



Research paper

## Execution of control among ‘non-compliant’, imprisoned individuals in opioid maintenance treatment



Ingrid Amalia Havnes <sup>a,b,\*</sup>, Thomas Clausen <sup>a</sup>, Anne-Lise Middelthon <sup>c</sup>

<sup>a</sup> SERAF – Norwegian Centre for Addiction Research, University of Oslo, P.O. Box 1039, 0315 Oslo, Norway

<sup>b</sup> Division of Mental Health and Addiction, Oslo University Hospital, P.O. Box 4956, Nydalen, 0424 Oslo, Norway

<sup>c</sup> Institute of Health and Society, University of Oslo, P.O. Box 1130, Blindern, 0318 Oslo, Norway

### ARTICLE INFO

#### Article history:

Received 21 June 2013

Received in revised form 17 January 2014

Accepted 24 January 2014

#### Keywords:

OMT

Diversion

Prison

Self-control

Self-regulation

Pharmacological agency

### ABSTRACT

Strict control routines of prescribed opiate intake in opioid maintenance treatment, OMT, are used to reduce the risk of diversion and non-prescribed methadone and buprenorphine use. While maintaining a focus on aspects of control, this article explores motivations for and practices of methadone and buprenorphine use, both inside and outside of prison and among imprisoned individuals in OMT. The participants in this qualitative study were subjected to tight external control regimes in their opioid maintenance schemes in prison, as they were prior to imprisonment due to varying degrees of ‘non-compliance’. We nevertheless found them to exhibit a considerable amount of self-control, self-regulation and/or self-initiation of external control. Among the participants, a ceaseless surveillance of processes associated with methadone and buprenorphine use throughout diverse situations, relations and contexts was encountered. We conclude that, in opioid maintenance treatment, some individuals might know what particular configurations of internal and external control they need in order to achieve their own treatment goals. The drug users’ capacities for execution of control, as well as their delegations of control to others, may be seen as resources throughout the course of treatment.

© 2014 Elsevier B.V. All rights reserved.

### Introduction

Heroin-dependent persons experience high risk of mortality (Clausen, Anchersen, & Waal, 2008; Degenhardt et al., 2011), morbidity (Ross et al., 2005; Skeie, Brekke, Lindbæk, & Waal, 2008) and criminal involvement (Bennett & Holloway, 2009; Bukten et al., 2012). Opioid maintenance treatment (OMT) reduces the risk of such harms (Degenhardt et al., 2011; Mattick, Kimber, Breen, & Davoli, 2008), but also carries possible negative consequences, such as potentially fatal diversion of prescribed medication (Luty, O’Gara, & Sessay, 2005; Paulozzi et al., 2009). Methadone-related deaths are reported worldwide (Bell, 2010; Sunjic & Zador, 2009), and 80% of such deaths in Norway are reported to occur among individuals outside of OMT programs (Bernard et al., 2012; Gjersing et al., 2013). Buprenorphine has a lower risk of fatal overdose than methadone (Bell, Trinh, Butler, Randall, & Rubin, 2009), but diversion is linked to development of injecting habits and opioid dependence (Alho, Sinclair, Vuori, & Holopainen, 2007; Yokell, Zaller, Green, & Rich, 2011).

The motives for using methadone and buprenorphine outside of treatment are diverse and reportedly include self-treatment, detoxification and avoidance of withdrawal symptoms (Mitchell et al., 2009; Monte, Mandell, Wilford, Tennyson, & Boyer, 2009; Roche, McCabe, & Smyth, 2008), experiencing euphoria (Aitken, Aitken, Higgs, & Hellard, 2008), monetary and safety reasons (Fountain, Strang, Gossop, Farrel, & Griffiths, 2002) and lack of available heroin (Bell, 2010). Furthermore, illegal methadone use has also been reported among individuals both denied and denying treatment (Mitchell et al., 2009). Reported motivations for taking the medication in ways that divert from its prescribed use while enrolled in OMT vary (Bell, 2010). Addition of illicit OMT-medication to the prescribed dose is an option for some individuals who experience their dose as insufficient (Duffy & Baldwin, 2012; Roux et al., 2008), and using a lower, or split, dose is a way of reducing adverse effects (Harris & Rhodes, 2012; Haskew, Wolff, Dunn, & Bearn, 2008). Moreover, stockpiling is seen by some as a safeguard with harm reduction potential (Duffy & Baldwin, 2012; Harris & Rhodes, 2012).

Strict control routines with daily supervised intake of prescribed opiates in OMT are used to reduce the risk of diversion and non-prescribed methadone and buprenorphine use. There is thus a need to acquire nuanced knowledge about the realities of the people these OMT measures are meant to meet. Therefore, this study sought to generate new knowledge about an OMT subgroup – namely, prisoners who enrolled in OMT prior to imprisonment and

\* Corresponding author at: Ingrid Havnes, SERAF – Norwegian Centre for Addiction Research, University of Oslo, PO Box 1039, Blindern, 0315 Oslo, Norway.

Tel.: +47 23 36 89 00; fax: +47 23 36 89 01.

E-mail addresses: [i.a.havnes@medisin.uio.no](mailto:i.a.havnes@medisin.uio.no), [inghav@aus.no](mailto:inghav@aus.no) (I.A. Havnes).

who were subjected to tight control regimes both prior to and during imprisonment. This article aims to explore these individuals' experiences of control and motivations for and practices of methadone and buprenorphine use prior to and during OMT, both inside and outside of prison.

### Context

The Norwegian OMT program, which was designed to reach a population of severely dependent heroin users who were not benefiting from other types of treatment, started in 1998 ([Waal, 2007](#)). In 2004, OMT participants were recognized as patients with patient rights. According to the national guidelines, enrolled individuals who regularly and voluntarily submit to observed urine testing and receive negative results are entitled to take-home doses. Opioid-dependent individuals may enter the national OMT program while in prison and, for individuals who are already enrolled in OMT when imprisoned, the treatment is continued ([The Norwegian Directorate of Health, 2010](#)).

### Method and participants

This study forms part of a larger study that employed both quantitative and qualitative methodologies. While the quantitative component focused on criminal convictions in a national cohort of individuals prior to, during and after OMT ([Bukten et al., 2012, 2011; Havnes et al., 2012](#)), the original aim of the qualitative component was to explore understandings of why some individuals continued criminal involvement during OMT. As is often the case in qualitative inquiries, additional phenomena of relevance to the study's overall theme emerged during the interview process and were subsequently incorporated into the investigation. When this occurred, the study's design and interview guides were amended accordingly ([Kvale & Brinkmann, 2009; Maxwell, 2013](#)). As a result, we will focus on phenomena related to control throughout methadone and buprenorphine use in this article.

At the time of their interviews, the OMT-enrolled individuals participating in this study were imprisoned; hence, all interviews were conducted in prison. Inclusion criteria for study participation were that all participants were of or above legal age, in a state to provide voluntary, informed consent and being charged with criminal offences while enrolled in OMT. In order to minimize recall bias, a short time span was set between the criminal offence leading to their imprisonment and the first interview. Altogether, 28 one hour interviews were conducted with 12 individuals – nine men and three women, between 22 and 50 years of age. Nine were remand prisoners and several were convicted during the period of interviewing. Eleven of the participants had several prior violent crime convictions and time previously served in prison ranged from 1.5 to 20 years. Their time enrolled in OMT varied from 1 month to 10 years and all had experienced tight control regimes prior to entering prison; the majority had received daily, supervised intake of methadone/buprenorphine, though a few had received one take-home dose per week.

The semi-structured interviews were conducted by the first author, who is a trained specialist in general practice and psychiatry. The interviews were audio recorded, with the exception of one individual who preferred note-taking. Due to the exploratory character of the interviews, the initial interview guide was regularly revised ([Maxwell, 2013](#)). Moreover, individualized guides were developed for subsequent interviews. Among the themes included in the guides were experiences with OMT, life situations before imprisonment and practices of acquiring, using, selling and giving methadone/buprenorphine prior to and during treatment. We sought to narrativise topics ([Hollway & Jefferson, 2013](#)) in

order to facilitate nuanced, detailed and concrete accounts of the participants' experiences, from their own perspectives. The participants were interviewed between one and four times each. Two individuals were interviewed once due to being released from the remand wing on short notice. Repeat interviews were conducted as dialogic validations of findings from the first interview ([Green & Thorogood, 2009](#)) and to facilitate cross-case analysis by presenting one or several cases based on findings from interviews with other respondents.

Identification and analysis of emerging themes was jointly carried out by the first and last authors as a ceaseless task that was not restricted to a particular analysis phase ([Pope, Ziebland, & Mays, 2000](#)). The themes discussed in this article were indeed among the 'emerging themes': practices in relation to incorporation of both legal and illegal drugs, the conditions of possibility for the execution of drug use and issues associated with internal and external control. Early in the data gathering process, it became clear that, when it comes to the phenomena of 'control' and drug use, to include loss or lack of control only would be insufficient, as experiences of control over drugs are also to be found.

### Ethics

The study was approved by the Regional Committee for Medical Research Ethics, the Norwegian Social Science Data Services and the Norwegian Correctional Service Region East. Prison staff contacted the prisoners who agreed to meet the first author, and the first author then gave written and verbal information about the study. All interview participants provided voluntary and written, informed consent to participate in the study. Emphasis was placed on ensuring anonymity throughout the publication process.

### Findings

While we generated empirical material on a number of phenomena related to methadone/buprenorphine use among OMT-enrolled individuals in prison, we focus specifically on phenomena of control and execution of control *in relation to drug incorporation* in this article. As human phenomena, executions of control can hardly be meaningfully understood in abstraction from the lived realities in which they occur. We aim here at exploring control from the perspectives of the drug users with regard to intake of prescription drugs. The first section addresses motivations for and experiences of prescription drug use prior to OMT, the second deals with phenomena related to control in OMT and the third discusses phenomena related to control of OMT in prison, at both organizational and individual levels.

### Experimenting with prescription drugs prior to OMT

When we use the phrase 'prior to OMT', it should not be taken to mean 'prior to actual experience with methadone or buprenorphine'; quite the opposite, all individuals interviewed had used either methadone, buprenorphine or both prior to enrollment and would have hence experienced the effects and/or side effects of these drugs. Their eventual enrollments in OMT and drug preferences while undergoing such treatment resulted from these experiences and their evaluations of them. Their initial engagement with methadone and buprenorphine was, for some, due to lack of heroin access. For others, it resulted from a deliberate wish to learn more about these substances and their potential psychological or physical effects. And, for a few, it happened almost by chance. In order to illustrate how nuanced and complex a situation this may be, some cases are presented below.

Hugo, a man in his thirties, made a deliberate decision to explore the effects of illicit buprenorphine over a two-year period, as he

realized that his heroin intake was out of control. During the first six months, he controlled his intake, used illicit buprenorphine only and felt 'stable' – but, as he longed for the feeling of getting high, he started sporadically using heroin and benzodiazepines as well. He gradually increased his intake of these drugs in combination with illegal buprenorphine. Hugo said that he again felt trapped in drug use and crime and recognized a need for external control. He took control over an experienced uncontrolled incorporation of drugs by applying for OMT. He was admitted to treatment with buprenorphine, the drug he preferred, two years after he initiated his self-designed 'stabilization scheme' on that very same drug.

Simon, a man in his forties, first tried methadone while he was institutionalized and tapering down on clonazepam:

I've always been very much against it [methadone]. But then I ended up in a place [institution] where everybody used methadone... I went there to come off pills [clonazepam] and they found out – those who used methadone – that I had pills. They wanted to trade methadone for pills. I got some, it wasn't much, maybe I took 15, 20 mg of methadone, and I got a taste for it. So when I left [the institution], I started buying methadone on the street. I stopped buying heroin, and only bought methadone. You don't get sick for 2 days. It's cheaper for one, and if you combine it with some pills, you can get a high. It's not the same as with heroin, but the high is similar. I fell for that high.

Even if Simon's first experience with methadone happened almost by chance, the 'cocktail' he subsequently developed was the result of a consciously monitored, experimental attempt to find substances that would meet his needs with regard to both finances and effect. To him, the high achieved from a combination of methadone and pills felt similar to a heroin high. However, this desired effect diminished gradually and, after 6 months, he could no longer feel it. Simon also experienced methadone as having bodily side effects and therefore came to prefer buprenorphine as his medication of choice when he entered OMT.

#### *Temporary change of social context by use of methadone*

Paul illustrates a form of temporary adaptation to a new social context by use of illicit methadone. He describes an instance from a time before he entered OMT, when he lived a hectic and stressful life as a heroin dealer. Before visiting his family for Christmas, he made an arrangement with an OMT-enrolled friend to exchange heroin for a week's supply of methadone:

The reason for taking methadone? It was to get away for a bit, to relax, selling is so stressful, you know. You also have to look over your shoulder all the time: "where are the cops now?" It was also to become stable for my family... I felt more stable on methadone, it wasn't stressful, I was sober all the time and it suited me well since I was spending Christmas with my family. They were really happy after that holiday.

Paul calmed down on methadone for one week and felt stable. His motivation for a controlled change of drugs was both a desire for a spending time in calmer social context and to be in a condition that made it possible for him to celebrate Christmas with his family.

#### *Achieving control in OMT*

In the following, experiences of control in relation to drug intake while enrolled in OMT outside of prison are the focus. OMT and

imprisonment can be viewed as universes whose rules and regulations define 'immovable borders', not only for execution of self-control, but also for that which is considered acceptable behavior. To find or carve out a space for execution of control within these borders, and thereby achieve a sense of autonomy, was expressed as important by several of the project's participants. Ståle provides one example:

When I started this programme [a competency building course] I was referred to a pharmacy for collecting my methadone. I had an arrangement where I had to show up there once a day but didn't have to take it supervised. So I was free to take it when I wanted to. So I took it every thirty or so hours. Then I could save so I had a little extra... either I gave it away or I took it with more methadone, it gave me a high.

During this period, Ståle did not have any clinic appointments or urine testing. When the course ended after 12 weeks, he waited for suitable work practice. The OMT clinic then changed his dispensing regimen to daily supervision; he was not invited to discuss this with the clinic and felt both disempowered and insulted. When he later wanted and requested a reduced daily methadone dose, he, after careful consideration and due to fear of sanctions, decided not to inform the clinic that he had taken less methadone than prescribed while at the training course. His request was denied, as a lower dose was seen as suboptimal and as something that could lead to opioid craving. In effect, Ståle went from a situation in which he experienced some autonomy and internal control to one of unwanted stricter *external* control and, thereby, less constructive influence over his treatment.

To experience a sense of influence and autonomy in relation to decisions about level of control was important for Paul, as it was for Ståle and all individuals interviewed. Paul was supposed to take methadone under daily supervision at the pharmacy:

I cheated with the bottles at the pharmacy. Finally I told the woman, "you have to open the bottles for me, it's too easy for me to switch them"... Because I liked to shoot it up instead. It's so sick, I'm so hooked on the needle, a big problem for me... sitting there with those horse syringes and pumping it all into myself, it isn't good... When I realized I could fool them at the pharmacy, I did it more and more. But in the end I realized that I couldn't go on like that. So I was honest and told them. And then I managed to get a grip.

In practice, Paul demonstrated control over the situation by initiating a reformed scheme that involved a specific element of external control directly related to his situation as he experienced it, hence making it easier for him to control his craving for the needle. That it was he himself who initiated the change gave rise to a feeling of autonomy: he was, after all, the one who asked for this particular element of control and provided the rationale for its implementation.

Erik conveyed a similar experience. When he was transferred to a general practitioner (GP) shortly before imprisonment, he collected methadone weekly. Quite often, he sold the methadone and used heroin instead, but also found it problematic that he did not manage to control his drug use and sought a solution. He took action by requesting daily, supervised intake. His GP organized this, but with one take-home dose on Saturday (for Sunday). Erik regularly exchanged this extra dose for a small amount of heroin and felt that this revised arrangement functioned well. He felt in control of his drug intake and could live a life with a low level of both illicit drug use and criminal activity. This control rested, as he saw it, on the somewhat stricter external scheme he himself had initiated for his dispensing regimen in OMT.

### *Temporary and situational adaptation of illicit drug use in OMT*

Here, we discuss a practice of contextual adaptation of illicit drug use in OMT prior to imprisonment. Simon's experience exemplifies a self-determined and controlled, temporary and situational adaptation of illicit drug taking. The context of this particular incidence was corporeal pain. Simon was enrolled in OMT with buprenorphine when his hand was fractured while playing sports. The fracture was set and a cast was applied, but he was denied medication for acute pain:

The reason I relapsed was because it was so bloody painful. I got no painkillers, because I'm already on strong painkillers [buprenorphine]. They couldn't offer me anything. So I bought heroin to stop the pain. That's what I did.

In order to achieve pain relief, Simon took a short, controlled break from his scheme of legal buprenorphine treatment and injected heroin instead. When the fracture became less painful, he discontinued his use of his 'medication' (heroin) and switched back to buprenorphine.

### *Organizational control of OMT in prison*

Being imprisoned as a remand prisoner represents an abrupt custodial break. Some of the participants described being taking into custody as remand prisoners with some sense of relief and manageability, and in terms of the protection that it offers them from their otherwise uncontrolled and destructive behavior and patterns of multi-substance use, crime and violence while enrolled in OMT. Frederic expressed it like this:

I couldn't go on like that... I'm glad I was stopped [by the police]. Then it is two months less [drug use, crime and violence] done.

The majority of the study participants were placed in an 'OMT-department' in prison. According to the prison authorities and health staff, the department was organized in a manner intended to ease safe and supervised methadone and buprenorphine dispensing and reduce the risk of diversion to fellow prisoners. For Victor, being placed in an OMT-department in prison made him feel even more stigmatized than he did outside of prison. He felt that other prisoners who were not enrolled in OMT regarded him as a drug addict eager to get drugged by his OMT-medication. He also felt that the prison staff and health professionals saw him as a criminal who would give or sell his medication to fellow inmates if placed outside the OMT-department. He suggested a more individualized treatment plan with regard to the risk of medication diversion and this was denied by the prison treatment team. Paul, in contrast, experienced placement in the OMT-department as positive. To him, this organizational control reduced the diversion demand from fellow prisoners and made time in prison easier:

It's OK to be here in a controlled environment. That is the reason for not wanting to go back to the other department. I've been there a lot before and I know what it will turn into. The focus on drugs is higher there and you spend a lot of time with the other inmates.

### *Self-regulation of OMT-medication in prison*

We now turn to Ulf as an example of an individual who had long-term experience using illegal and legal buprenorphine in prison. He was opioid-dependent already in his early teens and spent several periods in prison, during which he organized buprenorphine

smuggling and injected buprenorphine almost daily. He was later included in OMT, with buprenorphine as his assigned medication. One year into his treatment in prison and at the time of the first interview, Ulf took a daily, supervised dose of buprenorphine but said he would have preferred to receive the substance in double doses every second day. When we met for our second interview, he had requested such a change and his scheme had been altered accordingly. As he knew well, buprenorphine is prescribed in a form intended for absorption under the tongue and swallowing the drug renders its effect insignificant (because buprenorphine has a very low bioavailability through the gastrointestinal system). For this reason, Ulf regularly chose to swallow his buprenorphine dose in order to achieve an 'effect' when finally taking it properly after 4 days. The reason that he swallowed the buprenorphine instead of simply not taking it, he said, was to prevent the prison health staff from labeling him as 'non-compliant' or suspecting that he had recently used heroin and wanted to avoid the adverse effects of this combination (taking the partly antagonist buprenorphine would displace the heroin on the opioid receptor and lead to acute withdrawal symptoms). The scheme he had developed for himself also involved fasting until the afternoon of the day he took buprenorphine sublingually so as to experience intensified physical relaxation. When he explained this, he was asked if it gave some feeling of withdrawal. He responded:

Yes, very mild. I sweat, feel restless, have chills. But then it's bloody wonderful to take it [buprenorphine]. When you skip one day your body feels the next dose that much more. It's not like a high when I don't eat. But I get more of that effect. It's not like an opioid-effect, it's more like taking a couple of Valiums [diazepam].

As an inmate in prison, execution of control is limited. Yet, despite experiencing tight external control while imprisoned, Ulf nevertheless demonstrated considerable self-control in order to achieve his desired effect. He was willing to endure lasting bodily discomfort in order to experience a moment of bodily relaxation. To Ulf, the only 'legal' way to experience the work of the drug was to control and self-regulate his 'legal' medication by taking it less frequently than prescribed.

### **Concluding discussion**

Ideally, the planning, development and implementation of OMT should be based on as full an understanding as possible of the realities of the people its measures are meant to meet. In this article, we strive to contribute to this task by inquiring about imprisoned, OMT-enrolled individuals' experiences of internal and external control – matters that are perhaps not often made focal in such research endeavors (Weinberg, 2013).

The persons involved in this project had all used illegally-obtained methadone and buprenorphine in varying degrees before entering OMT. Reported motivations for doing so, and as also identified in previous studies, were self-treatment, detoxification, avoidance of withdrawal symptoms, experiencing euphoria and financial reasons, as well as a temporary change of social context. The participants had carefully monitored the effects of their illegal use of OMT-medications, which resulted in an informed preference for one of these drugs when they entered OMT. Importantly, the preferred drug was not necessarily the one offering the most sedation, as stereotypical understandings of opioid-dependent individuals would easily imply (Harris & McElrath, 2012).

The surveillance of substance intake and its effects did not end with admission to OMT, but also continued during treatment. While the knowledge acquired from this monitoring led, for some, to a diverted use of their opioid prescriptions, for others, it led to a

request for alteration of their OMT scheme and, for yet others, to an informed maintenance of it. Internal to the form of agency we have conceptualized as 'pharmacological agency', we find a ceaseless surveillance of the processes associated with the incorporation of drugs, and methadone and buprenorphine in particular. Amongst the phenomena monitored by these drug users are the effects of the substance and the needs and cravings of their bodies. The substance/drug is clearly recognized as a 'force' by the drug users themselves, as are their bodies and emotions; they crave, react and give pain and pleasure. This, however, should not be taken to imply that the drug users do not also recognize themselves as 'doers' and agents in relation to their incorporation of drugs – as persons capable of executing control and in their capacity to ask for external control when that is what they consider necessary.

The individuals involved in this study demonstrate considerable self-control, self-regulation and/or self-initiation of external control. We found that some study participants initiated new control measures in their OMT schemes themselves, such as asking for higher levels of external control to reduce their risk-taking behavior. For one participant, his self-initiated, heightened control scheme of supervised medication intake six days a week left it possible for him, on the seventh day, to exchange his prescribed drug for heroin. We would claim that maintaining, over time, a once weekly heroin injection demands substantial self-control. Even though such behaviors might also be regarded as destructive, it is important to explore and take into account practices of self-control and self-regulation and the possibility that, at times, these practices might serve ends that are conducive to the treatment goals. Similar examples of self-surveillance and self-control are reported elsewhere in addiction research and, in particular, among recreational drug users (Decorte, 2001; Hilden, 2009; Robins & Slobodyan, 2003; Rödner, 2006).

The prison is a controlled environment that may sometimes be the most effective way to stop a destructive cycle of drug use, crime and violence. We found the structural organization of a prison with an isolated OMT-department to increase the level of external control and protect some prisoners from the demand to divert their medication to fellow prisoners. Nevertheless, this organization was also found to lead to an increased feeling of stigmatization for some. Prisoners in OMT have been found to complain about public identification (Stallwitz & Stover, 2007) and stigmatization (Zamani et al., 2010). While previous studies have found that OMT-enrolled prisoners experience their medication doses as inadequate (Hughes, 2000), we report a practice of taking less buprenorphine than prescribed in order to induce withdrawal symptoms and experience a 'legal' heightened sense of pleasure and relaxation when subsequently taking buprenorphine. This can hardly be perceived as harmful (when considered from a medical perspective, given that there is no risk of overdose), but certainly involves endurance of bodily discomfort on the part of the drug user. This form of self-regulation when subjected to tight control measures in a controlled prison environment might suggest that the control of bodies, cravings and substances in OMT involves diverse and complex practices of resistance and compliance.

The present study was undertaken among OMT-enrolled individuals who were considered to be 'non-compliant' by treatment providers, and who were therefore subjected to tight control regimes. Contrary to the conventional understanding of non-compliance as a failure to abide by treatment regulations, in these particular cases and as suggested by previous research, non-compliance might also be regarded as an adaptation to treatment conditions experienced as imperfect (Ning, 2005).

Addiction treatment, and OMT in particular, is often initiated with a high degree of external control and involves a gradual transfer of control back to the treatment participants when progress and stability is observed (Caplan, 2008). Improved life situations of

so-called 'chaotic' individuals are reported when subjecting these persons to tight control regimes in treatment (Bell, 2010), but treatment regulations can also reduce the quality of life of OMT-enrolled individuals (De Maeyer et al., 2011; Treloar & Valentine, 2013). On the other hand, a substantial proportion of individuals subjected to supervised intake regard it as a positive treatment condition (Duffy & Baldwin, 2012; Neale, 1999). Some participants in our study did indeed ask for and self-initiate a higher level of control in OMT. For the majority of the study participants, having some space for the execution of self-control, self-regulation and, thereby, autonomy was experienced as essential.

Prior to concluding, some study limitations should be noted. The sample is limited and the findings cannot be generalized, but should instead be considered for the ways that they contribute to a fuller understanding of imprisoned, OMT-enrolled individuals' lived experiences and the potential clinical implications. Additionally, certain factors, such as the interviews being conducted in prison, the interviewer and the sensitive nature of the interview topics may have influenced the participants' decisions to share particular experiences, their retrospective reflections and their understandings of these events and their consequences (Schlosser, 2008).

In conclusion, we suggest that, as in all medical treatment, OMT providers should meet the patients with a professional curiosity and desire to explore their resources. In a neurobiological framework, addiction is seen as a chronic, relapsing medical illness (McLellan, Lewis, O'Brien, & Kleber, 2000) 'leading to progressive loss of control over drug intake' (Dackis & O'Brien, 2005). Impaired control is a core criterion of substance use disorders (APA, 2013) and clinicians might be led to believe that individuals in OMT have little control over their drug use. Development of individualized treatment schemes in dialogue with the persons in question allows for building upon the resources that these persons possess, including those acquired through their drug taking experiences and demonstrations of pharmacological agency. For example, individuals entering OMT may possess an informed preference for methadone or buprenorphine based on illegal use prior to treatment, and some individuals might know what particular configuration of internal and external control they need in order to achieve their own treatment goals. An individual's experience and ability to execute self-control and self-regulation with regard to drug taking may be seen as a resource throughout the course of treatment.

## Acknowledgements

The study was partly funded by a grant from the Regional Centre for Co-occurring Disorders of Substance Abuse and Mental Health in Norway. The funding sources had no further role in the study. The authors are grateful to Christina Brux for proof-reading. We thank her together with Hedda Giertsen, Henning Pettersen, Stian Biong, Per Kristian Hilden, two anonymous reviewers and Associate Editor Cameron Duff for giving constructive comments on earlier drafts of the manuscript.

## References

- Aitken, C. K., Aitken, C. K., Higgs, P. G., & Hellard, M. E. (2008). Buprenorphine injection in Melbourne, Australia – An update. *Drug and Alcohol Review*, 27(2), 197–199.
- American Psychiatric Association. (2013). *American diagnostic and statistical manual of mental disorders (DSM-5)* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Alho, H., Sinclair, D., Vuori, E., & Holopainen, A. (2007). Abuse liability of buprenorphine–naxalone tablets in untreated IV drug users. *Drug and Alcohol Dependence*, 88(1), 75–78.
- Bell, J. (2010). The global diversion of pharmaceutical drugs. *Addiction*, 105(9), 1531–1537.

- Bell, J., Trinh, L., Butler, B., Randall, D., & Rubin, G. (2009). Comparing retention in treatment and mortality in people after initial entry to methadone and buprenorphine treatment. *Addiction*, 104(7), 1193–1200.
- Bennett, T., & Holloway, K. (2009). The causal connection between drug misuse and crime. *British Journal of Criminology*, 49, 513–531.
- Bernard, J.-P., Havnes, I., Slørdal, L., Waal, H., Mørland, J., & Khiabani, H. Z. (2012). Methadone-related deaths in Norway. *Forensic Science International*, 224(1–3), 111–116.
- Bukten, A., Skurtveit, S., Gossop, M., Waal, H., Stangeland, P., Havnes, I., et al. (2012). Engagement with opioid maintenance treatment and reductions in crime: A longitudinal national cohort study. *Addiction*, 107(2), 393–399.
- Bukten, A., Skurtveit, S., Stangeland, P., Gossop, M., Willemsrud, A. B., Waal, H., et al. (2011). Criminal convictions among dependent heroin users during a 3-year period prior to opioid maintenance treatment: A longitudinal national cohort study. *Journal of Substance Abuse Treatment*, 41(4), 407–414.
- Caplan, A. (2008). Denying autonomy in order to create it: The paradox of forcing treatment upon addicts. *Addiction*, 103(12), 1919–1921.
- Clausen, T., Anchersen, K., & Waal, H. (2008). Mortality prior to, during and after opioid maintenance treatment (OMT): A national prospective cross-registry study. *Drug and Alcohol Dependence*, 94, 151–157.
- Dackis, C., & O'Brien, C. (2005). Neurobiology of addiction: Treatment and public policy ramifications. *Nature Neuroscience*, 8(11), 1431–1436.
- De Maeyer, J., Vanderplasschen, W., Camfield, L., Vanheule, S., Sabbe, B., & Broekaert, E. (2011). A good quality of life under the influence of methadone: A qualitative study among opiate-dependent individuals. *International Journal of Nursing Studies*, 48(10), 1244–1257.
- Decorte, T. (2001). Drug users' perceptions of 'controlled' and 'uncontrolled' use. *International Journal of Drug Policy*, 12(4), 297–320.
- Degenhardt, L., Bucello, C., Mathers, B., Briegleb, C., Ali, H., Hickman, M., et al. (2011). Mortality among regular or dependent users of heroin and other opioids: A systematic review and meta-analysis of cohort studies. *Addiction*, 106(1), 32–51.
- Duffy, P., & Baldwin, H. (2012). The nature of methadone diversion in England: A Merseyside case study. *Harm Reduction Journal*, 9(1), 3.
- Fountain, J., Strang, J., Gossop, M., Farrel, M., & Griffiths, P. (2002). Diversion of prescribed drugs by drug users in treatment: Analysis of the UK market and new data from London. *Addiction*, 95(3), 393–406.
- Gjersing, L., Jonassen, K. V., Biong, S., Ravndal, E., Waal, H., Bramness, J. G., et al. (2013). Diversity in causes and characteristics of drug-induced deaths in an urban setting. *Scandinavian Journal of Public Health*, 41(2), 119–125.
- Green, J., & Thorogood, N. (2009). *Qualitative methods for health research*. London: SAGE Publications.
- Harris, J., & McElrath, K. (2012). Methadone as social control institutionalized stigma and the prospect of recovery. *Qualitative Health Research*, 22(6), 810–824.
- Harris, M., & Rhodes, T. (2012). Methadone diversion as a protective strategy: The harm reduction potential of 'generous constraints'. *International Journal of Drug Policy*, <http://dx.doi.org/10.1016/j.drugpo.2012.10.003>
- Haskew, M., Wolff, K., Dunn, J., & Bearn, J. (2008). Patterns of adherence to oral methadone: Implications for prescribers. *Journal of Substance Abuse Treatment*, 35(2), 109–115.
- Havnes, I., Bukten, A., Gossop, M., Waal, H., Stangeland, P., & Clausen, T. (2012). Reductions in convictions for violent crime during opioid maintenance treatment: A longitudinal national cohort study. *Drug and Alcohol Dependence*, 124(3), 307–310.
- Hilden, P. K. (2009). MDMA use among a group of friends in Oslo, Norway, between self-development and social participation: Dilemmas of a pharmaceutical normalcy. *Contemporary Drug Problems*, 36, 137–173.
- Holloway, W., & Jefferson, T. (2013). *Doing qualitative research differently: A psychosocial approach*. London: SAGE Publications.
- Hughes, R. A. (2000). 'It's like having half a sugar when you were used to three' – Drug injectors' views and experiences of substitute drug prescribing inside English prisons. *International Journal of Drug Policy*, 10(6), 455–466.
- Kvale, S., & Brinkmann, S. (2009). *InterViews: Learning the craft of qualitative research interviewing*. London: SAGE Publications.
- Luty, J., O'Gara, C., & Sessay, M. (2005). Is methadone too dangerous for opiate addiction? The case for using a safer alternative, buprenorphine, is strong. *BMJ: British Medical Journal*, 331(7529), 1352–1353.
- Mattick, R. P., Kimber, J., Breen, C., & Davoli, M. (2008). Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence. *Cochrane Database Syst Rev*, 2, 1–33. CD002207.
- Maxwell, J. A. (2013). *Qualitative research design: An interactive approach*. London: SAGE Publications.
- McLellan, A. T., Lewis, D. C., O'Brien, C. P., & Kleber, H. D. (2000). Drug dependence, a chronic medical illness: Implications for treatment, insurance, and outcomes evaluation. *JAMA*, 284(13), 1689–1695.
- Mitchell, S. G., Kelly, S. M., Brown, B. S., Reisinger, H. S., Peterson, J. A., Ruhf, A., et al. (2009). Uses of diverted methadone and buprenorphine by opioid-addicted individuals in Baltimore, Maryland. *The American Journal on Addictions*, 18(5), 346–355.
- Monte, A. A., Mandell, T., Wilford, B. B., Tennyson, J., & Boyer, E. W. (2009). Diversion of buprenorphine/naloxone coformulated tablets in a region with high prescribing prevalence. *Journal of Addictive Diseases*, 28(3), 226–231.
- Neale, J. (1999). Drug users' views of substitute prescribing conditions. *International Journal of Drug Policy*, 10(3), 247–258.
- Ning, A. M. (2005). Games of truth: Rethinking conformity and resistance in narratives of heroin recovery. *Medical Anthropology*, 24(4), 349–382.
- Paulozzi, L. J., Logan, J. E., Hall, A. J., McKinstry, E., Kaplan, J. A., & Crosby, A. E. (2009). A comparison of drug overdose deaths involving methadone and other opioid analgesics in West Virginia. *Addiction*, 104(9), 1541–1548.
- Pope, C., Ziebland, S., & Mays, N. (2000). Qualitative research in health care: Analysing qualitative data. *BMJ: British Medical Journal*, 320(7227), 114.
- Robins, L. N., & Slobodian, S. (2003). Post-Vietnam heroin use and injection by returning US veterans: Clues to preventing injection today. *Addiction*, 98(8), 1053–1060.
- Roche, A., McCabe, S., & Smyth, B. (2008). Illicit methadone use and abuse in young people accessing treatment for opiate dependence. *European Addiction Research*, 14(4), 219–225.
- Ross, J., Teesson, M., Darke, S., Lynskey, M., Ali, R., Ritter, A., et al. (2005). The characteristics of heroin users entering treatment: Findings from the Australian treatment outcome study (ATOS). *Drug and Alcohol Review*, 24(5), 411–418.
- Roux, P., Villes, V., Bry, D., Spire, B., Feroni, I., Marcellin, F., et al. (2008). Buprenorphine sniffing as a response to inadequate care in substituted patients: Results from the Subazur survey in south-eastern France. *Addictive Behaviors*, 33(12), 1625–1629.
- Rödner, S. (2006). Practicing risk control in a socially disapproved area: Swedish socially integrated drug users and their perception of risks. *Journal of Drug Issues*, 36(4), 933–951.
- Schlosser, J. A. (2008). Issues in interviewing inmates navigating the methodological landmines of prison research. *Qualitative Inquiry*, 14(8), 1500–1525.
- Skeie, I., Brekke, M., Lindbæk, M., & Waal, H. (2008). Somatic health among heroin addicts before and during opioid maintenance treatment: A retrospective cohort study. *BMC Public Health*, 8(43). <http://dx.doi.org/10.1186/1471-2458-8-43>
- Stallwitz, A., & Stover, H. (2007). The impact of substitution treatment in prisons – A literature review. *International Journal of Drug Policy*, 18(6), 464–474.
- Sunjic, S., & Zador, D. (2009). Methadone syrup-related deaths in New South Wales, Australia, 1990–1995. *Drug and Alcohol Review*, 18(4), 409–415.
- The Norwegian Directorate of Health. (2010). *Norwegian guidelines for opioid maintenance treatment, OMT*. Oslo, Norway: The Norwegian Directorate of Health.
- Treloar, C., & Valentine, K. (2013). Examining structural violence in opioid pharmacotherapy treatment in Australia: Sweating the small stuff in a liberal paradise. *International Journal of Drug Policy*, <http://dx.doi.org/10.1016/j.drugpo.2013.04.010>
- Waal, H. (2007). Merits and problems in high-threshold methadone maintenance treatment. *European Addiction Research*, 13, 66–73.
- Weinberg, D. (2013). Post-humanism, addiction and the loss of self-control: Reflections on the missing core in addiction science. *International Journal of Drug Policy*, 24(3), 173–181.
- Yokell, M. A., Zaller, N. D., Green, T. C., & Rich, J. D. (2011). Buprenorphine and buprenorphine/naloxone diversion, misuse, and illicit use: An international review. *Current Drug Abuse Reviews*, 4(1), 28–41.
- Zamani, S., Farnia, M., Tavakoli, S., Gholizadeh, M., Nazari, M., Seddighi, A.-A., et al. (2010). A qualitative inquiry into methadone maintenance treatment for opioid-dependent prisoners in Tehran, Iran. *International Journal of Drug Policy*, 21(3), 167–172.