



BIROn - Birkbeck Institutional Research Online

Kinman, Gail and Clements, A. (2021) New psychoactive substances, safety and mental health in prison officers. *Occupational Medicine* 71 (8), pp. 346-350. ISSN 0962-7480.

Downloaded from: <https://eprints.bbk.ac.uk/id/eprint/47042/>

Usage Guidelines:

Please refer to usage guidelines at <https://eprints.bbk.ac.uk/policies.html>
contact lib-eprints@bbk.ac.uk.

or alternatively

New psychoactive substances, safety and mental health in prison officers

Abstract

Background The use of new psychoactive substances (NPS) in UK prisons is believed to have increased substantially. As well as posing a significant threat to prisoners' health, NPS use can trigger violent, unpredictable, and aggressive behaviour. Dealing with the direct and indirect effects of NPS therefore has the potential to compromise the physical and psychological safety of prison staff.

Aims This study investigates prison officers' perceptions of NPS use in their workplace and their risk of exposure. Relationships between NPS exposure, the workplace safety climate and mental health were also examined.

Methods We assessed prison officers' perceptions of the prevalence of NPS use among prisoners in their workplace, their personal exposure and the safety climate in their institution through an online survey. The General Health Questionnaire-12 measured mental health. Descriptive statistics were used to assess officers' perceptions of NPS use in their workplace and their personal exposure and correlations examined relationships between variables.

Results The sample comprised 1,956 prison officers (86% male). Most respondents (85%) highlighted NPS as a serious cause for concern in their institution. Two-thirds (66%) reported being personally exposed to NPS at least sometimes, with 22% being exposed once a day or more. Significant relationships were found between officers' perceived NPS exposure, assessments of safety climate and self-reported mental health.

Conclusions Our findings highlight the need for urgent action to reduce the use of NPS among prisoners. This is likely to improve the safety climate of UK prisons and the mental health of staff.

Key words: new psychoactive substances, prisons, safety climate, mental health, occupational health.

Introduction

Prison staff are at greater risk of work-related stress, burnout and mental health problems than other public safety occupations (1,2,3). Staff have been found to experience a range of operational, organizational, and traumatic stressors (4), often simultaneously. Challenges to their wellbeing include high demands, long working hours/mandatory overtime, lack of support and control, role strain, bullying and poor resources (1,2,5). A high proportion of UK prisons are officially categorised as over-crowded and many are under-staffed (6,7), increasing the pressure on employees. Moreover, the work is physically and emotionally demanding, as officers are responsible for the control, safeguarding and rehabilitation of people whose behaviour can be unpredictable, resistant or violent. Incidents of aggression between prisoners are common and staff are often subjected to violence, threats and assaults. The number of attacks on prison staff has increased considerably, with serious assaults up by over 200% since 2010 (8). Unsurprisingly, experiencing aggression from prisoners can threaten the mental as well as the physical health of staff, increasing their risk of work-related stress, burnout and trauma (1,4,9).

One of the biggest challenges facing the criminal justice system in the UK is the misuse of drugs. Between 2012 and 2018, the rate of positive random tests for 'traditional' illicit drugs (such as cannabis, cocaine and heroin) in prisons rose by 50% (10). The emergence of new psychoactive substances (NPS), a range of drugs designed to mimic established illicit drugs, such as cannabis cocaine and LSD, has exacerbated the problem. Some estimates suggest that 60% to 90% of the prison population use, or have used, NPS. Many prisoners report trying NPS for the first time in the prison environment, most commonly synthetic cannabinoids (11). The most frequently used synthetic cannabinoid is known as 'Spice', which is inhaled by smoking or vaporising. The popularity of NPS is thought to be due to several factors such as ease of access, being undetectable by

conventional drug testing, as a way of alleviating stress or boredom, or as a form of self-medication (1,12,13). Short staffing means that many prisoners can be confined to their cells for at least 22 hours a day, and they may turn to drugs to ease the tedium (14). NPS are more psychologically and physically addictive than many other drugs and its effects are unpredictable and can be extreme. They can induce or exacerbate mental disorders in users, causing anxiety, depression, paranoia and psychosis, as well as having physical effects such as lack of bowel control, hypertension, loss of consciousness and seizures. NPS use also has a negative impact on the prison culture and the safety of the general prison population, contributing to violent crime, intimidation and vulnerability. The mental health problems and self-harm (ranging from bodily injuries to suicide) observed among prisoners who use NPS are believed to arise not only from the effects of the drug, but also from the anger, anxiety and depression associated with debts, bullying and violence (15,16).

Although the negative effects of NPS use on prisoners have been acknowledged (17), little is known about the implications for the wellbeing of the staff who are responsible for safeguarding them. A recent study on the use of NPS in custodial settings found that 91% of staff had witnessed aggression from drug users, with more than half (53%) experiencing direct harm (18). A survey of more than 1,600 members of prison staff found that more than half (53%) had been personally exposed to NPS taken by prisoners, with more than a third (39%) reporting becoming unwell from the effects of the drugs (19). Symptoms included dizziness, confusion, nausea and vomiting, tachycardia and hypertension, and anxiety and paranoia. It is likely, therefore, that dealing with the adverse effects of NPS (both direct and indirect) and concerns about personal exposure will threaten perceptions of safety and be a source of strain for staff. This study investigates prison staff (i.e. prison officers') perceptions of NPS use in their institution and the extent to which they have been exposed to these

substances. Also examined are officers' relationships between NPS exposure at work, perceptions of the workplace safety climate and their mental health.

Methods

Data were obtained from an online survey. A link was provided on the website of the POA that represents the majority of prison, correctional and secure psychiatric workers in the UK. Sex, age and length of employment in the prison service were also assessed. Respondents' perceptions of the use of NPS in the prison where they were employed were assessed by three statements:

The statements "new psychoactive substances are a serious problem where I work" and "the use of new psychoactive substances has increased where I work" were rated on a five-point scale ranging from 1 = 'strongly disagree' to 5 = 'strongly agree', with higher scores indicating more serious problems and greater use. The statement "I am personally exposed to new psychoactive substances at work" was assessed by a five-point scale ranging from 1 = "never or almost never" to 5 = "regularly" (e.g. once a day or more). For all three questions, higher scores represented more frequent exposure.

Workplace safety climate was measured by a seven-item scale developed for the survey that assessed perceptions of danger and feelings of safety and security. Items were assessed on a five-point scale ranging from 1 = "strongly disagree" to 5 = "strongly agree". Higher scores represented more positive perceptions of the workplace safety climate (Cronbach alpha = .84).

Mental health was assessed by the General Health Questionnaire (GHQ-12) (20), which is frequently used to assess common mental disorders in workplace settings (21). Participants are asked to indicate the frequency or severity with which they have experienced a range of symptoms compared to how they 'usually' feel. All items are scored on a four-

point scale ranging from 'better/healthier than usual' to 'much worse/more than usual'. The Likert scoring system was used, where responses are scored from 0 to 3, and mean scores are calculated ((Cronbach alpha = .96). Higher scores are indicative of higher levels of psychological distress. The proportion of the sample that exceeds the threshold for 'caseness' (i.e. 4) is also provided to highlight the extent of self-reported mental health problems.

Descriptive statistics are provided to illustrate the perceived prevalence and exposure to NPS. Correlations are used to examine the strength of the relationships between prevalence and personal exposure to NPS, workplace safety climate and mental health.

The study was approved by the ethics committee of the School of Psychology at the University of Bedfordshire, UK.

Results

There were 1,956 respondents to this survey (86% male). Ages ranged from 19 to 67 years with a mean of 48 (SD = 9.62). Respondents were employed in prisons across the four UK nations, but most (84.7%) worked in England and all but six were employed in the public sector. Respondents had worked for the prison service for an average of 19 years (SD = 10.15), but the length of employment ranged from five months to 42 years.

Most respondents (85%) reported that the use of NPS was a serious problem in their workplace, with nearly six out of ten (59%) strongly agreeing with this statement. Eighty-five percent of the sample agreed that NPS use had increased in their organisation, with 63% expressing strong agreement. Two-thirds (66%) reported being personally exposed to NPS at least 'sometimes' (once or twice a month), whereas 22% of these were exposed 'often' (once or twice a week) and 18% 'regularly' (once a day or more),

Figs 1 and 2 show the percentage of respondents who reported that NPS use by prisoners was a serious problem in their workplace and the percentage who reported being personally exposed to NPS.

In terms of mental health, sixty-nine percent of the sample scored at the threshold point of four or above.

Figs 1 and 2 about here

Descriptive statistics for each of the scales used in this study and correlations between variables are shown in Table 1. As can be seen, prison officers' perceptions of the prevalence of NPS in their institutions and the extent to which they feel personally exposed to these substances were significantly related to safety climate in a negative direction, and to GHQ-12 scores in a positive direction. This indicates that officers who reported that NPS was more a more serious problem and were more frequently exposed to them tended to report feeling less safe at work and poorer mental health. The strength of the correlation coefficient between NPS exposure and GHQ scores reaches Cohen's (1988) (22) threshold for a medium sized effect and a 'real-world' relevance threshold (i.e. $\geq .3$) (23).

Table 1 about here

Discussion

This study found that most of the prison officers surveyed consider NPS use among prisoners to be a serious problem in their institutions, with many being personally exposed to the substances on a regular basis. The findings highlight the risks of NPS use for the safety and wellbeing of prison staff. The prevalence of NPS use and feelings of personal exposure to these substances were significantly related to officers' assessments of their personal safety in the workplace and to their mental health status.

Prison officers experience a wide range of operational, organisational and traumatic stressors in relation to their job (4) that have the potential to threaten their mental health (1). The findings of this study indicate that NPS use by prisoners is an additional workplace hazard that further challenges the wellbeing of staff. Officers who reported that NPS was a serious problem in their workplace and who felt personally exposed to these substances at work tended to see their workplace as less safe, their job as more dangerous, and themselves and their colleagues at greater risk of injury. Concerns about NPS use and perceptions of personal risk were strongly related to psychological problems such as depression, anxiety, sleeping difficulties and cognitive impairment. Like previous studies of UK prison officers (2,22), the general level of mental health among the sample was poor, further highlighting the urgent need for interventions in the sector to improve wellbeing.

Action is clearly needed to tackle NPS use in prisons. This will have benefits for staff as well as the health and wellbeing of prisoners, as it should reduce the risk of violent incidents and the other negative consequences of drug use and improve the safety of the prison population. In turn, this will reduce the demands placed on staff and enhance the safety culture, with the potential to improve their mental health and wellbeing. Suggested interventions include enhanced training and education, improved detection and better treatment and support services. The need for increased staffing levels in prisons is well recognised (17) and this will improve the safety of prisoners and staff in general. One of the main reasons for NPS use by prisoners has been found to be boredom and lack of stimulation (11), so more officers will reduce lengthy lock-up periods and increase opportunities for structured, purposeful activity. Nonetheless, recruitment and retention of staff is challenging. Prison officers have one of the highest rates of injuries and illnesses of all occupations and the risk of psychological trauma is high (1). Perceptions of the work being dangerous and

stressful and the sector being poorly resourced is likely to discourage qualified candidates from applying (24,25).

This study has limitations as it relied entirely on self-report data and its correlational design cannot establish causality. A further limitation relates to the sampling strategy. Online surveys are frequently used to examine work-related wellbeing, but it is not possible to calculate a response rate as the number of participants exposed to the survey is unknown. The number of officers working across in public sector prisons across the four UK nations cannot be easily established. Although the size of the sample is substantial it only represents a small proportion of prison officers working in the UK, so the findings may not have captured the perceptions and experiences of the wider population. Officers who responded may have been more motivated to do so due to an unusually high exposure to NPS, or sensitivity to their effects. Moreover, the high level of self-reported mental health problems found in this and other studies of the prison sector in the UK (1,2) may mean that respondents are inclined to evaluate their working environment negatively.

There is evidence that NPS use may be more common in men's prisons and remand prisons and lower in high-security institutions (26). This suggests that future studies that examine the impact of NPS use on staff should target these prisons specifically. The sector is currently introducing enhanced training and education for prison staff on the management of prisoners who are using NPS (17) and evaluating the effects of such interventions on perceptions of safety and mental health would also be useful. Future studies would also benefit from taking a more in-depth approach to investigating officers' experiences of NPS use among prisoners and the hazards of this, possibly using qualitative methods. It is particularly important to identify the extent to which staff have been *physically* exposed to the drug (i.e. by inadvertently inhaling smoke or vapour) and how this affects their physical and mental health and behaviour immediately and over the longer term. Little is yet known

about the implications of secondary exposure to NPS, but the effects can be serious and may affect job performance, sickness absence and retention in what is a highly safety critical working environment.

Key learning points

What is already known about this subject:

- NPS is widely used in prisons and has unpredictable and extreme effects on prisoners' mental and physical health and behaviour.
- Little is known about the impact of NPS use by prisoners on staff, in terms of their perceptions of personal risk to their safety and the impact on their mental health.

What this study adds

- The findings identify how NPS use among prisoners can impair officers' perceptions of safety and security.
- We also find evidence that NPS use can impair the mental health of staff at a level suggesting real-world relevance.

What impact this may have on practice or policy

- The findings highlight the risks of NPS use for the safety and mental health of prison staff.
- Action is needed to tackle NPS use in prisons that, in turn, will protect the wellbeing of staff.

- More research is needed to identify the impact of secondary exposure to NPS among staff and the implications for staff and the implications for their health and performance.

References

1. Clements A, Kinman G. Stress and Wellbeing in Prison Officers In: Burke RS, Pignata S. eds. *Handbook of Research on Stress and Well-being in the Public Sector*, Cheltenham: Taylor and Francis, 2020: pp. 137 – 151.
2. Kinman G, Clements AJ, Hart J. Work-related wellbeing in UK prison officers: A benchmarking approach. *Int J Workplace Health Manag.* 2016 Sep 12.
3. Finney C, Stergiopoulos E, Hensel J, Bonato S, Dewa CS. Organizational stressors associated with job stress and burnout in correctional officers: a systematic review. *BMC Pub Health* 2013;13:82.
4. Denhof M, Spinaris, C, Morton, G. Occupational stressors in corrections organisations: types, effects and solutions. U.S Department of Justice National Institute of Corrections. <https://info.nicic.gov/nicrp/system/files/028299.pdf>
5. Ricciardelli R, Carleton RN. A qualitative application of the Job Demand-Control-Support (JDCS) to contextualize the occupational stress correctional workers experience. *J Crime Just* 2021 Mar 5:1-7.
6. Ministry of Justice. 2020. *Official Statistics Bulletin*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/905580/HMPPS-annual-digest-2019-20.pdf
7. House of Commons Library. 2020. *UK Prison Population Statistics*. <https://commonslibrary.parliament.uk/research-briefings/sn04334/>
8. Ministry of Justice. 2020. *Safety in Custody Statistics, England and Wales*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/905064/safety-in-custody-q1-2020.pdf
9. Kinman G, Clements AJ, Hart J. Working conditions, work–life conflict, and well-being in UK prison officers: The role of affective rumination and detachment. *Crim J Behav.* 2017 Feb;44(2):226-239.
10. HM Prison and Probation Service. *Prison Drugs Strategy*. 2019. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/792125/prison-drugs-strategy.pdf
11. Ralphs R, Williams L, Askew R, Norton A. Adding spice to the porridge: the development of a synthetic cannabinoid market in an English prison. *Int J Drug Pol.* 2017. Feb 1;40:57-69.
12. Public Health England. *New psychoactive substances (NPS) in prisons: A toolkit for prison staff*. 2015.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/669541/9011-phe-nps-toolkit-update-final.pdf

13. Duke K. Producing the 'problem' of new psychoactive substances (NPS) in English prisons. *Int J Drug Pol.* 2020 Jun 1;80:102479.
14. HM Inspectorate of Prisons. *Life in prison: Living conditions.* <https://www.justiceinspectorates.gov.uk/hmiprisons/wp-content/uploads/sites/4/2017/10/Findings-paper-Living-conditions-FINAL-.pdf>
15. Gooch K, Treadwell J. Prisoner society in an era of psychoactive substances, organized crime, new drug markets and austerity. *Brit J Crim* 2020 Aug 1;60(5):1260-81.
16. Moyes H. How Do New Psychoactive Substances Affect the Mental Health of Prisoners? In: Mills A, Kendall, K. *Mental Health in Prisons* 2018. Palgrave Macmillan: pp. 131-157.
17. Public Health England. *Thematic analysis of training for prison staff on new psychoactive substances.* 2016. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/669546/Analysis_of_training_programme_for_prison_staff_on_NPS_2015_to_2016.pdf
18. Corazza O, Coloccini S, Marrinan S, Vigar M, Watkins C, Zene C, Negri A, Aresti A, Darke S, Rinaldi R, Metastasio A. Novel psychoactive substances in custodial settings: a mixed method investigation on the experiences of people in prison and professionals working with them. *Front Psych.* 2020 May 26;11:460.
19. Joint Unions in Prisons Alliance. *Health and Safety in Prisons.* 2019. <https://www.ucu.org.uk/article/10160/Quarter-of-prison-staff-have-been-recent-victim-of-physical-violence>
20. Goldberg D, Williams P. *General Health Questionnaire (GHQ).* Swindon, UK: NFER Nelson, 1988.
21. Goodwin L, Ben-Zion I, Fear NT, Hotopf M, Stansfeld SA, Wessely S. Are reports of psychological stress higher in occupational studies? A systematic review across occupational and population-based studies. *PLoS one.* 2013 Nov 4;8(11):e78693.
22. Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum
23. EU-OSHA (2017). Health and safety risks at the workplace: a joint analysis of three major surveys. <https://osha.europa.eu/en/publications/health-and-safety-risks-workplace-joint-analysis-three-major-surveys/view>

24. Walker EJ, Jackson CA, Egan HH, Tonkin M. Workability and mental wellbeing among therapeutic prison officers. *Occ Med*. 2015 Oct 1;65(7):549-51.
25. Foresight. *Prisons in crisis: the effect of staff shortages on prison conditions*. 2019. <https://www.foresight.expert/news/prisons-in-crisis-the-effect-of-staff-shortages-on-prison-conditions>
26. Institute of Justice. *Changing the culture of corrections*. 2016. umantolofjail.vera.org/changing-the-culture-of-corrections/
27. European Monitoring Centre for Drugs and Drug Addiction. *New psychoactive substances in prisons*. 2018. <https://www.emcdda.europa.eu/system/files/publications/8869/nps-in-prison.pdf>

Table 1. Correlations between study variables

Study variables	<i>M</i>	<i>SD</i>	Range	1	2	3	4
1. NPS prevalence	4.33	1.03		1.0			
2. NPS exposure	3.11	1.31		0.43 ***	1.0		
3. Safety climate	2.08	0.74	1 - 5	-0.35 **	-0.44 ***	1.0	
4. GHQ-12	1.47	0.82	0 - 3	0.16 ***	0.29 ***	-0.45 ***	1.0

Note: *** $p = < 0.001$.

Fig. 1 Prevalence of NPS use

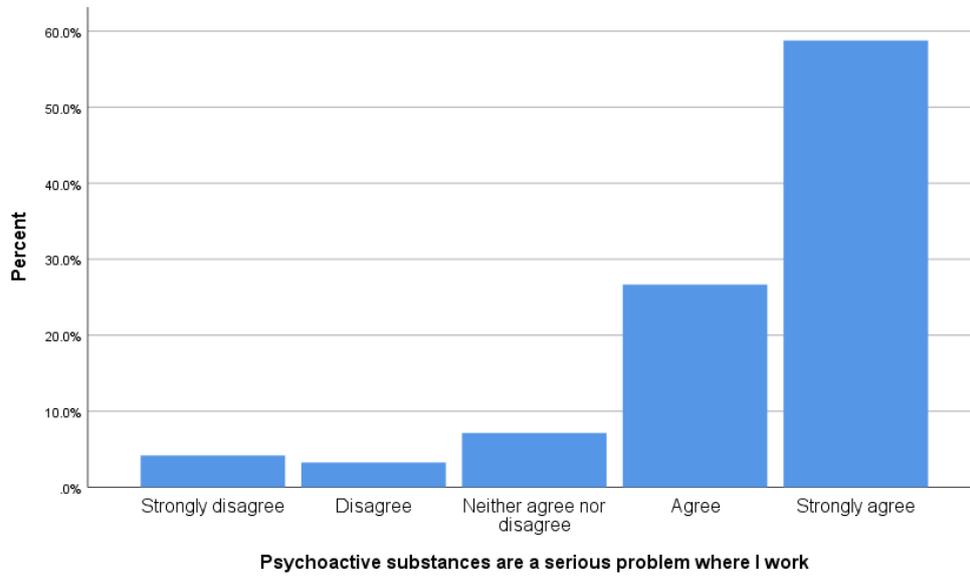


Fig 2 Perceptions of personal exposure to NPS at work

