



Feeding on fear: Edible marijuana and disproportionality in US media

Michael H. Eversman

Department of Social Work, Rutgers University, Newark, NJ, USA

Abstract

Aims: US marijuana policy is in flux, as some states have legalized it for medical and recreational use despite long-standing federal prohibition. Edible marijuana (edibles) allows consumption without smoke inhalation, yet concern surrounding dosing and its effect is concerning. Cohen's moral panic framework informs how and why some societal problems are disproportionately constructed and stigmatized, while other important problems are tolerated or ignored. This qualitative study explores the construction of disproportionality within textual US news coverage of legal edibles. **Methods:** A three-year sample of 349 articles was retrieved and analysed. Analysis was informed *a priori* by the moral panic criteria of disproportionality, and data reflect headlines and story text purporting to gauge problems surrounding edibles. **Findings:** Using reports of emergencies, poison centre calls and anecdotes, disproportionality surrounding edibles was constructed using indefinite numeric adjectives while avoiding or downplaying totals and presenting statistics with little context to gauge danger relative to other substances. Edibles were also depicted as causing fatalities, occluding other contributing causes. **Conclusions:** Deviance was ascribed to marijuana by exaggerating its toxicity when eaten and downplaying important contextual factors. Disproportionality surrounding marijuana supports bases vested in maintaining criminalization policies while drawing attention from other relevant social problems.

Keywords

Cannabis, drugs, policy, qualitative research, substance abuse

History

Received 13 January 2016

Revised 6 March 2016

Accepted 14 March 2016

Published online 27 April 2016

Introduction

Evidence of worldwide marijuana (*cannabis sativa/indica*) smoking and eating for medicinal purposes, religious rituals and consciousness transcending has existed for millennia, yet its benefits remain challenged and its dangers are often exaggerated (Bostwick, 2012; Cohen, 2009). From “reefer madness” during the 1930s to its inclusion in the War on Drugs, marijuana in contemporary US society has long been immersed in sociopolitical conflict (Berkey, 2011; Musto, 1973; Sloman, 1979/1998). Despite long-standing federal prohibition, individual states began legalizing medical marijuana in 1996 and recreational use in 2012. Presently, 23 states and the District of Columbia have legalized medical marijuana, while four states and D.C. have legalized recreational use.

Edible marijuana products – long a mainstay for medical users who prefer not to smoke – have proven popular in the recreational market. In edible form, marijuana can be consumed without smoke inhalation, considered perhaps its biggest health risk (Lamarine, 2012). Yet concern surrounding proper dosage and the unique high of edible marijuana has garnered attention, as it has been implicated in a handful of serious incidents, emboldening those opposed to expanded legalization.

Cohen's (1972/2002) social constructivist framework of moral panic helps inform how and why some social problems are constructed such that they serve particular interests (political, business, etc.). During moral panic, the true threat posed by certain social problems is exaggerated, typically via sensationalized media coverage. From this construction of the problem, it becomes increasingly stigmatized and those associated with it politically weakened. In the wake of the disproportionate danger ascribed to the problem, the occurrence of other, often more serious social problems is accepted or ignored. Given the contentious sociopolitical history surrounding marijuana in the United States and the presence of vested interests opposed to liberalized marijuana policies, examining its depiction is relevant. Informed by Cohen's moral panic framework, this study examines textual US news coverage of edible marijuana, specifically the qualitative construction of disproportionality within media depiction of it.

Edible marijuana: Background

The therapeutic value of marijuana was first formally acknowledged in the United States by its inclusion in the 1850 *United States Pharmacopeia* drug reference manual (through 1942 when it was removed), and it was long recommended for various disorders (Sloman, 1979/1998). Edible marijuana products (“edibles”) originated within the medical marijuana community and have long been a staple choice for patients who prefer to consume it without smoking

(Chapkis & Webb, 2005). However, since the 1970 federal *Controlled Substances Act* deemed marijuana a Schedule I substance with high abuse potential and no medicinal value, large-scale study of therapeutic efficacy was effectively stifled (Bostwick, 2012). Yet throughout the 1970s, some states began decriminalizing marijuana and supporting research, and with the AIDS crisis in the 1980s, San Francisco enacted medical marijuana, setting the stage for California's passage of the *Compassionate Use Act* in 1996 (Berkey, 2011).

In addition to voluminous anecdotal patient reports supporting the therapeutic benefits of marijuana (Chapkis & Webb, 2005), clinical research supports its indication for controlling nausea and vomiting and promoting weight gain, and treating muscular neuropathy and spasticity from conditions such as multiple sclerosis (Grant, Atkinson, Gouaux, & Wilsey, 2012), though others suggest the benefits may be overstated (Whiting et al., 2015). While early-age marijuana use is concerning, lifetime dependence rates (9–10%) compare favourably to those of other recreational substances such as nicotine (32%) and alcohol (15%) (Bostwick, 2012; Cohen, 2009). Marijuana dependence is associated with psychosis and the onset of schizophrenia, and while causality is unclear, heavy use is associated with cognitive impairment, depression and severe psychiatric illness. Claims of a “gateway theory” – that marijuana use leads to the use of “harder” drugs – are largely unsubstantiated (Bostwick, 2012; Cohen, 2009).

Legalized recreational marijuana laws have expanded the number of marijuana users who can consume edible marijuana, and while the exact number of users is unknown, sales information suggests that it is popular. In 2014, Colorado sold almost five million units of medical and recreational edible marijuana products, and approximately, 45% of marijuana sales in that state involve edible marijuana products (Centers for Disease Control, 2015; Colorado Department of Revenue, 2015). However, due largely to unclear dosing guidelines and differences between eating marijuana and smoking it, wider consumption of edible marijuana has fostered concerns about increased emergency visits for intoxication and paediatric exposures and fears of increased youth initiation and use (MacCoun & Mello, 2015).

Moral panic: Background

Originating with British sociologist Stanley Cohen (1972/2002), moral panic is a social constructionist framework for understanding social problems and deviance, notably how, why and by whom particular phenomena are defined as deviant. According to moral panic, the dangers of some social problems are depicted disproportionately to their “true” extent and ultimately draw attention from other equally or more dangerous problems (Cohen, 1972/2002; Goode & Ben-Yehuda, 1994/2009). The existence of moral panic requires three elements: an enemy, a victim and societal consensus to act. The occurrence of the problem becomes linked to an enemy or “folk devil” and is seen to threaten victims – typically children or “middle class” society. From the panic generated by the problem now linked to the enemy, consensus emerges that the threat poses wide scale societal danger

unless action is taken – usually legislation (Cohen, 1972/2002).

A key application of moral panic lies in scrutinizing the information – typically media coverage – provided about a particular problem. Functioning as information processors, media outlets frame and define (construct) social problems as deviant and worthy of attention (Cohen, 1972/2002). The elements of moral panic can be found within media coverage and include concern about the threat of the problem, hostility targeted at those (enemies) deemed responsible for the problem, consensus that something be done to address the problem, disproportionality about the scope of the threat posed by the problem and volatility, such that panic about the problem often vanishes suddenly (Cohen, 1972/2002). As detailed below, this study emphasizes the element of disproportionality, considered the core aspect of moral panic (Goode & Ben-Yehuda, 1994/2009).

Despite its utility, criticisms of moral panic should also be noted. For example, some point to its underlying constructionist orientation and remind us that subjective formulations of a particular social problem do not mitigate its objective harms (Goode, 1990). Others argue that changes in media consumption and production render moral panics “everyday” occurrences and that the framework has long been removed from its original formulation and its application complicated by the multiplicity of societal interests and mechanisms of social control (McRobbie & Thornton, 1995). More recent critics note that the meaning of moral panic is and has always been open to interpretation. For example, a core feature of moral panic is the irrationality of disproportionate reaction to particular social deviance, yet Stanley Cohen himself has suggested the idea of “good” moral panics, whereby societal reaction to phenomena can be legitimate and proportionate (David, Rohloff, Petley, & Hughes, 2011).

Drug moral panics in textual US news media

Several analyses of textual US news media have examined drug moral panics. Most examine methamphetamine (Armstrong, 2007; Jenkins, 1994; Linnemann, 2009; Omori, 2013; Weidner, 2009), crack cocaine (Chiricos, 1996; Hartman & Golub, 1999; Reinerman & Levine, 1997), or both drugs (Cobbina, 2008), while others have considered heroin (Agar & Reisinger, 2000; Denham, 2008), LSD (Goode, 2008), MDMA (Baldwin, Miller, Stogner, & Hach, 2012), and marijuana (Goode & Ben-Yehuda, 1994/2009).

Methamphetamine moral panics

Moral panics surrounding methamphetamine (meth) are considered to have occurred episodically in the United States since the late 1980s. Jenkins (1994) discussed a brief panic in 1989 surrounding a form of meth known as “ice”. Though largely confined to Hawaii (called the “Hawaii epidemic”), media coverage and Congressional hearings fanned concerns and drew national attention but ebbed after just a few months. Armstrong (2007) declared a meth panic occurred in the Midwestern United States in the early 2000s, documenting disproportionality by finding inconsistency between the volume of meth-related articles and government

epidemiologic data. Noting also that concerns surrounding the environmental hazards of meth labs are exaggerated relative to those surrounding livestock industry waste, for example, the author concluded that panic surrounding meth deflects attention from the widespread poverty in many rural US communities. Similarly, Weidner (2009) studied a meth panic in the Midwest that occurred between 1997 and 2005 by comparing print media portrayal of meth to objective indicators including usage rates, treatment admissions and laboratory seizures, finding that the frequency of related stories was excessive, while also describing claims about meth's addictiveness as exaggerated. Studying a similar period (1995–2007), Linnemann (2009) noted how identifying moral panic also reveals inequalities spanning race, class and gender and found differences in media portrayals of gender such that women who use meth were criticized as maternal failures, while such failures among men who use meth were generally ignored, and they were instead portrayed as rational actors trying to earn a living. Omori (2013) considered the years 2000–2007 to examine the influence of print news on state antimeth legislation, suggesting that media coverage acts in concert with law enforcement to exaggerate the meth problem and drive policy formation.

Crack cocaine moral panics

It is widely accepted that moral panic surrounding crack cocaine occurred in the United States during the 1980s and 1990s. Chiricos (1996) noted that news coverage of crack increased during the 1980s despite data indicating its use was decreasing. This increased attention fuelled panic and largely obscured the economic decline and rising crime in many US urban areas, while simultaneously justifying harsh criminal penalties and expansion of the prison industrial complex. Similarly, Reinerman and Levine (1997) surmised that fear and panic generated by sensationalized media accounts in the 1980s and early 1990s misrepresented evidence about crack, functioning to legitimize the War on Drugs and support a conservative political agenda. Considering whether inaccurate news claims about crack would “self-correct”, Hartman and Golub (1999) analysed newspaper and magazine content spanning 1985–1995, finding that numerous exaggerations and falsehoods – widely repeated – became accepted as truth. Cobbina (2008) considered depictions of race and class surrounding crack and meth, finding that stories about crack (portrayed as a black drug) were twice as likely to emphasize violence and call for harsh penalties than were stories on methamphetamine (portrayed as a white drug), which more often emphasized public health problems.

Other drug moral panics

Agar and Reisinger (2000) examined newspaper coverage of heroin between 1992 and 1998 and found that linking white suburban youth with heroin use induced moral panic. Denham (2008) explored whether coverage of heroin during the 1990s mentioned a cultural icon (model, actor or musician) associated with heroin use and/or referenced a motion picture addressing heroin and found that contrary to media coverage, survey data did not indicate a significant increase in heroin

use. Citing the link of psychedelic drugs to political subversion during the 1960s, Goode (2008) claims that stigmatization of LSD users made outrageous claims of its danger believable. In a case study of MDMA and club drug use, Baldwin et al., (2012) concluded that passage of an antirave ordinance in a Florida city in the late 1990s consisted of an “interest group” moral panic (Goode & Ben-Yehuda, 1994/2009) driven by influential community stakeholders.

Moral panic surrounding marijuana occurred in the United States during the 1930s, when sensationalized media accounts and the popular film ‘Reefer Madness’ heightened fears and deviance (Goode & Ben-Yehuda, 1994/2009). By enflaming fears that marijuana use induced racial minorities to commit crimes, state and local governments enacted marijuana prohibition, culminating in the federal Marihuana Tax Act of 1937 (Musto, 1973). Marijuana's current sociopolitical dynamic (and stigma) is in flux, as states increasingly legalize recreational use alongside medical use while federal prohibition remains. Informed by Cohen's moral panic framework, this qualitative study explores US news coverage of edibles. Specifically, it considers the presence and construction of disproportionality in a sample of textual news story headlines and articles since passage of recreational legalization (2012–2015).

Methods

Theoretical application of moral panic

While determining the occurrence of full moral panic (i.e. the presence of all elements) with edibles is beyond the scope of this analysis, three important aspects are utilized. First, the presence and qualitative construction of disproportionality in textual news media headlines and articles are examined. While moral panic consists of five elements (concern, hostility, consensus, disproportionality and volatility) disproportionality is central such that “the concept of the moral panic rests on disproportionality (Goode & Ben-Yehuda, 1994/2009, p. 38, italics in original). A key indicator of its presence lies with distorted figures and statistical claims cited to describe the scope of, and risk posed by, the problem (Cohen, 1972/2002; Goode & Ben-Yehuda, 1994/2009). Second, the paper explores how disproportionality can be constructed to establish (or re-establish) social deviance surrounding edibles and marijuana per se. Moral panic theory regards the construction of deviance as transactional, facilitated by information processors – media outlets with particular political and commercial interests (Cohen, 1972/2002). Lastly, moral panic holds that disproportionate attention given to some social problems draws attention away from other, often more serious social problems (Goode & Ben-Yehuda (1994/2009). Thus, the paper considers how disproportionately constructed around edible marijuana usage serves to occlude other social problems present (but downplayed) in media coverage of edibles.

Sampling

The sample consisted of 349 unique (i.e. occurring once) textual US news media articles published between 1 November 2012 (approximating when the first states

legalized recreational use) and 31 October 2015. Articles were retrieved from two comprehensive full-text newspaper databases – *Access World News* and *Factiva* which yielded articles from newspapers across the United States – and *Google News*, a computer-generated aggregator of worldwide news stories which yielded articles from internet media, such as magazines, broadcast outlet web pages, web-based newspaper editions and blogs. Duplicate articles were excluded – notably syndicated pieces published in multiple sources – and only the article from the originating media source is included. All articles were published in US media or the US version of an international source.

Articles were retrieved based on the occurrence of keywords appearing anywhere in its text. Keywords included “edible marijuana”, “marijuana edibles”, “marijuana infused”, “pot infused”, “pot laced”, “pot candy” and “marijuana candy”. Included articles focused on edible products legally available via medical and/or retail outlets in the United States. While all retrieved articles referenced legalized edibles, the sample includes only articles in which it was a main focus such that an iteration of it appears in the headline and/or is discussed in the lead paragraph or more than half of the article text. News stories, columns, opinions (editorials, op-eds) and letters to the editor (in which the writer indicated an institutional or professional credential) were included. Excluded articles were those addressing “homemade” (i.e. illicit) edibles and/or edibles not otherwise specified as legal, business news and articles addressing cooking and/or dining with marijuana. Blog content was included only from blogs affiliated with a mainstream media outlet (typically online newspaper editions). The author conducted all database retrieval.

Sample description

Figure 1 shows the bimonthly distribution of all 349 articles spanning 1 November 2012 through 31 October 2015.

The sampled articles were selected from 191 unique media outlets throughout the United States, most of which (177) yielded less than five articles. Table 1 lists the fourteen media outlets from which five or more articles were sampled.

Almost two-thirds (62%) of the 349 sampled articles consisted of news stories ($n = 216$), while columns comprised nearly one-third (31%, $n = 109$). Editorials ($n = 21$) and letters to the editor ($n = 3$) occurred less frequently. Regional distribution was led by articles from national media outlets (28%, $n = 100$) and outlets in Colorado (26%, $n = 92$). Articles from outlets in other legalized states [Washington ($n = 23$), Oregon ($n = 20$), California ($n = 14$)] as well the District of Columbia ($n = 11$) were also well represented.

Data analysis

Retrieved articles were saved as word processing documents and entered as qualitative data analysis software files (Atlas TI, v. 7.5, Corvallis, OR). First-level data coding was then initiated, during which all articles were examined and individual recording units identified and coded *a priori*. Recording units are textual passages that are discretely determined by “a definable boundary, or symbolic meaning”

(Riffe, Lacy, & Fico, 1998). As such, a recording unit is best understood as the most basic expression of meaning contained within the data, coded to reflect this meaning. All retrieved textual content (headlines and articles) was examined using the analytic software which allowed the author to highlight and tag (code) identified passages (i.e. recording units) reflecting an element of moral panic (concern, consensus, hostility, disproportionality and/or volatility). Familiarity with these elements allowed the author to identify content *a priori*. The study reports only recording units coded to reflect disproportionality, which was considered to be present in any textual references “cited to measure the scope of the problem” (Goode & Ben-Yehuda, 1994/2009), including numeric claims (i.e. statistics) and non-numeric claims (i.e. claims of “an increase” in edible related incidents).

Second-level analysis involved identifying, arranging and categorizing first-level recording units to reflect thematic content (Coleman & Unrau, 2005). Specifically, recording units were grouped to reflect conceptually larger notions of disproportionality. For example, one grouping of recording units reflected that disproportionality was constructed by citing statistical claims out of context, and thus, they were categorized as “disproportionality, statistics out of context”. Recording units (in the form of story headlines and text) deemed by the author to best convey larger thematic ideas are presented below. Further, the data are displayed chronologically (spanning the sample period). Article headlines are presented in capital letters, while article text is quoted and/or block formatted throughout.

Results

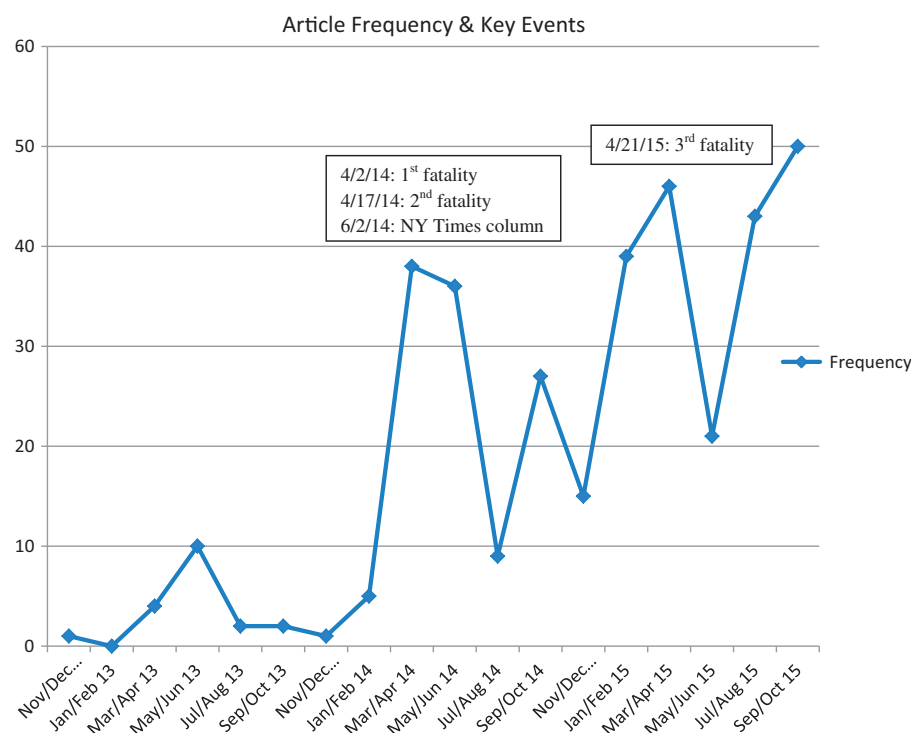
Disproportionality constructed around the danger of edibles used indefinite numeric adjectives to describe the occurrence of incidents involving their use while avoiding or downplaying low total numbers. Statistics were reported with little context to gauge the severity of similar incidents (i.e. emergency exposures) with other substances, while stories depicted edibles as the central or sole cause of involved incidents. By linking the benign to the serious, the danger of edibles was highlighted, while other causes of reported incidents were typically ignored or downplayed. Incidents reported included ER visits, poison control centre calls and fatal and non-fatal anecdotes.

Indicators of disproportionality first emerged in April 2013 with news of a Children’s Hospital Colorado study which determined that ER admissions for marijuana exposure in children under age 12 went from zero before 2009 to 14 from 2009–2011 when medical marijuana was enacted in Colorado. Headlines and articles raised concerns about child access to edibles but provided no context to properly gauge the extent relative to accessing other drugs:

COLO. KIDS GET INTO POT CANDY, PROMPT CALLS FOR CHILDPROOF PACKAGING. *UPL.com* (United Press) – 2 April 2013

Children’s Hospital Colorado saw 14 children come into the emergency room after ingesting cannabis candy in the two years following medical marijuana legalization in the state, reports the Denver Post. Studies of ER charts by

Figure 1. Article frequency and key events.

Table 1. Media outlets ($n = 14$) yielding five or more articles.

Outlet name	$N =$ Source articles/total sample	Percentage total article sample
Denver Post	36	10.4
Denver CBS Local.com	11	3.2
Associated Press (National)	10	2.9
Associated Press (State Wire, Colorado)	8	2.3
Washington Post	8	2.3
USA Today	7	2
Oregon Live.com	7	2
New York Times	7	2
Forbes	6	1.7
Los Angeles Times	6	1.7
Reuters	6	1.7
CBS News.com	5	1.4
Huffington Post	5	1.4
Seattle Times	5	1.4
	127/349	33.5

Four or fewer articles were sampled from each of 177 other media outlets.

Colorado doctors show looser pot laws leading to childhood ingestion, often from mistakenly eating tempting “edibles” like marijuana-infused gummy worms or brownies...

Related articles quoted a doctor affiliated with the study as having seen “a dramatic increase” in paediatric marijuana exposures due “mostly” to edibles and treating “one to two kids a month” without reporting rates of paediatric exposures to other substances. The doctor is further quoted to say that marijuana related calls to the state poison control centre “have doubled since 2009” but no specific numbers are provided. The above study garnered more attention after its formal publication in May, 2013, and headlines again used

indefinite numeric claims, while multiple articles similarly cited “a significant increase” in youth marijuana exposure:

CASES OF CHILDREN ACCIDENTALLY INGESTING POT ON RISE, STUDY SAYS. *Los Angeles Times* – 28 May 2013

SURGE IN CHILDREN ACCIDENTALLY EATING MARIJUANA-LACED FOODS. *Targeted News Service* – 29 May 2013

STUDY SUGGESTS LINK BETWEEN EDIBLE POT AND OVERDOSE AMONG KIDS. *KPLU.org* – 28 May 2013

A new study conducted in Colorado shows an increase in kids seen at Emergency Departments ever since medical marijuana laws were liberalized in 2009. In more than three years prior to that, zero kids went to the ER for marijuana overdose. But in the two years after the changes, 14 kids were confirmed to have overdosed on marijuana. Half the poisonings in Colorado were linked to edibles.

Despite articles referencing the “admittedly small” total number of paediatric exposure emergencies, they were nonetheless recast as “small but growing” or otherwise “significant”:

WHAT HAPPENS WHEN CHILDREN IN COLORADO FIND THEIR GRANDPARENTS’ POT BROWNIES. *National Journal.com* – 28 May 2013

Studying the patient records of one children’s hospital in the state, the incidence of marijuana consumption in children younger than 12 hopped up from zero cases (between 2005 and 2009) to 14 cases (between 2009

and 2011). The number is small, but the authors find it to be statistically significant.

By April 2014 media coverage intensified after news broke of the March 11 death of a nineteen year old college student visiting Colorado who leapt from his hotel window. Use of edibles was involved, and the story received national coverage. Headlines and articles portrayed edibles as the direct cause of death:

STUDENT DIES IN COLORADO FALL AFTER EATING POT COOKIE.

NBC News.com – 2 April 2014

TEEN JUMPS TO HIS DEATH AFTER EATING MARIJUANA-LACED COOKIE FROM COLORADO SHOP. *Hartford Examiner (CT)* – 2 April 2014

COLLEGE STUDENT FALLS TO DEATH AFTER EATING POT COOKIE IN DENVER. *Atlanta Examiner* – 3 April 2014

IN THE FIRST FATALITY LINKED TO LEGAL MARIJUANA, THE MAN WHO JUMPED ATE POT COOKIES: EDIBLES CITED IN DEATH REPORT.

The Denver Post – 3 April 2014

(Coroner's office spokeswoman) said (the decedent) had no known physical or mental-health issues, and toxicology tests for other drugs or alcohol came back negative. "We have no history of any other issues until he eats a marijuana cookie and becomes erratic and this happens", she said. "It's the one thing we have that's significant".

This incident drew sustained attention and was commonly cited in subsequent coverage of edibles and marijuana in general, highlighting the dangers and risks of legalization:

ERs SEE MORE PATIENTS AS LAWMAKERS REVIEW EDIBLES' POTENCY:

DEATH PUTS FOCUS ON RISK. *The Denver Post* – 4 April 2014

DEATH RAISES NEW ALARMS OVER POT: EDIBLE FORM OF DRUG A CONCERN IN COLORADO. *The Baltimore Sun* – 9 April 2014

The death, involving a victim with no history of mental problems or suicidal tendencies, was linked to "marijuana intoxication". The case has become a grim exhibit in a growing case file as Colorado health officials wonder whether, in the rapid rollout of legalized marijuana, adequate attention was paid to potential health risks of its use, especially in the little-scrutinized area of edible marijuana.

Soon after (14 April 2014) news broke of a second Colorado death involving edibles whereby a husband shot his wife in their home. Articles noted that the exact role of edibles in the murder was unclear. The murder was committed with a firearm, and early reports indicated the husband may have taken other medications and that the couple was enduring increasing marital stressors, yet

headlines again depicted edibles as the direct, singular cause of the shooting:

DENVER POLICE WANT TO KNOW WHETHER MURDER SUSPECT CONSUMED POT

Los Angeles Times – 15 April 2014

POLICE: MAN ATE POT CANDY BEFORE SHOOTING WIFE. *Honolulu Star-Advertiser* – 17 April 2014

A POLICE AFFIDAVIT SAYS THE HUSBAND SUSPECTED OF KILLING HIS WIFE HAD, ACCORDING TO HER 911 CALL, JUST EATEN POT CANDY: MAN "TOTALLY HALLUCINATING". *The Denver Post* – 18 April 2014

MAN ATE POT CANDY BEFORE SHOOTING HIS WIFE DEAD: COPS. *Huffington Post.com* – 18 April 2014

DENVER MAN ACCUSED OF KILLING WIFE MAY HAVE EATEN POT CANDY. *NBC News.com* – 18 April 2014

POLICE: MAN EATS POT CANDY, KILLS. *The Key West Citizen (FL)* - April 18, 2014

DAD TURNS VIOLENT AFTER EATING MARIJUANA CANDY FROM (STORE NAME). *Atlanta Examiner* – 18 April 2014

Media accounts soon after emphasized the "ease of access" to edibles purportedly underlying paediatric exposures, and headlines again described an increase using indefinite terms:

STONED TODDLERS RAISE RED FLAGS. *Hawaii Tribune-Herald (Hilo, HI)* – 25 April 2014

CASES OF KIDS EATING POT PRODUCTS RISING. *The Denver Post* – 6 May 2014

THIS YEAR'S SURGE IN ACCIDENTAL CASES INVOLVING KIDS IS ON PACE TO MORE THAN DOUBLE THE TOTAL FOR 2013: CHILDREN'S HOSPITAL SEEING RISE IN MARIJUANA INGESTION. *The Denver Post* – 22 May 2014

By using anecdotal accounts, articles also generated disproportionality surrounding child access through interviews in which, for example, paediatric exposures are described by medical personnel as "rising at an alarming rate." First-hand accounts from doctors – who were variously described as "sounding an alarm" – provided salient details of danger:

DOCTORS WORRY ABOUT AN INCREASE IN KIDS CONSUMING CANNABIS. *Fox21news.com* – 27 May 2014

"There are long-term effects, but the biggest thing is respiratory depression. Their (children) vitals need to be constantly monitored, and that's the biggest one because if you can't breathe you can't live. It's a scary thing sometimes," Dr. (name) said. In most cases reported, children ate edible products. "The lollipops, the brownies,

the candies, everything is just way too enticing to kids. And who's gonna stop at one brownie?"

In June, 2014 a high profile first person account of an unpleasant experience with edibles was published in the *New York Times*. Although the amount consumed was unspecified ("I nibbled off the end...and then nibbled some more" having had "a bite or two"), the column was frequently recounted in subsequent media coverage, notably the authors claim of experiencing "a hallucinatory state for eight hours" and having become "convinced I had died". Headlines about the incident were sensationalized:

COLUMNIST SUFFERS POT PARANOIA AS DOPERS ADVANCE. *Accuracy in Media* – 4 June 2014

STAR NEWSPAPER COLUMNIST VISITS COLORADO, TRIES MARIJUANA

EDIBLE, FREAKS OUT. *The Gazette: Blogs* (CO) – 4 June 2014

AND THEY CALL THIS A RECREATIONAL DRUG? *The Deseret News* (UT) – 9 June 2014

Called the latest in "a string of incidents", the danger of edibles were further exaggerated by linking this non-fatal anecdote to the two April deaths:

POT EDIBLES COULD CAUSE MORE THAN A HIGH. *The News Tribune* (WA), 23 June 2014

Edibles can even be a problem for adults – as illustrated in a recent article by *New York Times* columnist (name)...who took ill after ingesting a small amount of pot-infused candy. In March, a 19-year-old college student who had eaten a pot cookie died after jumping off a Denver hotel balcony. And the shooting death of a Denver woman has been linked to her husband's ingestion of pot-infused candy.

In March, 2015 a third death was linked to edible consumption, in which a young man shot himself while visiting Colorado on family vacation. Dubbed a "MARIJUANA SUICIDE" by at least one headline, others again suggested edibles were the singular, direct cause of death:

OKLAHOMA MAN SHOOTS SELF AFTER EATING POT CANDIES. *The Denver Post* – 27 March 2015

MAN COMMITS SUICIDE AFTER CONSUMING POT-INFUSED CANDIES. *Las Vegas Review-Journal* – 27 March 2015

DID POT GUMMY BEARS KILL THIS MAN? *Associated Press State Wire: (CO)* – 27 March 2015

Referred to as "The latest of a handful of deaths" and reflecting "The growing number of deaths" linked to edibles, headlines and articles emphasized an unchallenged attribution by grieving family members that the death was caused by marijuana ingestion, ignoring other factors such as firearm availability:

MARIJUANA EDIBLES BLAMED FOR KEYSTONE DEATH. *Denver.CBSLocal.com* – 25 March 2015

The family of a...man who shot himself Saturday night...is blaming his suicide on his ingestion of edible marijuana candies. "It was completely a reaction to the drugs," (decedent's mother) said about her son's suicide...(The coroner spokeswoman) says the preliminary cause of death is a self-inflicted gunshot wound. As for the impact of the marijuana edibles, she said, "That's what we've heard consistently."

In June 2015, findings of an academic study (Onders, Casavant, Spiller, Chounthirath, & Smith, 2015) reported on rates of paediatric (aged six and younger) marijuana exposures in the United States. In their findings, the study authors noted that the low rate (5.9 per every 1,000,000) indicates these exposures are "rare" and that between 2006 and 2013 the total numbers increased from roughly 100 to 250, yet headlines and articles reported these numbers in percentages:

MARIJUANA LEGALIZATION MEANS MORE CHILDREN ACCIDENTLY CONSUMING POT PRODUCTS, EXPOSURE ROSE 148% SINCE 2006.

IBTimes.com – 8 June 2015

AS POT BECOMES LEGAL, MORE KIDS EAT IT. *Cincinnati.com* – 14 June 2015

A study released this week found toddlers and infants are being exposed to marijuana nearly 147 percent more often than in 2006, prompting researchers to recommend states take swift action to address child safety when marijuana is legalized. *Cincinnati.com* – 14 June 2015

Similarly, headlines in July 2015 and beyond proclaim that Poison Control calls involving edibles have increased by noting an "ALARMING INCREASE" or that "REPORTS...SPIKE", while articles downplayed the low overall numbers and instead emphasized that they represent "An upward trend", "An increasing number", and "An emerging health risk". The headline and text from a story reporting on "14 potential marijuana poisonings" among youth 19 and younger:

MARIJUANA 'POISONING' INCIDENTS ON THE RISE – CHOCOLATES, CANDIES APPEAL TO CHILDREN. *The Spokesman-Review* (Spokane, WA) – 28 July 2015

Reports of kids eating marijuana-infused cookies and candies are on the rise statewide and in Spokane County, where a 4-year-old spent the night in intensive care after eating a product belonging to a parent. The number of "pot poisonings" is relatively small, but the increase is troubling to public health officials.

Similarly, a headline to a story which reported the total number of marijuana calls (of which an unspecified "many" are attributed to edibles) increased from 54 in 2009 to 136 in 2013:

POISON CONTROL CALLS UP AFTER LEGALIZATION OF POT.

Reuters.com – 16 October 2015

Discussion

While considering the presence of all moral panic elements is beyond the scope of this analysis, there is evidence of media generated disproportionality and other key features of moral panic surrounding edible marijuana. Although these media accounts can be said to be objectively true, presented as they are – without context to gauge their frequency and severity relative to similar incidents with other legal substances – distorts the danger posed by edible marijuana and increases social deviance surrounding its very nature. Indeed, unchallenged suggestions that edible marijuana consumption leads directly to death and/or violent behaviour are reminiscent of “Reefer Madness” era hype. Attributing the cause of such incidents solely to the intrinsic properties of edible marijuana without focusing on dosage, the possibility of irresponsible use, and the presence of other causative factors serves to increase stigma and reinforce stereotypes of the danger of marijuana. Such a climate becomes more favourable to marijuana control policies that maintain criminalization or otherwise hinder liberalization.

Depicting the two April 2014 deaths as due solely to edible consumption established what Agar and Reisinger (2000) called a topic framework for subsequent coverage, whereby the danger of edibles becomes taken for granted by the audience. From this comes what Cohen (1972/2002) called “sensitization”, a cueing process that occurs during moral panic that “...has the effect of increasing the awareness of items of a similar nature which he (the reader) might otherwise have ignored” (p.59), or as Goode and Ben-Yehuda (1994/2009) describe it “...the process whereby harm, wrongness, or deviance is attributed to the...phenomenon that is *routinely ignored* when the same consequences are caused by or attributed to more conventional conditions (p. 156, emphasis added). For example in the U.S. there are over 30,000 annual ER visits (and many hospitalizations) for children aged six and younger due to pharmaceutical medication exposure and over half a million calls to Poison Control hotlines for children aged 19 and younger involving prescribed and over the counter pharmaceuticals (Ferguson, Osterthaler, Kaminski, & Green, 2015; Lovegrove et al., 2014). Further, there are over 2000 annual alcohol poisoning deaths – more than 40 of which involve youth aged 15–20 (Kanny et al., 2015). By comparison, the number of fatalities attributed to marijuana in this sample pales. If the same media intensity were given to alcohol fatalities, such stories would exceed five a day.

Incidents of suicide, domestic violence and gun violence have multiple causes and antecedents such that no single variable can fully explain their occurrence. Yet by suggesting that edibles are the lone, immediate cause in the incidents covered, the tragic regularity with which they occur goes unnoticed. In 2013 adolescents and young adults committed suicide at a rate of 10.9 per 100,000, and more than 41,000 suicides occurred in the United States overall. A firearm was used in more than half (American Foundation for Suicide Prevention, 2015). Similarly, between 2001 and 2012, over 6000 women were murdered by an intimate partner using a gun (Center for American Progress, 2014). Such numbers make these incidents tragically “routine”, and sadly it is the

involvement of legal marijuana that accounts for the intense and sustained media attention received.

Goode and Ben-Yehuda (1994/2009) describe elite-engineered moral panic as driven and maintained by particular elite interests (law enforcement, political, business) to divert attention from societal problems such elites may have to account for, or which if given attention, will otherwise hurt their interests. Certainly those vested in continued marijuana criminalization policies and limiting its availability as a therapeutic and recreational substance benefit from disproportionate danger ascribed to it. Other interests are served when attention is drawn from the public health problems associated with the misuse of widely available legal pharmaceutical and recreational substances, and firearms violence. Constructing disproportionality around the danger of marijuana enables these concerns to “hide in plain sight”. Additionally, disproportionality in media coverage diverts attention from policy-related harms. For example, drug criminalization policies divert attention from the fact that prohibition creates an environment in which people, fearing the associated social and legal repercussions, may avoid seeking medical attention for accidental ingestion or overdose.

As other states consider legalization policies they look to the experience in Colorado for guidance (Miller, 2016), and news reports from that state greatly influence the general discussion of marijuana policy. Support for marijuana legalization in the United States has consistently increased in recent years, with poll data indicating a majority (58%) of Americans support it, the highest margin in 46 years (Jones, 2015). Support for legalization is strong among youth aged 18–34 (68%) and has risen sharply amongst all groups except those aged 70 and older (People Press.org, 2015). With legalization likely to continue expanding among states, it appears marijuana is now less deviant than ever in the post “reefer madness” era, and whatever fear and opposition remains seems to surround edibles.

Study limitations include the sampling procedures. First, the databases utilized may not have contained all relevant textual news coverage of edibles in the United States, and thus, relevant articles may be excluded. The keywords used to retrieve articles may not have included all iterations of legalized edibles, and implicit references to them or articles discussing them by some other form were not included. In addition, the exclusion of articles about illicit edibles might overlook policy-related news and consideration of policy reforms in reaction to depictions of edibles. Furthermore, the sample excluded content from non-journalistic sources such as social media and so-called “niche” blogs. Though textual news media is a valid proxy for overall news media (Smith et al., 2008), non-textual media (television, internet and radio broadcasts) were not included. Finally, the study did not discern whether and how media outlets may construct marijuana coverage differently, for example whether patterns exist based on geographic region or ownership structure.

Future studies should continue to examine media depictions of marijuana, particularly as state legalization expands along with calls to reschedule marijuana at the Federal level. Concerns for youth marijuana use should receive attention, as should attention to media coverage of other social problems (child welfare, suicide, domestic violence and gun violence)

in which marijuana use may be involved. Such studies should particularly examine the depiction of marijuana relative to these other concerns. Attention should also be paid to the depiction of marijuana in influential non-textual media and social media sources.

Declaration of interest

The author declares that no funding was received for this research and there are no conflicts of interest.

References

- Agar, M.H., & Reisinger, H.S. (2000). Read all about it: Media construction of a heroin epidemic. *Substance Use & Misuse*, 35, 1551–1571. doi: 10.3109/10826080009148230.
- American Foundation for Suicide Prevention. (2015). *Facts and Figures*. October 7, 2015. Retrieved from <https://www.afsp.org/understanding-suicide/facts-and-figures>.
- Armstrong, E.G. (2007). Moral panic over meth. *Contemporary Justice Review*, 10, 427–442. doi: 10.1080/1082580701677519.
- Baldwin, J.M., Miller, B.L., Stogner, J., & Hach, S. (2012). The night the raving died: the social construction of a local drug panic. *Deviant Behavior*, 33, 675–698. doi: 10.1080/01639625.2011.636723.
- Berkey, M. (2011). Mary Jane's new dance: the medical marijuana legal tango. *Cardozo Public Law, Policy, and Ethics Journal*, 9, 417–450. doi: <http://trove.nla.gov.au/version/171489159>.
- Bostwick, J.M. (2012). Blurred boundaries: the therapeutics and politics of medical marijuana. *Mayo Clinic Proceedings*, 87, 172–186. doi: <http://dx.doi.org/10.1016/j.mayocp.2011.10.003>.
- Center for American Progress. (2014). *Fact sheets: Protecting women from gun violence*. Retrieved from <https://www.americanprogress.org/issues/guns-crime/report/2014/10/14/92119/protecting-women-from-gun-violence/>.
- Centers for Disease Control and Prevention (2015). *Notes from the field: death following ingestion of an edible marijuana product – Colorado, March 2014*. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6428a6.htm?s_cid=mm6428a6_x.
- Chapkis, W., & Webb, R.J. (2005). Mother's milk and the muffin man: Grassroots innovations in medical marijuana delivery systems. *Journal of Ethnicity in Substance Abuse*, 4, 183–204. doi: 10.1300/J233v04n03_08.
- Chiricos, T. (1996). Moral panic as ideology: drugs, violence, race, and punishment. In Critcher, C. (Ed.), *Critical readings: Moral panics and the media* (pp. 103–123). Maidenhead: Open University Press.
- Cobbina, J.E. (2008). Race and class differences in print media portrayals of crack cocaine and methamphetamine. *Journal of Criminal Justice and Popular Culture*, 15, 145–167.
- Cohen, S. (1972/2002). *Folk devils and moral panics: The creation of the mods and rockers* (3rd ed.). New York: Routledge.
- Cohen, P.J. (2009). Medical marijuana: the conflict between scientific evidence and political ideology. Part one of two. *Journal of Pain and Palliative Care Pharmacotherapy*, 23, 4–25. doi: 10.1080/15360280902727973.
- Coleman, H., & Unrau, Y.A. (2005). Analyzing qualitative data. In Grinnell, R.M., & Unrau, Y.A. (Eds.) *Social work research and evaluation: Quantitative and qualitative approaches* (7th ed.) (pp. 404–420). New York: Oxford University Press.
- Colorado Department of Revenue (2015). *Annual update*. Retrieved from https://www.colorado.gov/pacific/sites/default/files/2014_MED_Annual_Report_1.pdf.
- David, M., Rohloff, A., Petley, J., & Hughes, J. (2011). The idea of moral panic – ten dimensions of dispute. *Crime, Media, Culture*, 7, 215–228. doi: 10.1177/1741659011417601.
- Denham, B.E. (2008). Folk devils, news icons, and the construction of moral panics: Heroin chic and the amplification of drug threats in contemporary society. *Journalism Studies*, 9, 945–961. doi: 10.1080/14616700802227811.
- Ferguson, R.W., Osterthaler, K., Kaminski, S., & Green, A. (2015). *Medicine safety for children: An in-depth look at poison center calls*. Washington D.C.: Safe Kids Worldwide Watch.
- Goode, E. (1990). The American drug panic of the 1980's: Social construction or objective threat? *The International Journal of the Addictions*, 25, 1083–1098. doi:10.3109/10826089009058874.
- Goode, E., & Yehuda, N. (1994/2009). *Moral panics: The social construction of deviance* (2nd ed.). Oxford, UK: Blackwell.
- Goode, E. (2008). Moral panics and disproportionality: The case of LSD use in the sixties. *Deviant Behavior*, 29, 533–534. doi: 10.1080/01639620701839377.
- Grant, I., Atkinson, J.H., Gouaux, B., & Wilsey, B. (2012). Medical marijuana: Clearing away the smoke. *Open Neurology Journal*, 6, 18–25. doi: 10.2174/1874205X01206010018.
- Hartman, D.M., & Golub, A. (1999). The social construction of the crack epidemic in the print media. *Journal of Psychoactive Drugs*, 31, 423–433. doi: 10.1080/02791072.1999.10471772.
- Jenkins, P. (1994). ‘The ice age’: The social construction of a drug panic. *Justice Quarterly*, 11, 7–31. doi:10.1080/07418829400092111.
- Jones, J. (2015). *In U.S., 58% back legal marijuana use*. Retrieved from <http://www.gallup.com/poll/186260/back-legal-marijuana.aspx>.
- Kanny, D., Brewer, R., Mesnick, J., Paulozzi, L., Naimi, T., & Lu, H. (2015). *Vital signs: Alcohol poisoning deaths – United States, 2010–2012*. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6353a2.htm>.
- Lamarine, R.J. (2012). Marijuana: Modern medical chimaera. *Journal of Drug Education*, 42, 1–11. doi: 10.2190/DE.42.1.a.
- Linnemann, T. (2009). Mad men, meth moms, moral panic: Gendering meth crimes in the Midwest. *Critical Criminology*, 18, 95–110. doi: 10.1007/s10612-009-9094-8.
- Lovegrove, M.C., Mathew, J., Hampp, C., Governale, L., Wysowski, D.K., & Budnitz, D.S. (2014). Emergency hospitalizations for unsupervised prescription medication ingestions by young children. *Pediatrics*, 134, 1009–1016. doi: 10.1542/peds.2014-0840.
- MacCoun, R.J., & Mello, M.M. (2015). Half-baked: The retail promotion of marijuana edibles. *The New England Journal of Medicine*, 372, 989–991. doi: 10.1056/NEJMp1416014.
- McRobbie, A., & Thornton, S.L. (1995). Rethinking ‘moral panic’ for multi-mediated social worlds. *British Journal of Sociology*, 46, 559–574. doi:10.2307/591571.
- Miller, J. (2016). *In Colo., a look at life after marijuana legalization*. Retrieved from <http://www.bostonglobe.com/metro/2016/02/21/from-colorado-glimpse-life-after-marijuana-legalization/rccczuhMDWV74UC4IxXIYJ/story.html>.
- Musto, D. (1973). *The American disease: Origins of narcotic control*. New Haven: Yale University Press.
- Omori, M.K. (2013). Moral panics and morality policy: The impact of media, political ideology, drug use, and manufacturing on methamphetamine legislation in the United States. *Journal of Drug Issues*, 43, 517–534. doi: 10.1177/0022042613491101.
- On ders, B., Casavant, M.J., Spiller, H.A., Chounthirath, T., & Smith, G.A. (2015). Marijuana exposure among children younger than six years in the United States. *Clinical Pediatrics*, 55, 428–436. DOI: 10.1177/0009922815589912.
- People Press.org (2015). *In debate over legalizing marijuana, disagreement over drug's dangers*. Retrieved from <http://www.people-press.org/2015/04/14/in-debate-over-legalizing-marijuana-disagreement-over-drugs-dangers/>.
- Reinerman, C., & Levine, H.G. (1997). The crack attack: Politics and media in the crack scare. In Reinerman C., Levine H.G., (Eds.), *Crack in America: Demon drugs and social justice* (pp. 18–51). Berkeley: University of California Press.
- Riffe, D., Lacy S., & Fico, F. (1998). *Analyzing media messages: Using quantitative content analysis in research*. Mahwah: Lawrence Erlbaum Associates.
- Sloman, L. (1979/1998). *Reefer madness: A history of marijuana in America*. New York: St. Martin's Griffin.
- Smith, K.C., Wakefield, M.A., Terry-McElrath, Y., Chaloupka, F.J., Flay, B., Johnston, L., ... Siebel, C. (2008). Relation between newspaper coverage of tobacco issues and smoking attitudes and behaviour among American teens. *Tobacco Control*, 17, 17–24.
- Weidner, R.R. (2009). Methamphetamine in three small Midwestern cities: Evidence of a moral panic. *Journal of Psychoactive Drugs*, 41, 227–239. doi:10.1080/02791072.2009.10400533.
- Whiting, P.F., Wolff, R.F., Deshpande, S., Di Nisio, M., Duffy, S., Hernandez, A.V., ... Kleijnen, J. (2015). Cannabinoids for medical use: A systematic review and meta-analysis. *Journal of the American Medical Association*, 313, 2456–2473. doi: 10.1001/jama.2015.6358.

Copyright of *Drugs: Education, Prevention & Policy* is the property of Taylor & Francis Ltd and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.