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'Zombies', 'cannibals' and 'super humans': A quantitative and qualitative analysis of UK news media reporting of cathinone psychostimulants labelled 'monkey dust'.

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Background: The news media is an influential source of information on substance use. It can help to set the agenda for public thinking and policy responses by framing substances, substance use and people who use drugs (PWUD) through narratives of 'drug scares', which may reproduce the justification of prohibitionist drugs policy responses, and undermine efforts to reduce stigma towards affected groups. Using the example of 'monkey dust', an inconsistently identified set of substituted cathinone psychostimulants, we explored how a newly emerging drug 'problem' was reported in the UK news media, and what this tells us about prevailing attitudes towards substance use and PWUD.

Methods: A quantitative content and qualitative thematic analysis of UK news media (n=368 articles) representations of the cathinone psychostimulants compounds labelled 'monkey dust' was conducted.

Findings: A number of themes were identified that highlight how UK news media reporting of monkey dust was underpinned by a drug scare narrative. Reporting provided a unrepresentative, somewhat distorted, incomplete and simplified account of monkey dust use, which was presented as new, dangerous and as requiring legislative action. Such reporting led to the dehumanisation, criminalisation and stigmatisation of PWUD and the obscuring of the complexities of use.

Conclusion: Coverage of monkey dust met the criteria of a drug scare. We conclude that to prevent the negative impact such reporting may have on PWUD, it is important that relevant stakeholders, including researchers work, with journalists to change these types of narrative in order to try and prevent propagation of stigmatising narratives.

Introduction

The media is an important and influential source of information on substance use; it sets the agenda for public thinking by framing substances, substance use and those who use substances in certain ways, in turn influencing which drug related issues are perceived as salient (Forsyth, 2001; Lancaster et al., 2011; Orsini, 2017; Swalve and DeFoster, 2016). The news media not only tell the public *what* to think about, but *how* to think about a range of social issues, including what drugs and individuals are perceived as 'risky' and therefore what practice and policy responses are deemed necessary and acceptable to respond to the 'problem' of drug use as it is constructed and presented (Atkinson et al., 2019; Lancaster et al., 2011; McCombs 1997). The framing of drug issues as salient and problematic feeds into the policy making process, by shaping political discourse and building support for, and opposition towards, certain policy responses (Belackova et al., 2011; Forsyth, 2001; Lancaster et al., 2011; McArthur, 1999; Stevens and Zampini, 2018; Swalve and DeFoster, 2016). Whilst in the context of drug prohibition the responses put forward by and in the media tend to be legislative (e.g. Alexandrescu. 2014; Forsyth, 2012; Hughes et al., 2011), the news media also provides a platform in which current drugs policy can be contested and alternative approaches (e.g. harm reduction, decriminalisation, legalisation) advocated (Atkinson et al., 2019), meaning that the public are presented with a complex mix of messages.

'Drug scares', as defined by Forsyth (2012), are a common feature of the news media landscape, and follow a familiar pattern (Ayres & Jewkes, 2012; Forsyth, 2012; Goode & Ben-Yehuda, 1994). Reports may originate at national level, or typically (although not exclusively) in non-mainstream media or local news sources, and then following high profile or unusual events, break into the mainstream and national press. In a drug scare, certain drugs, patterns of use and populations are framed as new, novel and dangerous (Forsyth, 2001; 2012; Taylor, 2008; 2016). Although drug scares may cover a range of compounds with diverse psychopharmacological and toxicological properties, similar or generic drug effects and adverse outcomes tend to be reported, with a focus on newsworthy cases involving death and violence, often without forensic confirmation of the substances involved (Forsyth, 2012, Goode, 2008). In a drug scare, the extent, severity and impact of drug use are presented disproportionately, and threat is enhanced through highlighting uncontrollability without intervention. By emphasising threat and danger, and privileging certain actors in defining the 'problem' (e.g. police, politicians), a limited range of usually prohibitionist responses and solutions are prioritised in reporting, in turn influencing public understanding and the cultural and social environment in which drug use takes place (e.g. prohibition, police 'crack downs' and arrests) (Acevedo, 2007; Ayres & Jewkes, 2012; Chermack, 1997; Hughes et al., 2011;

Forsyth, 2012; Swalve and DeFoster, 2016; Taylor, 2008; 2016). Whilst dissenting discourses do appear, they tend to be less prominent than those reflecting status quo law and order responses (Alexandrescu, 2018; Forsyth, 2012).

Moreover, within drug scares, some groups who use drugs (e.g. young white and more affluent females) are presented as victims, whilst others (e.g. those using heroin, people who are homeless) are presented as deviant and as a threat to wider society in ways that reflect and reinforce structural inequalities (Alexandrescu, 2018; Belackova et al., 2011; Boland, 2008; Boyd, 2002; Lancaster et al., 2011; Manning, 2007; O' Conner, 2008; Taylor, 2008, 2016; UKDPC, 2010; van der Bom et al., 2018). As discussed by Alexandrescu (2018:357), a focus on the 'who', 'what' and 'how' of drug taking shapes the tone of drug reporting, and through the process of 'othering' (Ayres & Jewkes, 2012; Taylor, 2010), media understandings of substance use are simplified and reduced to poorly defined terms such as addiction, danger, and harm (Alexandrescu, 2018; Ayres & Jewkes, 2012; Hughes et al., 2011; Stevens, 2007; Taylor, 2016; Wincup & Monaghan, 2016). Research into representations of substance use in reality TV such as that defined as 'poverty porn' (Atkinson and Sumnall, 2018), and research into news media reporting of 'Spice' use (i.e. synthetic cannabinoids receptor agonists; SCRAs) (Alexandrescu, 2018), has also emphasised how the demonization of people who use drugs (PWUD) is not only a product of the moralisation of substance use itself, but drug use is also used as a symbol and overlapping feature of neo-liberal anxieties over so-called 'redundant populations', who are doubly moralised and 'othered' for their substance use and 'dependence' on state welfare, in ways that reinforce classed inequalities. Thus, drug scares are not only an outcome of fears surrounding the use of drugs as a symbol of immorality, but represent broader fear and anxiety over the behaviour of certain populations, within the neo-liberal social-economic order. Such framing creates a 'twofold stigma' of drug use and welfare dependency that may direct blame towards marginalised groups, in a way that obscures the structural causes and determinants of drug use, and inequality itself (Alexandrescu, 2018; Atkinson and Sumnall, 2018; Wincup and Monaghan, 2016).

Given the preoccupation of the media with drug-related issues, research has explored the framing of news media reporting on a range of substances and the implications for the development of public opinion, policy formation and preference, the lived experiences of PWUD, and drug use itself (e.g. methamphetamine, Ayre & Jewkes, 2012; Weidner, 2009; Spice, Alexandrescu, 2018; ecstasy, drug deaths, Forsyth, 2001; mephedrone, Forsyth, 2012; Alexandrescu, 2014; cathinones, Swalve and DeFoster, 2016). In recent years, 'monkey dust', has been used in news media reporting and popular discourse as a generic term to describe a number of different synthetic substituted cathinone compounds (PHE, 2018). The term

emerged in one urban region of the United Kingdom (the West Midlands, based on date of first reporting the local newspaper, *The Sentinel*), but subsequently received national attention through media reporting (*Daily Mirror*). Substituted cathinones were controlled in the UK under the Misuse of Drugs Act 1971 in 2010 under a generic definition (ACMD, 2010), and all other non-exempted new psychoactive substances (NPS) were controlled under the Psychoactive Substances Act 2016. Previous research has explored media reporting of NPS, including other cathinones such as mephedrone (e.g. Alexandrescu, 2014; Forsyth, 2012). This work has suggested that reporting on NPS met the criteria for a drug scare, and by focussing on (unconfirmed) deaths, framing substances as a threat to the nation's youth and supporting calls for legislative action, the news media influenced the decision to control the compound mephedrone (Alexandrescu, 2014; Forsyth, 2012). Based on the premise that news media reporting of drug issues can influence the public's understandings of drug use, trends in use, attitudes to PWUD, and what are considered appropriate and acceptable policy responses (Alexandrescu, 2014; Atkinson et al., 2019; Forsyth, 2012; Lancaster et al., 2011; Swalve and DeFoster, 2016), we aimed to critically explore the ways in which the UK mainstream news media has reported the group of psychostimulants compounds commonly referred to as 'monkey dust'.

Methods

A quantitative content and qualitative thematic analysis of UK mainstream news media (printed and online) reporting of 'monkey dust' was conducted. We were interested in what features and themes emerged, and how these framed understandings of the substance(s) and the people who used them, the actors that were provided with a platform to define the problem, what evidence was drawn upon, what responses were proposed, and whether reporting met the criteria of a 'drug scare' (e.g. newness, threat, counter reactions, use of unconfirmed cases, prediction, calls for legislative change) (Chermack, 1997; Forsyth, 2012; Swalve and DeFoster, 2016). Given the changing media landscape where online news is available globally, local news reports have become more easily accessible for reproduction and expansion by national and international news journalists. As such, we were also interested in which local news stories were regarded as 'newsworthy' (Forsyth, 2012) at national level, and how 'monkey dust' developed from a local to national concern.

Articles published before 31st May 2019 containing the word monkey dust were retrieved from the Lexis Nexis database, which provides access to all printed and online

articles published by UK (national, regional and local) newspapers in the last 35 years. Given the changing nature of news media consumption, with increased use of online sources and a fall in printed circulation (Ofcom 2018), it was important to include other widely read online news sources that do not feature within the Lexis Nexis database. As such, the BBC News and Sky News online news sites were also searched using the same search terms. A total of 605 articles were retrieved and screened for relevance. Duplicates and irrelevant articles were excluded and a total of 368 articles were included in the study and subject to analysis (see Table 1). Articles were published in a total of 40 news sources. A total of 14 national news sources reported on monkey dust (n=46, 13%) (*Daily Mail, Mail Online, The Sun, The Daily Mirror, The Daily Record, The Daily Star, The Times, The Sunday Times, The Daily Telegraph, The Guardian, The Independent, The-I, BBC News Online, Sky News Online*), but the majority (n=322, 88%) were published in local news sources, particularly one local news source *The Sentinel*. This news source covers the geographical location (e.g. Stoke on Trent in the county of Staffordshire) in which the term 'monkey dust' appears to have originated, and the location in which the use of compounds labelled monkey dust are predominantly used (personal correspondence from drug seizure forensic providers).

As discussed by Ayre & Jewkes (2012), drug issues are not only constructed in the news media through words, but also visually through the use of photographs, and increasingly video footage (including stills) (Swalve and DeFoster, 2016). Such material is important in that it may be interpreted by audiences as evidence of real events, in a way that increases readers trust in the validity of the narrative and the events being reported (Ayre & Jewkes, 2012). Images are also powerful and voyeuristic, in that they provide a visual representation of drug use as an issue that is often private yet omnipresent, whilst conveying immediate meaning often in simplified ways and without context (Ayre & Jewkes, 2012). Similarly, Alexandrescu (2019:11) highlights how the use of audience-generated visual materials in news reporting of drug use by marginalised groups such as those who are homeless '*mobilises emotion and aesthetic realism*' among audiences. As such, we considered the use of photographs within the articles, and how they interacted with the written narrative. A limitation of the Lexis Nexis database is that visual images used within news reports are not captured. In order to retrieve photographs for analysis, we searched individual online news sources, and retrieved photographs (N=183), which were available across 86 articles.

A quantitative content analysis (Atkinson et al., 2019; Atkinson & Sumnall, 2018) was initially conducted using Excel, to examine the manifest content through deductive and inductive coding (e.g. Alexandrescu, 2014; 2018; 2019; UK Drug Policy Commission 2010; Forsyth, 2012). The lead author conducted a pilot with additional codes emerging from the data being subsequently applied to the whole sample of articles (including photos) and the

extent and nature of reporting was then explored using descriptive statistics. Percentages presented within the analysis refer to the number of articles promoting each particular theme and feature. Quantitative content analysis was used alongside qualitative thematic analysis, as it enabled larger samples to be analysed and gives an indication of the *extent* to which the public are exposed to certain framing within drug reporting. That said, studying the prevalence of certain framing and the prevalence of media focus on certain issues does not adequately reveal the *nature* of media reporting, and as such, qualitative analysis was conducted to consider the role of language and discourse in creating meaning and salience. Moreover, just because one issue is focussed upon to a greater extent than another does not necessarily mean that these issues are regarded as more salient, as the use of sensationalist language may be more memorable and impactful than the extent of framing. Following the quantitative content analysis, a number of noteworthy overarching themes in the way that monkey dust was framed were subject to a qualitative thematic analysis and further development using NVivo 11. This involved further close reading of the articles and the systematic classification of theme identification and a focus on the language and imagery used (Braun & Clarke, 2006).

We begin by discussing the emergence of monkey dust reporting, what actors and evidence (i.e. data sources) were drawn on to define and establish monkey dust as a 'problem', before presenting a number of interlinked questions containing sub themes, to address the 'who', 'what', 'why' and 'how' of monkey dust use as it was reported in the news media. When addressing each question, both the quantitative and qualitative analysis are drawn on, and example headlines, quotes and images discussed.

INSERT TABLE 1 HERE

Findings

The emergence of monkey dust and coverage overtime

As shown in Figure 1, the first reports of monkey dust appeared in the local Staffordshire published news source *The Sentinel* (covering the city of Stoke on Trent) in early 2013. It was here where the precedence for an association between monkey dust use and violence was first established, with the reporting of a murder case in which the perpetrator was '*high on drugs during [a] 'savage' attack*', having *taken 'the drug 'monkey dust'*. There was a 2-year

delay before monkey dust became national news, when the *Daily Mirror* and *Mail Online* reported on the criminal case of a traveling salesman who was prosecuted for disposing of a cigarette through an elderly person's letter box whilst under the '*influence of monkey dust*'. With a prosecution of arson being secured through the analysis of DNA collected from the disposed cigarette, the event became newsworthy due to its resemblance to crime fiction, and the victim's familiarity with '*CSI programmes on television and reading dozens of detective novels*' that influenced her decision to submit the deposited cigarette for analysis (*Mail Online*). This was followed by further national reporting (*Daily Mirror, The Sun, Mail Online, Daily Star, Daily Telegraph*) of another event; a robbery involving use of monkey dust in September 2015, in which the male perpetrator was reported as having '*dressed as Cruella de Vil*' (a female Disney cartoon character) and being '*arrested when customers recognised him in drag [whilst] high on a drug known as 'monkey dust'*". Thus, despite local news reports (18%, n=50) of cases involving an (unconfirmed) monkey dust related death, 'murder' and acquisitive crime, it was two unusual and amusingly framed cases that were regarded as newsworthy by the national press.

INSERT FIGURE 1 HERE

There was little national coverage in 2016 (n=1) and 2017 (n=1), although reporting continued at local level (20%, n=60). An increase in national coverage began in 2018, when despite the term monkey dust already being established, it was described as a '*new*' drug (6%, n=21). The language subsequently used to describe monkey dust became increasingly sensationalised (20%, n=72), with adjectives such as '*dangerous*', '*terrifying*', '*evil*', '*frightening*', '*appalling*', '*demon like*' and '*abhorrent*' being used to describe the drug(s), alongside the use of inhuman analogies to reinforce claims that use led to changes in behaviour (e.g. superhero characters, demons, zombies) (see theme *Metamorphosis*). Local reporting continued into 2019 (n=92 articles between January and May 2019), but no national reports were published from December 2018. Thus, as with previous drug scares, news media concern and the use of sensationalist language to describe the substance(s) effects appeared to heighten once the issue became more mainstream through national publications (Forsyth, 2012), with such framing feeding back into local reporting. However, unlike other recent drug scares (e.g. mephedrone ; Forsyth, 2012), media reporting did not initiate or coincide with 'knee jerk' legislative policy responses, and national reporting declined despite ongoing calls at local level for the reclassification of monkey dust compounds.

‘What is monkey dust?’

Despite monkey dust first being reported in the local news in 2013, by 2018 it was described in national news sources as a ‘new’ drug (6%, n=21), with articles subsequently asking ‘*What is monkey dust?*’ (e.g. *The Independent, Daily Mirror, Daily Post, Liverpool Echo, Bolton News, Liverpool Echo, Sky News Online*). There was a lack of reference to particular compounds in the local press prior to monkey dust becoming newsworthy at national level, and it was first referred to in the national press, as ‘*a synthetic substance sometimes called bath salts*’ (*Daily Mirror*). Although specific compounds or classes of compounds were not identified, the controlled status of monkey dust compounds was suggested to be Class B substances in around a third of articles (30%, n=110), yet at times the substances were labelled as, and associated with, new/novel psychoactive substances (2%, n=7), ‘legal highs’ (6%, n=22) and ‘*bath salts*’ (3.5%, n=13), thus reflecting previous drug scares surrounding other substances (Alexandrescu, 2018; Forsyth, 2012; Swalve and DeFoster, 2016).

Moreover, specific compounds or drug classes identified as monkey dust were named in only a quarter of articles (25%, n=92) and as shown in Figure 1, these changed over time. Generally, monkey dust was described as a synthetic (18%, n=66), psychoactive (9%, n=33), cathinone (7%, n=25), or stimulant (6%, n=22) substance. The first compound to be specifically named was the cathinone MDPV (12%, n=43) in the local press in May 2013. In February 2016, the cathinone alpha-PVP was identified as a monkey dust substance (2%, n=6), and from 2018, the cathinone MDPHP was mentioned (8%, n=28) (e.g. *Daily Post, Huddersfield Daily; the Sentinel, BBC News Online*). Public Health England (1.6%, n=6) was cited as an authoritative source, and identified monkey dust as MDPHP in December 2017 in a way that added credibility and certainty. Despite this, alpha-PIPH was referred to in late 2018, and all previously named compounds were subsequently used interchangeably to describe monkey dust. Uncertainty regarding what compound(s) constituted monkey dust is further highlighted by the incorrect labelling of the substance as the dissociative arylcyclohexylamine compound PCP in a number of articles (3%, n=12) (e.g. *Daily Mail*). Such ambiguity over what compounds constituted monkey dust allowed the press to predominantly define the substance(s) in relation to the substance(s) purported adverse effects (e.g. hallucinations, paranoia) and the behavioural outcomes of use (e.g. violence).

Who and what defined the ‘problem’?

The news media provided a platform through which various actors constructed 'monkey dust' substance(s) and its use as problematic. A range of actors were drawn on across the majority (84%, n=307) of articles, but criminal justice professionals (see Table 2) such as solicitors, judges and the police were most frequently represented (72%, n=264). As such, despite articles reporting on the health harms of use (see Table 5) the issue was predominately represented as one of criminal justice and criminality, which had the effect of framing those who use monkey dust as criminals, and legislative action being prioritised and endorsed as an appropriate response (see *Reclassification*). This focus on criminality and criminal justice was further reinforced by the use of photographs (28%, n=105, see table 4) such as police 'mugshots'¹ (9%, n=33), and images of PWUD (e.g. entering court) (2%, n=8), crime scenes (7% n=25), locations in which incidents occurred (4%, n=13) and law enforcement officials (9%, n=34). The use of mug shots was particularly noteworthy, as they include depictions of individuals who may have been intoxicated and appeared to be in poor physical health. Such images helped create to a binary between 'us' and 'them', based on criminality, morality and appearance, in ways that suggested PWUD were inherently different and in need of control². However, the voices of PWUD were relatively absent and their perspectives included in only 2% (n=9) of articles. When they were drawn upon, they were quoted to raise concern about the substance(s), to suggest rising levels of use and adverse effects (see *What does it do and why is it harmful?*), or to call for the reclassification of the substance (see *'What should be done?'*).

INSERT TABLE 2 HERE

Moreover, the data sources drawn on as 'evidence' of monkey dust use and its effects were predominantly from law enforcement sources, and included public calls to the police for suspected monkey dust related incidents (16%, n=60) and the testing of substances as part of prosecutions for possession and supply offences (23%, n=83), which further positioned use and those using in relation to criminality. Estimates of the number of call outs to the ambulance service (6%, n=23) for suspected monkey dust related incidents were also drawn upon, but like references to police incident data, there was a lack of toxicological or forensic confirmation of what compounds had been used by those suspected of using monkey dust. Whilst 16% (n=64) of articles discussed death as an outcome of use, monkey dust was discussed in

¹ The routine photographing of individuals committing criminal offences. They allow individuals to be kept under surveillance and for criminal identities to be documented (Finn, 2009).

²It is for these reason that images identifying PWUD have not been reproduced in the article.

relation to 21 individual fatalities, with only a small (n=6³) number reported as involving the ingestion of monkey dust compounds by the deceased via toxicological confirmation (see *How big of a problem is it?*). With a lack of toxicological confirmation of the compounds used, and a lack of clarity and the changing nature as to what compounds constitute monkey dust (see *'What is Monkey Dust?'*), the effects of use reported could not therefore be attributed to a particular compound, which highlights the social constructed nature of the problem.

INSERT TABLE 3 HERE

INSERT TABLE 3 HERE

'What does it do?' and 'Why is it harmful?'

Effects of use

In keeping with other studies of news reporting of drugs, the reported effects of monkey dust included death and violence in a way that enhanced the perceived threat of the substance(s). 94% (n=345) of articles discussed the effects of monkey dust and as shown in table 5, a range of behavioural/effects to others (76%, n=278), physical (64%, n=236), and psychological (63%, n=230) effects were reported. Whilst the physical effects reported were those that affected PWUD, the behavioural effects were predominantly acts that targeted others, such as violence (28%, n=102), and aggression (21%, n=78), which were reported in a way that positioned PWUD as dangerous. A focus on the effects of use, resulted in the creation of a substance that was deemed *'harmful'*, *'terrifying'*, *'sinister'* and *'dangerous'* to both PWUD and the wider public, but with more weight given to the latter. However, monkey dust was rarely discussed as a public health issue (9%, n=34). *'Addiction'*, as an outcome of use, was implied (e.g. labelling individuals as *'addicts'*) in 40% (n=147) of articles (although not defined), yet there was a lack of focus on experiences of substance use, or motivations for use of such an apparently harmful compound. Instead, a focus on the outcomes such as acquisitive crime (18%, n=68), further emphasised the threat to the public of those labelled as *'addicts'*. Moreover, the psychological effects of use were reported in a way that further enhanced the perceived threat posed by those using monkey dust through associations with psychosis (12%, n=44), and paranoia (27%, n=101). For example, the *Daily Post* claimed that as an outcome of paranoia *'people can start to believe they are being chased and lash out at others'*

³ Four due to ingestion, two due to injecting practices.

(Daily Post). In extract 1, violence and psychosis were focused upon and anecdotal accounts of extreme and 'hair raising episodes' in the United States (US) (6%, n=23) drawn on to suggest those 'high on the drug' are 'dangerous for those around the user (see section *Zombies*). Whilst mental health issues among those using monkey dust were acknowledged (12%, n=44), articles tended to focus on mental health issues as an outcome of use, rather than as a co-occurring condition. Presenting mental health, psychosis and paranoia as a direct outcome of use and as leading to violence and aggression, not only reinforced the notion that use posed risk to others, but conflated drug use with mental health. By focusing on drug use itself as the cause of mental health issues, other (treatable) factors were also overlooked.

Extract 1

'It [monkey dust] is already sending users into violent and psychotic episodes in towns and cities across the country...Monkey dust is also dangerous for those around the user, and in America it has been held responsible for a number of hair-raising episodes. An elderly woman was attacked with a shovel by a man, high on the drug, who was claiming to be an alien'

(The Daily Mirror)

Despite uncertainty with regards what compounds monkey dust contained, and if the subject(s) of articles had even ingested them, the news media gave the impression of certainty by implying causal links between use and behavioural outcomes (e.g. violence and paranoia). This was done through emphasising how incidents and crimes occurred as an outcome of individuals being 'under the influence', 'in the grip of', 'high on' and 'drugged up' on monkey dust (43%, n=160) (Chief Superintendent quoted by the *BBC*, *The Sentinel*, *Daily Mail*). In attempts at risk communication by police and ambulance staff, the effects of use were reported as unknown and varying due to a lack of clarity as to what compounds monkey dust contained (4%, n=13). However, as shown in extract 2, despite addressing such uncertainties, use was linked to a range of severe effects such as 'seizures', conditions such as 'heart attacks and strokes' and 'long-term illness' and death ('others never wake up'), thus contradicting statements about uncertainty and variation in effects.

The most prominent physical effects discussed were deaths and hospitalisations (see Table 5) and 19% (n=69) of articles reported incidents involving paramedics. Deaths were a commonly reported outcome of use and those using were warned by the police and paramedics that use could lead to 'long-term illnesses whilst others never wake up' (*Daily Record*) and that PWUD were 'dicing with death' (*The Sentinel*). However, as discussed, few

reported deaths were confirmed as involving monkey dust compounds (n=6) (see '*How big is the problem?*') and the effects of use were predominantly discussed with a tone of certainty, despite a lack of clarity with regards the chemical compounds consumed and a lack of toxicological confirmation.

Extract 2

'People who take these substances have absolutely no way of knowing what is contained within them as the chemicals are untested and unregulated," a spokesman said. "The effect on the patient can vary considerably; our staff often treat legal high [NPS] users who have suffered seizures, heart attacks and strokes. Some patients are left with long-term illnesses, while others never wake up."

(The Guardian).

INSERT TABLE 5 HERE

Monkey dust as 'worse' than other illicit drugs

In the absence of available information on monkey dust and its relevantly recent emergence, the substance(s) and its effects were compared to a number of other drugs (14%, n=51) (e.g. SCRA, heroin, cocaine, methamphetamine) which heightened the perceived threat. For example, it was framed as having replaced the SCRA 'Spice' as a new substance of concern ('*First it was spice... now it's monkey dust*', *Blackpool Gazette*), and as being '*worse than*' (*Bolton News*) and '*similar*' (*The Sentinel*) to Spice, which was described as a '*less dangerous alternative*' (*Birmingham Post* quoting homeless voluntary outreach worker). It was also compared to a number of Class A drugs, such as being described as being as '*powerful as crack*' (*Birmingham Mail, Sunday Mercury, Birmingham Post*), and as having a more negative impact on the lives of those using than heroin (e.g. '*his drug of choice changed to money dust and it had even more influence on his like than the heroin he was taking previously*', Solicitor, *The Sentinel*). Moreover, substance use service providers and criminal justice professionals were quoted to describe the effects of use, and described the substance as '*one of the worst drugs we have seen*' (*Daily Star, BBC News Online* quoting a substance use worker) and as '*causing more problems than any other drug*' (*Solicitor, The Sentinel*). Such comparisons may either undermine the risks posed by other drugs by suggesting they are less harmful, or, may reinforce all drug as dangerous through association which was

reinforced through the use of stock images of generic white powders (12%, n=43) and drugs paraphernalia (2%, n=66).

As discussed, the perspectives of PWUD were relatively absent from articles, but when their voices were included, they were quoted to describe the substance(s) with reference to other drugs. For example, one individual suggested that in their opinion monkey dust was ‘*10 times stronger than coke [cocaine]*’ (*The Sentinel, Daily Mirror*), whilst another described how they had been ‘*addicted to heroin since [they were] 14 and [were now] addicted to it [monkey dust]*’, describing monkey dust as ‘*the worse thing going*’. News reports further described individuals as experiencing ‘*cravings similar to those who use meth [amphetamine]*’ (*Sky News Online*) and those ‘*addicted to all sorts of class A drugs*’ were described as finding ‘*monkey dust the most difficult to deal with*’ (*The Sentinel*). Associating and comparing the effects of monkey dust to those of other substances for which use and public concern is more widespread and for which data on harms (including social harms and morbidity and mortality) is better established is notable. Moreover, these other substances have been the focus of negative and at times distorted media reporting and drug scares (e.g. Alexandrescu, 2018; Ayres and Jewkes, 2016). The suggestion that the adverse effects of monkey dust use were greater than those of better characterised compounds amplified the severity of harms associated with use, and through providing a narrow frame of comparison, limited health and legislative responses to those that had already been implemented for other substances.

Metamorphosis and dehumanisation .

Monkey dust use was reported as leading to changes (i.e. a metamorphosis) in behaviour in a way that enhanced the public safety threat of PWUD. For example, those taking the substance(s) were discussed as being unable to feel pain (15%, n=55), lacking control over their actions (‘*losing control*’, ‘*out of control*’, (*The Sentinel*) (8%, n=31)), ‘*highly unpredictable*’ (8%, n=28, *Daily Post, Daily Mirror, BBC, The Guardian, Daily Record, The Times, The Sentinel*) and as acting in bizarre, strange and unusual (10%, n=35) ways such as jumping off tall buildings or into traffic (18%, n=66). Police and emergency services (5%, n=17) staff were also quoted to highlight how those using monkey dust were ‘*very difficult for staff to deal with*’ (*The Sentinel*) and ‘*difficult for...staff to provide treatment for*’ (*West Midlands Ambulance Service spokesperson, Wales Online, The Sentinel, Daily Record*). By emphasising the inability of services to effectively respond and intervene, and suggesting that the pharmacological effects of the drugs restricted the ability of those using to monitor and

regulate their own behaviour, the threat posed by PWUD to others was heightened, and the issue was framed as uncontrollable, which may help legitimize state intervention and more punitive action.

Image 1, which was taken by *Sky News* and later used by various other news sources, provides an example of the use of video clips and photographs as evidence of events and to present extreme incidents as representing all monkey dust use, despite a lack of confirmation on the role of the substance(s) within such incidents. In the image, emergency service staff are depicted observing an individual who was suspected of having used the substance(s) jumping from a roof. The sources discuss how in such positions service providers are at risk of violence (e.g. '*began fighting police*' (*The Independent*), as are the public through claims that in such cases individuals '*will lash out*' (quote originating from *Sky News*). Image 2 also reinforced the idea that '*hard pressed*' emergency services were ill equipped to respond to those using monkey dust, and provided 'evidence' of violent situations, in a way that justified the use of force, and which may lead to public support for more coercive and punitive responses, and reduce supportive bystander intervention . Image 1 is particularly noteworthy in that it was taken from video footage dating back to 2014, which was prior to widespread concerns surrounding monkey dust, and at a time when the compounds labelled monkey dust differed to those being discussed at the time the image was published. Moreover, following the dissemination of the image, it was later reported that the police were unsure which, or if any, drugs had been taken by the individual depicted (Daly, 2018). The use of monkey dust in image 2, which depicts at least five police officers restraining an individual, was also unconfirmed, and both images are examples of photographs being used as 'evidence' of the adverse effects of monkey dust use, and which portray PWUD as a threat to public safety.

INSERT IMAGE 1 HERE

INSERT IMAGE 2 HERE

'Super humans'

As discussed, threat was predominantly enhanced through the use of inhuman analogies, which suggested that using monkey dust led to the metamorphosis from one physical and psychological state to another. Firstly, reports of physical strength being enhanced by use (11%, n=40) created a discourse of superhuman tendencies among those using the substances. For example, use was discussed as providing '*super human*' (BBC News Online, Daily Record) '*inhuman*' (*TOWNS BLIGHTED BY USERS WITH NO FEAR*

AND INHUMAN STRENGTH' (*The Sun*) 'super hero' strength (*Liverpool Echo*) and 'powers' (*Daily Star*). Labelling behaviour following (suspected) use as resembling that of the aggressive fictional character the Incredible Hulk (11%, n=40), further dehumanised and increased the perceived threat posed to others. Such comparisons originated from discussions with law enforcement and emergency service officials, and as such, provided credibility to such claims. For example, within a *Sky News* interview, a police officer described 'how users of the drug appear to have superhero-like strength' and how 'when you are trying to restrain them it's like you are dealing with someone who thinks they are the Incredible Hulk...the strength is unbelievable'. Such statements were frequently reproduced by a range of other news sources (e.g. *Daily Mirror*, *Daily Mail*, *Daily Record*, *Birmingham Mail*, *Liverpool Echo*, *The Independent*, *Huddersfield*), and it became common for monkey dust to be described as 'turning people into the Hulk' (*Coventry telegraph*, *The Times*, *Daily Record*, *Daily Mirror Birmingham Mail*). As shown in image 3, one local news source even published a photograph of the fictional character alongside a photo of white powder, to evidence the effects of use.

Not only did such comparisons have a dehumanising effect, but they reinforced the notion that people who use monkey dust were dangerous and uncontrollable. As shown in extract 3, *The Mail Online* drew on the Hulk analogy to exaggerate the extent of use ('*all too many grim pockets of Britain were being transformed into the Incredible Hulk*'), by stating use was more widespread (see section 'How big of problem is it?'). Casual links were made between use and behavioural outcomes, with monkey dust use being described as 'turning', 'sending' and 'transforming' into acting violently due to the substance(s) 'significantly alter[ing] your mental state' (e.g. *Worcester news*, *Evesham Journal*).

Extract 3

'Whatever the truth, there are all too many grim pockets of Britain where being transformed into the Incredible Hulk for a few hours might have its attractions, however appalling the risks'

(Mail Online).

INSERT IMAGE 3 HERE

The risks posed by those using monkey dust were further exaggerated through the language of contagion. Extract 4 highlights how the *Mail Online* recalled the experience of a paramedic who had been spat upon by an individual suspected of having used monkey dust. Narrating the event in a way that resembles the plot of an apocalyptic zombie film plot, those using were framed as posing a risk to the health of the public through the spread of infection via bodily fluids. The language used is dehumanising and stigmatising with people who use the substance(s) being described as 'deranged', 'super human', 'not of this world' and 'scary'. With the situation being described as 'getting worse' and the public warned 'to be careful because they can be so unpredictable', the public were encouraged to keep social distance from such groups.

Extract 4

'Paramedic [name], is anxiously awaiting the result of tests for various infectious diseases after a deranged user spat in her eye. 'You have to be careful because they can be so unpredictable,' one of her colleagues, [name], told me. 'One man was lying on the floor, and appeared to be unconscious. But then he suddenly jumped up and started behaving as if he was superhuman. 'There were three of us and two were men, but he threw us around like rag dolls. We pressed the panic button and the police came, but it was like holding down a raging bull. [Monkey dust users] are just not of this world.' This sort of thing is happening daily and it's getting worse. I've been in this job 15 years and I've seen every type of drug. 'But this is totally different. There is no appealing to reason. When you are shut in the back of the ambulance with them it's really scary.'

(Mail Online)

'Zombies' and 'cannibals'

Extract 5 and 6 provide examples of reports commenting on interviews with paramedics and the police, who were frequently quoted to suggest PWU monkey dust 'resembled zombies', which resulted in monkey dust being renamed 'zombie dust' and 'cannibal dust' (e.g. *Birmingham Post The Times, Daily Star, The Sun, Daily Post*). Like those who were reported as having turned into the Incredible Hulk, individuals labelled zombies (11%, n=40) were framed as a threat given the 'unpredictable' nature of their actions and violent tendencies ('sometimes they can be violent'). Such observations resulted in monkey dust being defined as 'the terrifying new street drug that turns users into 'zombies' for just £2'

(*Liverpool Echo*) and drawing on the words of one paramedic, led to the city of Stoke on Trent being described as ‘a scene from the *Night of the Living Dead*’ (*Daily Mirror, Daily Mail, Daily Record, Daily Post, Birmingham Post, The Times, The Independent*). As discussed previously, monkey dust was associated with the use of Spice, and through association with the existing discourse of the ‘Spice zombie’ (Alexandrescu, 2018), its effects were made more familiar. However, SCRA use is more widespread in the UK, whilst monkey dust appears to be a localised issue (see section ‘How big of a problem is it?’).

Extract 5

‘The Class B drug is described as "highly unpredictable" and police say that users have jumped off buildings and run into moving traffic, while paramedics said that users in Stoke-on-Trent resembled zombies. One user was pictured by emergency services on top of a roof before falling’

(The Times)

Extract 6

‘Chief Superintendent [name] said: "The public may be familiar with users wandering about in a zombie-like state after taking these drugs, but this is something different. There are various strains of these drugs and what we are seeing now is people becoming extremely agitated and paranoid. Sometimes they can be violent. They're often trying to get away from things, so they'll climb up buildings or run into traffic’ (*The Sentinel*)

This zombie discourse was further used to exaggerate the effects of use and violence among those using the substance(s), through suggesting that cannibalism (13% (n=40) was an effect of intoxication. As with the framing of those using monkey dust having super human strength, images of fictional cannibals such as Hannibal Lecter (see Image 4) were also used. Moreover, reports of unproven drug related incidents in America (6%, n=23) were drawn on as evidence of cannibalism as an outcome of use. For example, the *Daily Post, Daily Mirror* and *Daily Record* reported that ‘*Monkey Dust, also known as Zombie Dust and Cannibal Dust, has been blamed for a number of gruesome incidents in the USA*’, whilst other sources drew on cannibalism as a feature of zombie behaviour to suggest that monkey dust ‘*can make people who take it want to eat other people's faces off*’ (*Sheffield Star, Daily Mail, Daily Star, The Sun, Sky News*). Despite the US incident being clarified via toxicological analysis as not involving the use of cathinone drugs, the association between ‘*bath salts*’ and ‘*zombie*’ and ‘*cannibal*’ like ‘*attacks*’ had been established in the public’s imagination. Six years later, our

findings highlight how this drug scare provided a useful context for the UK news media (6%, n=23) to make associations between monkey dust use and violence (i.e. cannibalism), in a way that further dehumanised those using drugs and enhanced the perceived threat to the public.

INSERT IMAGE 4 HERE

'How big a problem is it?'

News media articles asked *'How big a problem is [monkey dust]?' (e.g. The Independent, Bolton News)*, yet only 19% (n=71) of articles quoted a data source to discuss the prevalence of use, reflecting the lack of available scientific data on the levels of use of the compounds labelled monkey dust (EDND, 2019). The news media exaggerated levels of use in three main ways.

An epidemic

Firstly, in the absence of official measures of use, we counted a total of 202 individual incidents reported in the news media that were suspected as being monkey dust related, and of these, 23% (n=83) referred to data suggesting the use of monkey dust compounds (e.g. confirmation of substances within possession offences). As shown in table 3, calls to the police (16%, n=60) and the ambulance service (6%, n=23) concerning incidents anecdotally reported as involving monkey dust use, were predominately drawn on to suggest an increase in use and harms. For example, it was widely quoted that Staffordshire Police had dealt with over *'950 calls/incident related to the drug'* (e.g. *The Times, The Sentinel, The Sun, Daily Record, Daily Mirror, The Guardian, Daily Star, BBC*). Similarly, the West Midlands Ambulance Service were reported as experiencing *'a monthly increase in call-outs'* (e.g. *Daily Mail, The I, Liverpool Echo*) with *'170'* (e.g. *Daily Mirror, Daily Record, Sky News, Liverpool Echo*) and *'178 incidents/call outs'* (e.g. *Sky News, Daily Mirror*) being recorded *'since April where monkey dust was logged as part of the call'*. In other reports, journalists drew on anecdotal figures from those working within homeless services to suggest that *'19 of the 30 people sleeping there this week are past or present dust users'* (*The Sentinel*). On the rare occasion that the experiences of people using monkey dust were included in news reports, they were quoted to draw conclusions about the extent of use, for example, one individual estimated that *'90% of people I know are on the dust'* (*Sky News, The Times*). Despite police reports that

calls to the authorities for assumed monkey dust related incidents had declined in 2019, only 0.3% (n=2) of articles (*'Monkey dust calls drop due to covert ops'*, *The Sentinel*) reported declines in calls and availability (e.g. shortage of supply), with use instead being discussed as having risen (4%, n=13) and as getting 'worse' (2%, n=8).

Spread

Secondly, despite monkey dust being a term predominantly used to describe the use of cathinone substances in the Staffordshire area, and local police and some news sources describing its use and supply as '*localised*', (*Daily Mail Online*) and '*unique to Stoke*' (*Daily Mail Online*), the geographical extent of use was exaggerated, by describing use as '*sweeping*' other areas and '*plaguing the streets*' of the UK as a whole (*Birmingham Mail*, *Coventry Telegraph*, *The Sentinel*, *Daily Star*, *The Sun*). Moreover, describing Stoke on Trent as the '*capital*' (2%, n=6) and '*epicentre*' of '*monkey dust*' (2%, n=7) (public campaign group, *Daily Mirror*, *The Sentinel*), implied that use was occurring in other parts of the UK. Drawing on the language of disease contagion, use was also predicted to '*spread*' (4%, n=14) to other localities, thus, making stories relevant to a wider readership and enhancing more widespread public concern. As shown in extracts 7-9, in the absence of evidence of use outside of the Staffordshire area, local and national news sources predicted that the future use of the substances in different localities and the UK as a whole. Moreover, whilst monkey dust was rarely discussed as an issue of public health (9%, n=34), the news media disproportionately defined its use and effects in terms related to infectious disease as an '*epidemic*' (18%, n=65), '*pandemic*' (1%, n=5) and '*crisis*' (4%, n=15) in a national context, despite a lack of evidence to support such claims.

Extract 7

'Supply of the drug, which sells for just £2 a hit, has spread from Staffordshire to Gloucestershire, the Thames Valley, Wiltshire, Greater Manchester and the West Midlands. It was first noticed just over two years ago'

(The Sunday Times)

Extract 8

'It first appeared in the city [Stoke of Trent] two years ago but this summer, police, paramedics and hospital staff say it has become a city-wide epidemic. And there are concerns that the drug, also called MDPV, which can be bought for as little as £2, could spread to other cities across the UK'

(The Independent)

Extract 9

'WARNINGS have been issued that a powerful synthetic drug dubbed 'monkey dust' is beginning to spread to the streets of Birmingham - selling for just £2. The illegal substance is sweeping the UK, reportedly giving users the sense that they are "the Hulk" because of its mind-altering effects'

(Birmingham Mail)

Although such predictions of widespread use, actual cases of incidents involving monkey dust were only reported occurring in the West Midlands, particularly Stoke on Trent in Staffordshire. There appeared to be a general lack of clarity over use in other areas, with news reports warning the public about the harms caused by monkey dust use within their localities, but local authorities (e.g. Manchester Police and Mental Health Trust) declining to comment on use (*Blackpool Gazette*). In some areas, the authorities contradicted news media claims of use in their area, for example, a spokeswoman for West Midlands Police confirmed that there was "*no intelligence to suggest it has been distributed anywhere in the region of West Midlands, though we are raising awareness of it to officers*" (*Birmingham Post*). However, this did not prevent news sources from making claims and predictions of use in these areas.

Fatality

Thirdly, although there was a lack of confirmation that reported deaths involved the use of monkey dust compounds, the news media and quoted criminal justice and public health professionals drew direct links between the use of monkey dust and the risk of death. For example, articles drew on data on the total number drug-related deaths from the Office for National Statistics (ONS) to generalise to the use of monkey dust. *The Sentinel* stated that '*MORE than 200 people across Staffordshire have died as a result of drugs in the past three years*', and whilst (incorrectly) suggesting that an increase in deaths at national level could be explained by the use of '*a powerful opioid fentanyl which can cause accidental overdoses when mixed with heroin*', death rates in the region were instead linked to '*growing concerns about the harm caused by psychoactive drugs like monkey dust*'. Moreover, police warnings regarding suspected monkey dust related deaths were reported prior to toxicological confirmation, for example, reporting on '*the deaths of two men that were thought to be linked to Monkey Dust*' (*BBC News Online, Sky News Online*). Alongside reports of '*drug-related deaths*' involving a number of substances (e.g. '*monkey dust*', '*heroin*'), it was difficult to determine the role of specific compounds.

The risk of death was further heightened by drawing on quotes (see extract 11) from a coroner who warned users that "*If you value your life, don't take it [monkey dust]*" (*The Sun*) and raised concern over '*the drug's [monkey dust] rapidly increasing prevalence and volatility*' (*The Times, BBC News Online, The Sentinel*). Whilst the coroner was reported as revealing that '*the forensic science lab which covers the West Midlands area has already dealt with at least six fatal cases linked to monkey dust in the last 18 months*' (*The Sentinel*), specific compound(s) were not named, and it is unclear as to whether such fatalities were actually caused by monkey dust compounds, what was meant by the use of the term 'linked', and whether such cases also involved the use of other substances. Moreover, deaths caused by accidents (e.g. traffic accidents) as opposed to drug poisonings were reported and were combined with other unconfirmed cases to suggest that '*several have died*' (*Daily Mail Online*), without specifying the specific compounds used. This led to the news media, police and paramedics making claims that exaggerated the risk of death, stating that '*people are dicing with death every time that they take monkey dust*' (*The Sentinel*), that '*using it was like crossing the road blindfolded*' (*Daily Mail Online*) and that '*some dying immediately from using the drug*' (*The Sentinel*). Moreover, in 5% (n=19) of articles, use of monkey dust was described as being fatal (e.g. '*very dangerous and potentially fatal*' (e.g. *Malvern Gazette, Evesham Journal, Redditch Advertiser, Worcester News*). We found reports on a total of 6 deaths in which the compounds labelled monkey dust were confirmed to have been consumed through toxicological results, all of which also involved the use of other substances. It cannot be determined if these deaths are the same 'six' referred to by the coroner discussed above.

Extract 11

'Several have died. [A male aged] 54, was found by his girlfriend, having collapsed in their house with packets of Monkey Dust in his hand. His death prompted a coroner to express 'great concern' at the drug's rapidly increasing prevalence and volatility'

(Mail Online)

Counter arguments to the narrative of the risk of death were rare, but were present in both local (n=2) and national news sources (n=1). This included articles in *The Sentinel* which highlighted that despite deaths from monkey dust use occurring, '*the biggest killer is heroin*' and *The Independent* stating that '*despite the current monkey dust 'epidemic' hitting North Staffordshire, cathinones have only been mentioned on crime reports in 17 drug prosecutions over the three years*'. Whilst such accounts are noteworthy, they were outnumbered by reports of deaths and the risk of death (31%, n=115) using exaggeration and sensationalist language.

Who uses 'monkey dust' and why?

Homelessness

Monkey dust use was predominantly set within the context of homelessness, with 25% (n=91), of articles discussing use among people experiencing homelessness. Whilst police officials acknowledged that use was not restricted to the homeless population (*The Sentinel*), national sources focused on this population. For example, *Sky News* interviewed a number of individuals who were sleeping rough and using drugs on the street and suggested that '*they are the fairly typical users, people with chaotic lifestyles, dependency issues and no fixed abode*'. Moreover, the quote previously discussed from one homeless individual claiming that '*90% of people I know are on the dust*' (*Sky News*), reinforced use as more prevalent among those who are homeless. However, the term '*homeless*' or having '*no fixed abode*' was mainly used as a descriptive label, or as in the quote above, framed as a '*lifestyle*' (choice), and there was a lack of explanation of homelessness as potential cause and/or a contributing factor to use. Moreover, by labelling those described as criminals and as a threat to the public as '*homeless*', vulnerable people (i.e. those experiencing a range of complex issues) were further framed as a threat. Whilst 7% (n=26) of articles defined those using monkey dust as '*vulnerable*', no explanation of what vulnerability entails was provided, and the structural determinants of vulnerability were ignored. Monkey dust use among those already experiencing problems with drugs (e.g. heroin) and an overlap between the homeless and prison population (6%, n=22) was also acknowledged. However, with a lack of discussion of these adverse experiences, such descriptions (e.g. '*homeless*', '*prison(er)*, and (existing) '*addict*') became negative labels that led to the further demonisation of already stigmatised groups.

The use of anonymised photographs of homeless people, such as images 5 and 6, also had a dehumanising effect, especially considering that the voices of those using the drug(s) and living on the streets were rarely reported within article texts. These images are ethically questionable in that they are often taken without consent, and if consent is given, the individual may have been intoxicated at the time and unable to provide consent freely. Images may also identify vulnerable groups and their location, whilst subjecting them to public scrutiny for their drug use and related behaviour highlighted in reporting. Image 6 also heightens concerns over the public nature (e.g. street use) of monkey dust use within the wider context of homelessness. Alongside the use of quotes from members of the public such as those presented in Extract 12 and 13, the physical presence ('*monkey dusters would congregate there*') of individuals using monkey dust in public spaces was blamed for the so-called decline

of the high street ('it's dead', 'shut') in ways that ignored wider socio-economic factors (e.g. the economy, austerity). The effect is that vulnerable groups are presented as the 'other' and a group that should be excluded from city centre locations, and as undeserving and redundant populations due to what is perceived as be their lack of contribution to society (i.e. 'We pay our taxes and precepts').

Extract 12

'Hopefully the town hall is going to be converted into a library, but Tunstall [constituent town of Stoke] isn't the same anymore. The pubs are still here but there's nothing else, it's dead. All of the shops on High Street are shut. They've removed the benches in the square because the monkey dusters would congregate there. But people would sit on those benches and have a coffee, and now they can't'

(The Sentinel)

Extract 13

'He added: "Cheadle [small market town near to Stoke] is losing out to the city, it is being forgotten. They have people in the city on monkey dust, I understand that, but don't forget Cheadle. We pay our taxes and precepts'

(The Sentinel)

INSERT IMAGE 5 HERE

INSERT IMAGE 6 HERE

Silencing of the structural determinants of use

There was a general lack of explanation for the reasons why people used monkey dust (6%; n=22), or why use was focused in the particular geography and populations. Reasons reported were restricted to those at the individual level, such as 'boredom' (0.5%, n=2) which was provided as an explanation by a local drugs worker, who declared that they "are hoping it is a fad...people are using it because they are bored and it's cheap." (BBC News

Online, *The Times*). Other personal reasons for use such as grieving (1%, n=3), escapism/self-medication and emotional pain (2%, n=5) (*"I was using monkey dust for escapism"* (e.g. *The Sentinel, Daily Mirror, The Times*) and 'stress and anxiety' (1%, n=3) were provided, but with a lack of discussion as to what had caused such experiences. There was a general lack of discussion of the structural determinants of use, such as poverty, deprivation, homelessness and cuts to support services (2%, n=10).

In addition, the cheap price and availability of the substance(s) (18%, n=68) was suggested as a key reason for use, particularly among people who are homeless, with monkey dust being consistently described as being '*picked up for as little as £2*' (e.g. *Sky News*). This price was first reported in late 2018 by both national and local publications, although a source for the figure was not provided. Communication around the drug via social media (1%, n=3) was also presented as a reason for the drugs '*spread*' by three national news sources (*The-I, The Guardian, The Sun*) who quoted a Police Commander suggesting that '*news about it [monkey dust] is spread more easily through social media than it would through phone or word of mouth*' (*The-I, The Guardian*). Such claims are interesting given research showing that news media reporting of drugs can increase online interest and discussion, and potentially use (Forsyth, 2012).

Other than the relationship between individual and wider social and environmental factors being indirectly suggested by a Police representative (*The Sentinel*) who described monkey dust as both a '*drug of choice*' and '*drug of necessity*', wider factors tended to be discussed only within readers' letters. For example, a member of the public explained use as an outcome of wider structural factors such as cuts to services, when suggesting use was '*symptomatic of the wider problems faced by our society. These include the severe cuts to services that support people dealing with issues of addiction, homelessness and mental illness over the past few years*' (*Readers letter, The Sentinel*). Another explored the relationship between monkey dust use and homelessness in a way that acknowledged the context of poverty and Government austerity measures. For example, the '*the growing monkey dust epidemic*' was described as '*blighting too many lives*', within the wider context of '*genuine poverty and even homelessness...[which are] exacerbated by this Conservative Government's social security policies*' (*The Sentinel*). Such alternative accounts were not media led and were rare, yet show a willingness to include public opinion that may contradict news media accounts.

‘What’ should be done?: calls for legislative action

In light of monkey dust use being described as an epidemic that causes a range of adverse effects to users but predominantly poses a threat to public safety, various actors were provided with platforms to suggest solutions to the problem. Whilst the need for multi-agency and ‘*joined-up*’ responses including the provision of substance use and mental health services, prevention and education, as well as a focus on production and supply, were reported (2%, n=8), criminal justice and legislative responses dominated (7%, n=25) and criminal justice officials (e.g. Crime Commissioner, Judge) and members of the public led the debate around suitable responses. From August 2018, the news media began to report calls for the reclassification of monkey dust from a Class B to a Class A substance (6%, n=22), for example, with articles reporting how it should be ‘*reclassified as a Class A drug, which would lead to harsher punishments for those involved*’ (Bolton News).

A community-based campaign group, including those with family members affected by use, ‘*Time for Action*’ was formed with the support of police and *The Sentinel* (‘*We stand with them*’). The group’s aim was to ‘*bust the dust dealers*’ through the reclassification of the substance(s) as a ‘*class A drug - the same as cocaine and heroin*’ and ‘*tougher sentences*’ for dealers through a petition to Parliament. People using monkey dust were distinguished from those supplying the substances(s), with the group highlighting the need to ‘*help*’ those using monkey dust, and the need for a rehabilitation centre in the area. Here, there was a separation of criminal and public health discourses, with the former being used to refer to those supplying drugs, and the latter being applied to those using drugs. Whilst a shift from framing PWUD as criminal could be interpreted as a positive move, this distinction presented a simplified perspective of the drugs market that failed to recognise the existence of user–dealers and social suppliers (Coomber et al., 2018), the effects of police crackdowns on supply on those who both use and sell, and failed to take into account the impact of austerity measures on existing local drug services (Drummond, 2017).

Despite such calls, a number of counter arguments were apparent in debates around what action should be taken. Drug reporting regularly draws on the opinions of academics to insert ‘expert opinion’ into news stories (Atkinson et al., 2019), however they rarely inputted into the reporting of monkey dust (3%, n=10, see Table 2). When academics were quoted, they tended not to speculate on the levels and effects of use, but commented on the nature of the drug market, the need for caution with regards legislative action and hasty reactions to media reporting. In extract 14, a prominent UK academic and former government drugs policy adviser, discussed drugs legislation as a contributing factor to the emergence of substances

such as monkey dust, and questioned the failure of reclassification in addressing drug issues, instead calling for the introduction of drug-checking facilities in Stoke-on-Trent to confirm what substances were being taken. Others discussed responses to monkey dust use and harms within wider debates around the need to maintain and develop early warning systems to monitor the market and collect data on use, and to inform evidence-based decision making (1%, n=3). Despite the inclusion of counter arguments such as these, they were expressed much less frequently than calls for reclassification. Thus, the news media was used to call for legislative action and place pressure on central Government to act, which reproduced prohibitionist discourse. An emerging discourse of public health was apparent yet underrepresented, which may reflect the lack of reporting of academic and expert insight into calls for suitable responses, which tend to be more critical of criminal justice responses and in favour of public health and harm reduction approaches to drug use in the UK. Despite such calls for legal change, the substance(s) were not reclassified, and at the time of writing, the cathinone substances that are labelled as monkey dust, remain Class B.

Extract 14

'Prof David Nutt, a former government adviser on drugs, said the 2016 Psychoactive Substances Act had resulted in cathinones becoming stronger. "Closing the headshops means we now have no control over what is sold: everything is now on the black market ... and there is now no quality control. We have driven people from a weak cathinone to a strong one - that happens with prohibition," he said. Drug-testing facilities should be introduced in areas such as Stoke-on-Trent to look into what exactly is in monkey dust, Nutt added, and reclassifying such drugs as Class As would not be wise. "Moving drugs up classes is a pretence of activity and has no value at all," he said.

(The Guardian)

Discussion and conclusion

The paper presents a critical analysis of the ways in which the UK mainstream news media reported the group of cathinone psychostimulants labelled 'monkey dust'. Whilst not underestimating the potential harms associated with the use of such substances, we conclude

that the reporting met the criteria of a 'drug scare' and as such has a number of implications (Forsyth, 2012). The analysis highlighted how a small local drug trend became national news following a number of unusual events, and once picked up by the national press, how news coverage escalated and became more sensationalist. Despite having been first reported in 2013 and a lack of certainty over what substances were involved, in 2018, monkey dust was labelled as a '*new*' '*dangerous*' drug, and despite evidence, use and harms were predicted to spread to other areas of the UK. A focus on newness and novelty is a key component of drug scares, and helped frame the substance(s) as an issue of concern, yet the compounds labelled monkey dust have existed on the drug market for some time (e.g. MPPV since 2008, PCP since 2006, alpha-PVP since 2011, MDPHP in 2014 (EDND, 2019)). Once reported in the national news, a number of inhuman analogies (e.g. zombies, cannibals) were drawn on which disproportionately presented the threat those suspected of using the substance(s) posed to others, through emphasising the uncontrollability of their behaviour and the need for intervention and control. A wide range of effects of use were reported, but in a similar manner to other drug scares, reporting focussed on death and violence, often without forensic confirmation of the use of monkey dust substances (Forsyth, 2012, Goode, 2008). With a lack of evidence on levels of use and harm, reporting drew on data underpinned by suspected rather than confirmed monkey dust use, such as calls to police and the ambulance service, and high profile, incorrect and sensationalist reporting of violence as an outcome of cathinone use from the USA.

The latter is noteworthy particularly as it allows us to consider where the inhuman analogies attached to the use of cathinone substances originated. In their analysis of media coverage of a 2012 incident known as '*the Miami Zombie Attack*', Swalve and Defoster (2016) describe an internationally reported incident in which an individual who was believed to be '*under the influence*' of '*bath salts*' (i.e. the US term for a range of cathinone compounds), was reported as repeatedly biting a bystanders face. Despite media reporting that the perpetrator was influenced by the use of a '*new*' and '*dangerous*' "*designer drug*", there was no evidence that cathinone use had occurred prior to the attack. One month later, it was clarified by medical examiners that the only drug found in the individual's system was cannabis, and instead mental health was provided as an explanation for the attack. Despite such clarification, the case was used as evidence that those using monkey dust posed a threat to others, and alongside association and comparison with other drugs and predictions that use would spread in a way that would lead to a pandemic, the extent of use and harms were reported disproportionately and the threat enhanced.

Of particular importance is how the vulnerable groups reported as using monkey dust, such as people who are homeless and those with existing problematic drug (i.e. heroin, crack)

use, were dehumanised and presented as deviant and as a threat to wider society through a focus on behavioural effects, uncontrollability and inhuman analogies, in ways that may reflect and reinforce societal stigma, and in turn, the structural inequalities that underpin drug use (Alexandrescu, 2018; Belackova et al., 2011; O' Conner, 2008; Taylor, 2008, 2016). A narrow focus on crime and violence, alongside such behaviour as being presented as a direct outcome of use and the overlooking the wider factors at play (i.e. mental health, cuts to mental health and substance use services, a housing crisis), framed PWUD as criminal and a danger to others (Taylor, 2008). Use and those using were further reduced to criminality through the dominance of criminal justice actors in defining the issue and proposing solutions to it. Such narratives are a common trope in news media reporting, and for example, featured in media reporting on PCP in the 1970s and 80s and methamphetamine use in the USA in the 1990's (Morgan and Kagan, 1980; Spiegel, 1991; Weidner, 2009), leading to police violence towards PWUD. Thus, media reporting has real life effects in that they can lead to police crack downs and in turn the further criminalisation of PWUD (Forsyth, 2001). Dissenting voices, such as an acknowledgement that prohibitionist responses would fail to adequately address the problem and its wider structural causes, did appear. An article in *The Independent* (Goddard and Hamilton, 2018), is particularly noteworthy, in that it discussed the news media's production of drug panics, and the negative effects of the such reporting on the lived experiences of PWUD. However, such arguments were less prominent than those endorsing status quo legislative responses such as reclassification (Alexandrescu, 2018; Forsyth, 2012).

PWUD were also presented as a drain on resources through the pressures placed on public services, their perceived lack of economic contribution to society, and the negative effects of their physical presence in town centres as damaging to local economies. Alongside a lack of consideration of the structural determinants of use and the wider context of social inequalities, such reporting has the potential to reinforce multiple stigmas, which can not only impact on the likelihood of PWUD engaging with services, but may generate public support for more punitive responses (Forsyth, 2001). As discussed by Alexandrescu (2019) in his analysis of news media coverage of 'Spice', media reporting may not only secure support for ineffective and punitive status quo responses, but may help justify the continuation of welfare reduction policies, by obscuring the effects of Government cuts on drug use and related harms. However, despite calls for the reclassification of monkey dust in the UK from class B to A, to date, legislative change has not occurred. Whilst this suggest the drug scare narrative did not impact on policy, reclassification of monkey dust is impossible in practice. Monkey dust is a generic term for a range of cathinone substances, for which there was disagreement on

which compound(s) it contains. For monkey dust use to be addressed via legislative amendments, all substituted cathinones would have to be reclassified.

The role of language, discourse and 'evidence' in creating drug scares and presenting PWUD in dehumanising ways has received much academic attention (e.g. Alexandrescu, 2018; Atkinson et al., 2019; Forsyth, 2001; Lancaster et al., 2011), however, visual imagery is of equally importance. The research found that images and photographs (e.g. mug shots) were reported as evidence of real life events in a way that was ethically questionable, and were used to convey meaning and illustrate the extent, nature and threat posed by monkey dust compounds and people who use them. As discussed by Ayres & Jewkes (2012), such images are ideological and have been used throughout modern history to label certain sections of society as a threat to social order and to reinforce the status quo through the regulation and control of those perceived as nonconforming. In a 24 hour news world, imagery is also used to '*sustain commercial buoyance*' in competitive news markets (Ayres & Jewkes 2012: 232), leading to the reproduction of images that simplify complex social issues in the drive for reader attention to furnish advertising revenue. Drawing on the work of Hall (1973), the authors (Ayres & Jewkes 2012: 232) suggest that the use of imagery when reporting PWUD is concerning, as unrepresentative and stigmatising imagery may be perceived as offering a valid visual proof of '*real world*' events, whilst further dehumanising those who use and framing them as the 'other'. Images can also help build support for punitive responses to complex social issues, and public '*condemnation, ridicule and stigmatisation*' of vulnerable groups (Ayres & Jewkes, 2012:327). We thus highlight the importance of analysing the use of imagery alongside the written word (Ayres & Jewkes, 2012) and consider the interplay between the two when studying the effects of media reporting.

The research provides a case study of negative and simplified ways in which drug use and people who use them are presented in the news media, and how complex issues are reduced to a narrow set of familiar narratives, in a way that obscures the structural causes and determinants of drug use (Alexandrescu, 2018; Atkinson and Sumnall, 2018; Wincup and Monaghan, 2016). We conclude that given that media reporting can have real life impacts on the lived experiences of PWUD by influencing public perceptions and attitudes, how substance users perceive themselves, generating stigma, reducing service uptake and policy responses (Lancaster et al., 2011; Radcliff & Stevens, 2008), it is important to change the narrative to prevent its negative effects (Global Commission on Drug Policy, 2017). Similarly to others who have discussed the impact of news media reporting on drugs and people who use them (Alexandrescu, 2014; Swalve and DeFoster, 2016), we highlight the need for journalists to

ensure reporting of drug issues is better informed and reported in ways that prevent further harm to PWUD, and for policy makers to reconsider reactions to news media reporting that reproduce ineffective policy responses (Alexandrescu, 2018; Swalve and DeFoster, 2016). A change in language will not necessarily reduce prejudice however, and it is important that attempts to change the ways in which PWUD are reported (for example, the USA Changing the Narrative campaign) form part of a wider attempt to inform journalists of the potential impact of their work, in a way that reduces prejudice and increases empathy and encourages advocacy for the most effective and harm reducing policy responses.

The research has a number of limitations. Firstly, we only analysed print media reporting of monkey dust and as such TV portrayals have not been considered. An analysis of media reports alone cannot measure the impact of such reporting on public opinion and the policy making process. Whilst, media communication theory suggests that the media effects individual and community perceptions of risk and norms around drug use and those that use them, more research is needed on how readers/viewers use and interpret news media reporting on drug issues, and how this feeds into the policy making process (Hughes et al., 2011).

Conflict of interests

The authors have no conflict of interests to declare.

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