana cigarette in photo)
b60	Propaganda do cigarro Winston recomenda que mulher fume durante a gravidez (Winston cigarette advertisement recommends woman smoke during pregnancy)
b61	João Amoêdo diz que é a favor do aborto e da descriminalização das drogas (João Amoêdo, Brazilian presidential candidate, says he is pro-abortion and drug decriminalization)
b62	Vídeo mostra goleiro Alisson, da seleção, com três mulheres e usando cocaín (Video shows goalkeeper Alisson, from the Brazilian team, with three women and using cocaine)
b63	Nova droga chamada Morango Rápido está sendo distribuída nas escolas (New drug Strawberry Quick is given in schools)
b64	Cerveja puro malte gelada mata células cancerígenas e cura câncer (Cold pure malt beer kills cancer cells and cures cancer)
b65	Gustavo Perrella é nomeado como ministro do Esporte de Bolsonaro (Gustavo Perrella is appointed as Bolsonaro's Minister of Sport)
b66	Paulo Guedes diz que não dará dinheiro para Carnaval, Parada Gay e marchas (Paulo Guedes, Brazilian Minister of Economy, says he will not give money to Carnival, Gay Parade and marches)
b67	Médica usuária de crack é filmada vivendo nas ruas (Doctor crack user is recorded living on the streets)

We selected 105 articles that addressed the drug theme, 38 from *E-farsas.com* portal and 67 from *Boatos.org*. After reading all the articles, 20 similar checked contents were identified between both portals. They were not excluded from the analysis because they present different comments, versions or dates. However, they will be grouped, adding the symbol "~",

to be more easily identified when the analysis refers to fake news and not to the checking article. These are:  $f_1\sim b_1$ ;  $f_2\sim b_2$ ;  $f_6\sim b_1$ ;  $f_7\sim b_1$ 4;  $f_8\sim b_3$ ;  $f_14\sim b_1$ 9;  $f_15\sim b_2$ 2;  $f_17\sim b_2$ 6;  $f_18\sim b_3$ 1;  $f_22\sim b_2$ 8;  $f_23\sim b_4$ 8;  $f_24\sim b_3$ 5;  $f_25\sim b_4$ 2;  $f_28\sim b_4$ 3;  $f_29\sim b_3$ 3;  $f_30\sim b_4$ 4;  $f_33\sim b_6$ 7;  $f_34\sim b_6$ 3;  $f_36\sim b_6$ 5;  $f_38\sim b_6$ 0. Subtracting the number of similar pieces of news from the total, we found 85 pieces on drugs.

After selecting these pieces of news, we decided, for convenience, to use only these two fact-checking portals. At this moment, all the pieces of news were carefully read. The reading was guided by a data extraction instrument, which, in turn, was organized into: information on the checking article year of publication; the drug mentioned; outcomes of drug use; targets of false information; action/prevention strategies; classification of the news; and emphasized excerpts.

To expose the research data, categories were listed *a posteriori* and analyzed from the perspective of collective health, which comprises the supply and demand of drugs as inherent to the historical-social process and, therefore, from the social determination involving individuals, families and classes in their different possibilities of social reproduction (Santos; Soares, 2013; Soares, 2007).

#### Results

The fact-checking articles accuse fake news of being: rumor; gossip; sham; false story; false

information; false photo; prank; lie; myth; bullshit; and hoax. Some report more than one version of the same fake news. This shows the difficulty of dealing with a dynamic phenomenon, capable of adapting news to appear believable.

To classify fake news, journalists linked to these agencies show the content investigated, try to compare the original source with others, relying on official references and experts. Nonetheless, most pieces of news do not have an easy-to-check source. Apparently, in many cases, the source and means of communication that share false information are merged. In this case, the communication channel legitimizes the fact without source. Means of communication assumedly jocular (national and international) were often used as a source for fake news, for example, Blog Joselito Muller, G17, MTVV - Maconha Torna Você Violento (Marijuana Makes You Violent), Diário Pernambucano, Sacizento, Olé do Brasil, The Daily Currant, Jornal VDD, among others.

Graph 1 shows a peak of fake news on drugs in 2014 and a growth trend by 2018.

25
20
15
10
2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

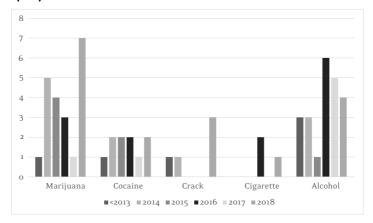
Graph I- Number of fake news on drugs per year of publication

The year 2014 was full of remarkable events for Brazilians. In the field of drugs, Marijuana March of São Paulo brought together thousands of people (Marcha da maconha..., 2014), and Bill No. 7,187/2014 was discussed in the House of Representatives, proposing the regulation of control, planting, cultivation, harvesting, production, acquisition, storage, commercialization and distribution of

marijuana and its derivatives. This context has generated public discussions and conflicts that may have influenced the production and proliferation of fake news.

Graph 2 quantifies drugs in the fake news selected, excluding those referring to the same fake news in both portals. It is noteworthy that not all of them specify the drug.

Graph 2 - Drug citations per year



The most frequent drug, with 22 citations, is a licit substance: alcohol. The most cited illicit drugs were marijuana and cocaine, with 21 and 11 citations, respectively. The low amount of fake news on crack (5) and cigarette (3) is notable.

According to the fake news, a 9 new drugs would have arrived in the country, they are: Focus X (f10), Neurofos (f13), *Docinho* (f17, b26), Cloud 9 (f30, b44, b27), *Manga Rosa* (b41), Dofe (f25, b42), Strawberry Quick (b49, f34, b63), Burundanga (f4, b16), and Krokodyl (f24, b35). According to the checking portals themselves, some of these drugs actually exist (e.g., Krokodyl and Burundanga), but they are rare, and reports on them have untrue information, which concurs with data presented by the *III Levantamento Nacional sobre o Uso de Drogas pela População Brasileira* (3<sup>rd</sup> National Survey on Drug Use by the Brazilian Population) (Bastos, 2017).

The negative and alarmist tone is the most common. The most cited tragic outcome was death (f1, b15, f2, b2, f8, b3, f24, b34, f25, b41, f27, f31, b40, b53). They also mentioned other negative outcomes, such as: robbery (f4, b16, b36); become a zombie (f30, b44); cancer (f23, b48); prostitution (f2, b2); sexually transmitted infections (f2, b2, b23); and cannibalism (b27).

In a smaller amount, some fake news reported "positive" outcomes for drug users, such as: slots in public service (b18); "crack assistance" (b51, b57); increased intelligence (f10, f13); Ebola cure (f7, b14); benefits of consumption for pregnant women (f38, b59); and cure of cancer (b64).

Five debunked pieces of news address changes in public drug policies: b5 points out that marijuana planting could be released in 2014; according to b17, the marijuana legalization project was shelved in 2015; b30 says Dry Law will be repealed because it causes more traffic accidents; b61 states that a Brazilian presidency candidate defends drug decriminalization; finally, b47 news alleges that the law had become even stricter for anyone caught drunk-driving. These publications report disinformation, and some seem part of a conservative strategy to discredit politicians and governments.

Other pragmatic information could be tips for damage reduction, if they were true. For example, the fake news that teaches how to escape breathalyzer using vinegar (b32), or the one that presents a new pipe for drug use (b36), or the right to paid sick leave for those who have a hangover (b58). However, they present information in a tone of denunciation or irony.

The fact-checking agencies do not always point to social networks where fake news originated or became viral. The most cited social network is Facebook (40 times), followed by websites and blogs (22 times) and WhatsApp (21 times).

Some news report market strategies to attract new users, such as colors and flavors (f17, b25, b26, f31, f34, b63, b41, b49, b53) or new forms of drug administration (f25, b42, b23, b36). The various reports with warnings involving young people and children (f5, f16, f17, b26, f29, b33, f31, f34, b62, f37, f34, b63, b23, b45, b49, b53) seem to sustain a risk discourse against individuals and groups considered vulnerable.

Some fake news bring action proposal in the form of requests to the reader. In this sense, they suggest that the (false) message be shared on social networks (f1, b15, f2, b2, f4, b16, f25, b41, f29, b32, f31, f34, b62, b29, b36, b46, b47, b52, b63), that children and friends be warned and closely monitored (b15, b25, b35, b48) and that they all say no to drugs (f23, b23).

The greatest individual targets of fake news were politicians, artists, athletes and celebrities or their families. In this case, the intention clearly seems to be to harm the image of a public person. In a smaller amount, certain social groups were also targeted, such as same-sex couples and young people. For the agencies, those pieces of fake news often bring illustrations and captions that do not confirm their content. According to the checking articles, the accused ones would not only be victims of fake news, but "victims of the web." After all, false publication is legitimized by uncritical sharing.

Unanimously, the checking agencies generally suggest that the reader be aware and get informed. It is noteworthy, however, that the checkings also have different interpretations. The comments accompanying the debunking of fake news, made in the *E-farsas.com*, propose abstinence and a vigilant and preventive action. By commenting the fake news in f17, this agency suggests that "it is never too much to keep an eye on the children." In f30, it concludes: "DON'T USE DRUGS." Boatos.org, on the other hand, seems to have a closer perspective on harm reduction, as seen in b16, when the agency states that "discussions on drug legalization in Brazil are still weak." In b17, it defends that "more than a police problem, crack use in Brazil is a public health problem." It recommends "don't drink and drive" (b46) and reinforces that scotching fake news "is no excuse for you to exaggerate with alcohol" (b47). Finally, it notes that the reader does have to take care of the children, "but not to be so paranoid" (b52).

Ultimately, fake news were gathered in three speech units that proved central: satire on drugs with potential to deceive; drugged as a category of prosecution; and illicit drugs epidemic.

Almost half of fake news (47%) satirized with humor situations involving substance use. These pieces of news may mean no harm, but they may potentially deceive. Among them, 31.7% report individuals or social groups misconduct, explained by drug use. And 21.1% disclose information on illicit drugs with misleading content and/or false contexts, reproducing an idea of urgency, panic or epidemic.

#### Discussion

Based on what Löwy (2013) called "critical sociology of knowledge," reason should refer to the ability to distinguish what is true to what is false. Post-truth deepens an irrationalism that denies the possibility of knowing the real, intensifying the subjectivist moment of the process of knowledge (Coutinho, 2010) and opening various possibilities for personal beliefs to deny scientific knowledge.

This same movement is evident in currents of the so-called postmodern thought. Although the various authors who reclaim postmodern thought are not homogeneous, according to Netto (2010), some common elements allow to characterize this thought: acceptance of immediacy to knowing the reality, dissolving the distinction between appearance and essence; suppression of the difference between scientific and non-scientific knowledge; refusal of the category of totality; the privilege of symbolic dimension of reality, reducing it to pure discursivity.

The closeness between fake news, post-truth and postmodern thought may expand the analysis of the fake news phenomenon, revealing aspects that link it to changes in the field of sociology of knowledge and the material basis of late capitalism that sustain them. The truth, as Gramsci (2007) pointed out, is linked to certain hegemonic relationships, showing its strength and reality immediately in politics. Not by coincidence, this field strongly disseminates fake news as a fighting strategy, reducing it to a dispute of "narratives", in which the relation with materiality is lost.

Beyond the political field, fake news greatly affects the academic-scientific field, questioning issues until recently consensual. In the field of drugs, fake news is amplified with distortions that stigmatize these substances and their users, as well as the war on drugs (Hari, 2018).

The fake news identified in this research present distorted content, for example, on the effects of substances, cause-and-effect relationships and their direct association with crime. Data from the World Drug Report indicate 35 million people worldwide suffer from some substance use disorder (UNODC, 2019), and the problematic use is reiterated in social dynamics generated by a system that needs inequality (Arruda et al., 2017). Concludingly, according to Velho (2008), society accuses the drug addict, as an embodiment of a social stigma, for problems that society itself has generated and cannot or does not want to solve.

A total of 31.7% fake news appealed to the "drug addict" accusation category. Implicitly or explicitly, these individuals are pointed out as morally harmful, as they have deviant habits and customs. Drugged people were pictured as addicts and/or sick, composing a representation that mobilizes compassion and disesteem. According to Velho (2008), this is a moral accusation that contaminates the entire life of the accused, stigmatizing him definitively. In this case, the accusation has a political and totalizing dimension, because from the discourse on the need to control deviations and addicts, a discourse on normality is constructed (Alvarez; Fraga; Campos, 2017).

More than 20% fake news identified by the research shared information on illicit drugs with misleading content and/or false contexts, reproducing an idea of urgency, panic or epidemic.

The idea of a drug epidemic in Brazil arises in the face of available studies that can support the analysis of reality. The survey carried out by Bastos et al. (2017), published in 2019, is emphasized, as it reveals the overview of licit and illicit drug uses in Brazil. According to it, the country has no epidemic of drug use.

The false drug epidemic aims to create the idea of a modern crisis, justifying exceptional actions. For Mészáros (2009), crisis is the new way of governing. The constant disturbances, which take the form of terror and apocalyptic catastrophes, serve to break ties and control the population, maintaining a chronic existential insecurity. Therefore, the drug epidemic discourse distracts the population and, at the same time, is a reason for authoritarian interventions.

The war on drugs, present in perspectives that point to abstinence as the only possibility for health policies, is justified by the argument of this (false) epidemic. Contradictorily, such war is not exactly against illicit drugs, but as any other wars, it is against people. Current scientific evidence indicates that the war on drugs is failing (Godlee, 2016, 2017).

In another sense, the movement to reduce damage opposes to the logic of the war on drugs (Moreira et al., 2019), incorporating social struggles in order to instrumentalize users and professionals to understand the roots of the problem, reinforcing the protagonism to build appropriate policies to reality, which respond to the drug users' needs (Santos; Soares, 2013).

For Zarzalejos (2017), disseminating fake news leads to the trivialization of the truth, endangering the means of communication value or credibility, and then made inferior in the face of personal opinions.

However, at least in theory, this form that ridicules everyday life could illuminate social inequalities and injustices, bringing problematizations and reflections on topicality to compose health communication strategies.

Indeed, health communication faces a great challenge in a society that values scientific relativism and the deconstruction of the idea of truth. Cavaca et al. (2018) describe potential priorities for health communication, based on the so-called "health value", with epidemiological criteria, and not just on the "news value". Henriques (2018) points out the need to offer and disseminate reliable sources to professionals and the community, especially by strengthening institutions and their areas of communication.

These are important claims to strengthen drug health policies, but they seem insufficient to democratize communication in the context of a prohibitionist society. After all, communication is not one-way, but a right vocalized by popular sectors and other segments of society committed or not to health based on scientific evidence.

### Final considerations

Faced with the media and science loss of credibility, it is urgent to offer and disseminate reliable evidence and sources to professionals and to the community.

Fact-checking sites play a very important role in debunking fake news. However, they will not

deconstruct drug stigmas alone, which have in their own genesis disinformation and facts distortion. Thus, fake news on drugs, especially paired with negative bias, tends to be perceived as truth.

Collaborative strategies that unite the strengthening of public institutions of health research, democratization of communication, and harm reduction could extend the reach of actions and research that respond to social health needs.

As a problematization background on the fake news phenomenon, it is important to question conceptions defending the impossibility to understand the real, making room for academic-scientific knowledge to be equated to personal convictions, reinforcing subjectivism and irrationalism that tend to strengthen the reception and proliferation of fake news in the most varied fields of knowledge.

The reflections developed here are expected to inspire the creation and modification of communicative strategies to illuminate social needs, inequalities and injustices, generating problematizations and reflections in topicality.

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#### Authors' contribution

Pasquim and Oliveira carried out the search. Soares guided the work and reviewed the manuscript. All authors analyzed the data and wrote the article.

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