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The Impact of Employment on Perceived Recovery from Opiate Dependence

Abstract

Purpose: Less than 15% of people starting opiate substitution treatment (OST) in England are employed, but few gain employment during treatment. Increasingly punitive approaches have been tried to encourage individuals with substance dependence into employment in the hope of facilitating recovery. It is not clear which factors are associated with the successful maintenance of employment whilst receiving OST, and whether this group can be said to be 'in recovery'.

Method: A cross-sectional study of the OST population in one English region was conducted between January and April 2017. Measures of physical health, employment patterns, drug use, mental health, recovery capital, and dependence severity were administered to 55 employed and 55 unemployed clients.

Results: Those in employment had higher levels of 'recovery capital', better physical and mental health, fewer drug problems, and less severe dependence, despite reporting heroin use at a similar level. Three variables were significantly associated with employment: longest period of employment (OR=1.01, p=0.003); number of chronic medical conditions (OR=0.44, p=0.011); and number of days of psychological problems in the last month (OR=0.95, p=0.031).

Practical Implications: These results suggest that abstinence may not be required in order to maintain stable employment when opiate substitution treatment is in place. Different treatment strategies are required for clients receiving OST already in employment compared with those who are unemployed.

Introduction

The 2017 UK Drug Report estimates over 330,000 high risk opiate users, of which approximately 142,000 were receiving opiate substitution treatment (OST) with either methadone or buprenorphine (European Monitoring Centre for Drugs and Drug Addiction, 2017). The period 2001-2005 saw a doubling of the number of people in contact with specialist treatment services, and Government policy favoured engaging and retaining problem heroin users in treatment (Best et al., 2007). However, a change of political leadership in 2010 moved the stated policy aims towards 'full recovery' (HM Government, 2010, McKeganey, 2014). The term recovery has been increasingly used in both treatment and policy arenas in the addictions field in the past 20 years (Best et al., 2011, Laudet, 2007, White, 2007, White, 2008). Definitions of recovery have centred on three areas: voluntary control over problem substance use, health (both physical and mental), and 'citizenship' (The Betty Ford Institute Consensus Panel, 2007, UK Drug Policy Commission Recovery Consensus Group, 2008). The latter broadens the concept to include expected benefits in a number of areas, including housing, health, employment, offending, relationships, self-care, community participation, and general well-being or quality of life (ACMD Recovery Committee, 2012, ACMD Recovery Committee, 2013, HM Government, 2010). Interviews with cohorts of drug users have concluded that there are a range of opinions about what recovery entails. Whilst some maintain that it requires complete abstinence, others believe that recovery can be consistent with OST and even controlled substance use (Radcliffe and Tompkins, 2016).

Being in stable employment provides many of the elements highlighted in definitions of recovery. As well as providing income, work is a way of structuring and filling time, a route into new social groups and situations, and has been associated with better mental and physical health (Patel et al., 2016). However, despite record numbers of people receiving treatment, levels of employment in the OST population remain disappointingly low. A recent analysis of statistics from the National Drug Treatment Monitoring System (NDTMS) and Labour Market

System has shown that 16% of people starting a treatment episode for opiate dependence with a specialist treatment service in England and Wales were employed, and this group tended to stay employed. However, very few gained employment during their treatment episode, with 20% working at 12 months and 26% at successful completion of treatment (Black, 2016) p93). Treatment in UK OST services involves both medication and structured psychosocial interventions (Recovery Orientated Drug Treatment Expert Group, 2012), and a number of initiatives aimed at increasing employment have been launched over the past 10 years (Monaghan and Wincup, 2013).

There is a significant literature on the barriers to employment for drug users in the UK. Sutton and colleagues identified six major areas of disadvantage that acted as barriers to work for people with significant drug problems: lack of education and skills; health; social disadvantage; provision of support services; engaging with employers and support professionals; and dealing with stigma (Sutton et al., 2004). Work conducted for the Department of Work and Pensions also found that mental health problems and involvement in crime were significant issues (Bauld et al., 2010).

The original conceptualisation of methadone maintenance therapy emphasised rehabilitation of the individual (Dole et al., 1968), and employment has long been a desired outcome of OST. Opponents of OST maintain that substitute medication is part of the problem, and that recovery is not possible without abstinence from all opiates, illicit or prescribed (Centre for Social Justice, 2007). A handful of previous studies from the UK (Parmenter et al., 2013), Sweden (Blom Nilsson et al., 2015), the USA (Widman et al., 2000), and Australia (Jenner et al., 1998) have identified facilitators of employment whilst receiving OST. An increased likelihood of employment is associated with male sex, previous paid employment, more years of education and being married. In contrast, social deprivation, housing problems, having a criminal record,

depression and poor physical health have been associated with decreased likelihood of employment (Zanis et al., 1994).

This paper reports on a mixed methods study to explore the characteristics of clients reporting full time employment whilst receiving OST in a particular treatment service. The first part (reported here) was a quantitative comparison of the perceived recovery capital and employment characteristics of a group in employment when compared with a similar group who were unemployed. We aimed to describe the type of jobs that they were doing, whether they differed in terms of their intake of prescribed and illicit drugs, and whether they perceived themselves to have greater levels of recovery capital than non-working peers as measured by a patient reported outcome measure. The second part involved a number of in depth qualitative interviews with a sub-sample of the employed group.

Methods

Setting

This cross-sectional study took place between January and April 2017 at the Solihull Integrated Addiction Service (SIAS), a specialist treatment service run as a partnership between Birmingham and Solihull Mental Health Foundation NHS Trust and three not-for-profit organisations (Aquarius, Welcome, Changes UK). In a preliminary analysis of data from the National Drug Treatment Monitoring Service (NDTMS) in November 2016, 99 of 385 (26%) clients receiving OST reported working on at least half of the days in the previous month, therefore providing an opportunity to study a large, stable employed group.

Participants

Participants completed a single, face-to-face, interview lasting approximately 25 minutes. Inclusion criteria were: i) OST from SIAS in the previous 30 days; ii) able and willing to give written informed

consent to participate; iii) aged 18 years or above. If the client was unable to provide consent due to intoxication but wished to participate they were asked to return at a later date.

Procedure

All drug workers and doctors were informed about the study and asked to discuss it with clients receiving OST at the next routine appointment and give them the participant information sheet. The client had until their next appointment to consider whether to take part in the study (minimum 48 hours). If the client agreed to participate, the drug worker introduced them to the researcher as either employed or unemployed. Within the limits of available resources, every eligible client who agreed to participate was approached whilst attending a routine appointment at SIAS. On average, clients had contact with their drug worker once a month, and consecutive clients were approached. An opportunistic sampling strategy was used due to a high frequency of missed appointments (approximately 50%) and attendance at unscheduled times. Participants that were employed were largely recruited during twice-weekly evening clinics designed for people in work. Employment was defined as any paid or unpaid work (including paid sick or vacation days) in the last 30 days (Kokkevi and Hartgers, 1995). Running a household, jobs in a controlled environment (e.g. prison or hospital), and illegal activities (e.g. drug dealing) were excluded even if paid. Unemployment was therefore defined as no paid work in the last 30 days. Each participant received a £5 shopping voucher to reimburse them for their time.

A sample size calculation, using data from the development of the Substance Use Recovery Evaluator (SURE, see below) measure used in the study (Neale et al., 2016), estimated that 110 participants were required to detect a five point difference in the total SURE score with 80% power and a 5% significance level. A five-point change was deemed clinically significant based on experience with the tool, as this would require an average change of one point in each of the five subscales. Recruitment stopped once the sample size for each group was met.

Approval was obtained from the NHS Research Ethics Committee (REC Reference: 16/SW/0319, IRAS ID: 217177) and the University BMedSci Research Ethics Committee (Reference: Y16_C2_17_SJDL).

Measures

1. Substance Use Recovery Evaluator (SURE): a validated, patient reported outcome measure for recovery from drug and alcohol dependence (Neale et al., 2016). The SURE has a focus on 'recovery' and prioritised the service user's perspective in its development (Neale et al., 2016). It was chosen as its design process involved a blending of qualitative methods (with their focus on subjective meaning and understanding) and more objective quantitative techniques. The 21 items are scored between 21 and 63 (higher score indicating greater recovery capital), with five individually-scored subscales: drinking/drug use (6-24), self-care (5-15), relationships (4-12), material resources (3-9), and outlook on life (3-9).

2. Addiction Severity Index (European version, EuropASI): elicits basic information prior, during, and after treatment for substance use-related problems to assess change in client status and treatment outcome (Kokkevi and Hartgers, 1995). Information was gathered on recent (last 30 days) or lifetime experiences in four problem areas: medical status, employment/support status, drug/alcohol use, and psychiatric status. A composite score of between 0 and 1 was calculated for each of the problem areas using the scoring manual (Blanken et al., 1997), where a score closer to 1 indicates more problems.

3. Leeds Dependence Questionnaire (LDQ): a validated, self-reported, ten-item questionnaire used to measure the severity of drug dependence in the last four weeks (Raistrick et al., 1994). The measure has been validated in abstinent patients. Each item is scored from 0 (never) to 3 (nearly always), giving a maximum score of 30. A higher score implies more severe dependence.

Outcomes

Demographic information was collected via the general information section of the EuropASI. The primary outcome was the difference in recovery capital (total SURE score) between the employed and

unemployed groups. The secondary outcomes were the average composite scores in the four EuropASI problem areas, average score in the five SURE subscales and average score in the LDQ.

Statistical analysis

The study sample was compared with NDTMS data for the whole SIAS population, and after reviewing the study dataset using descriptive statistics, the employed and unemployed groups were compared using SPSS v22.0. Continuous variables were tested for normality using the Kolmogorov-Smirnov test. Normally distributed data were summarised using the mean and standard deviation and compared using an independent t-test. Non-normally distributed data were summarised using the median and inter-quartile range and were compared using the Mann-Whitney U test. Categorical variables were analysed using a Chi-Squared test. Multiple logistic regression was used to test the independent contributions of factors associated with employment, and adjusted odds ratios were generated. The variables entered were chosen based on previous literature and significance in univariate analysis.

Results

Sample characteristics

During the ten-week recruitment period, 349 out of 385 clients receiving OST attended appointments at SIAS, 111 of which agreed to participate in the study (56 employed, 55 unemployed); one employed participant withdrew after consent due to concerns over confidentiality. When the sample was compared with NDTMS data, there were no differences in mean age, sex distribution, proportion receiving methadone and buprenorphine, mean medication dose, days used heroin the past 30 and days injecting. The study sample had a mean age of 39 years (range 24-69) and included 94 (86%) men. A majority (65, 59%) had used heroin in the preceding 30 days on a median of 1 day. Three-quarters (75%) were prescribed methadone and the remainder buprenorphine.

The employed group

The employed group had worked a median of 20 of the preceding 30 days. The most common occupational group according to the Office for National Statistics Standard Occupational Classification (Office for National Statistics, 2010b) was 'skilled trades' (e.g. bricklayer) (46%) followed by 'elementary occupations' (e.g. labourer and factory worker) (31%), 'process, plant and machine operatives' (e.g. fork lift truck driver) (11%), 'caring, leisure and other service occupations' (e.g. cleaner) (6%), 'sales and customer service occupations' (e.g. shop assistant) (6%) and 'managers, directors and senior officials' (e.g. self-employed) (2%) (Office for National Statistics, 2010a). The median wage in the previous 30 days after taxation was £1200. Work was the major source of income for 46 (83%) of the employed participants, but 9 (17%) reported that benefits/pension or family or friends were more important. Seven of the employed group (13%) were receiving state benefits in addition to earnings.

Employed vs. unemployed group

Table 1 compares the employed and unemployed groups.

[Insert Table 1 about here]

Substance Use Recovery Evaluator

The employed group had a significantly greater total SURE score compared to the unemployed group, with less drinking and drug use, better self-care, better relationships, more material resources, and a more positive outlook on life.

Medical and psychiatric status

The employed group had a significantly lower medical status score compared to the unemployed group (table 1), and were less likely to suffer from chronic medical problems, reported fewer days with medical problems and were less likely to be taking medication (table 2). The employed group also had a lower psychiatric status score, reported fewer days of psychological problems, were

significantly less likely to experience depression, anxiety/tension, hallucinations, and thoughts of suicide, and were less likely to have received medication (table 2).

[Insert Table 2 about here]

Employment/support status

The employed group had significantly lower scores (i.e. lower problem levels) on the two employment sub-scale composite scores (economic situation and satisfaction) (table 1). There were no significant differences in years of school or further education completed. The employed group had a significantly greater longest period of employment, a significantly shorter longest period of unemployment, and were more likely to have been in employment during the last 3 years (table 3). The majority of the unemployed group were claiming state benefits, of which two-thirds were receiving sickness or invalidity benefits.

[Insert Table 3 about here]

Drug use

The employed group had a significantly lower drug use composite score compared to the unemployed group (table 1). However, there was no significant difference in the number of days of drug use in the last 30, and no significant differences in the use of alcohol, heroin, cocaine/crack or multiple substances, age of first heroin use, or proportion of life using heroin (table 4). The employed group were less likely to have injected in their lifetime, and had experienced fewer drug overdoses.

[Insert Table 4 about here]

Drug Dependence

The employed group had a significantly lower LDQ score compared to the unemployed group (table 1).

Logistic regression model

Multiple stepwise logistic regression analysis was performed to test factors associated with employment. The following variables were entered into the model based on previous research and the results of the univariate analysis: years of secondary/high school education, longest period of employment (months), ever injected in lifetime (yes/no), receiving a therapeutic dose of OST (yes/no), number of days of heroin use in the last 30 days, use of multiple illicit substances in the last 30 days (yes/no), number of chronic medical conditions, and number of days of psychological problems in the last 30 days. The final model ($\chi2(4)=32.25$, $p=<0.001$), predicted 34.7% of the variance in employment status, and three variables were significantly associated with employment: months of longest period of employment (OR=1.01, p=0.003); number of chronic medical conditions (OR=0.44, p=0.011); and number of days of psychological problems in the last 30 days (OR=0.95, p=0.031).

Discussion

This exploration of the working patterns of a population receiving OST found that those in employment demonstrated features of recovery from opiate dependence: earning money and paying taxes, claiming few state benefits, and reporting good physical health and mental health. A patient reported outcome measure that didn't specifically reference employment was used to quantify the participants' levels of perceived recovery, and using this approach the employed group reported more material resources (e.g. stable housing and regular income), better self-care, better relationships, and a better outlook on life.

The need for total abstinence from opiates is enshrined in some definitions of recovery (The Betty

Ford Institute Consensus Panel, 2007), and ‘exiting treatment drug-free’ has been established as the primary marker of success in UK treatment services (Advisory Council on the Misuse of Drugs, 2014). Despite the clear differences between the employed and unemployed sub-groups in self-reported markers of recovery in this study, participants in employment reported using heroin as often as those not working despite no differences in age, gender, type of OST medication, or OST dose. This is consistent with another analysis of a UK treatment population that showed that meaningful activity was more strongly related to better health and quality of life than abstinence (Best et al., 2013). It also supports the argument to move away from using abstinence from heroin as the primary outcome measure of success of drug treatment (UK Drug Policy Commission Recovery Consensus Group, 2008), shifting the focus to perceived quality of life instead (Bray et al., 2017).

It is possible that the employed group felt more confident in using heroin as they received greater levels of income than their unemployed counterparts. Their lower levels of dependence as measured by the LDQ, and their lower use of other illicit substances beyond heroin may suggest that they felt more in control of their drug use, and that heroin was an acceptable ‘treat’ that they could afford both financially and emotionally. However, it is worth noting that most employed participants were working in industries that are at high risk during economic decline. Employment was mostly low-paid, with individuals earning on average £1354/month compared to the national average of £2036 (Office for National Statistics, 2017) and the Solihull average of £2321. Research suggests that during an economic recession, those with the most severe substance dependence are most likely to lose their jobs (Henkel, 2011). It will be important to follow this group up over time to determine whether employment is a stable base for moving into complete abstinence in the future.

Work offers benefits to individuals with substance dependence including a legal source of income, improved physical and mental health, and increased social integration (Richardson et al., 2012a). It has also been associated with more positive treatment outcomes such as periods of abstinence and improved engagement in treatment services, and has a key role in building recovery capital (Black, 2016, Patel et al., 2016). However, our results suggest a nuanced picture that requires careful

interpretation, with different strategies required for the employed and unemployed sub-groups. This study is consistent with previous research that found the most significant factor in predicting employment is a longer employment history (Zanis et al., 2001) i.e. 'those who are employed stay employed' (Bauld et al., 2010). Early employment may occur before drug use or treatment starts, providing a possible explanation for analysis showing that OST has little impact on employment outcomes (Black, 2016). The goal with the employed group is therefore to ensure that they can consolidate their working status despite the stigma of illicit drug use. Recovery is a developmental process in which there are various trajectories and turning points, and further understanding of how employment fits into this journey is required (Richardson et al., 2016). Treatment services need to think how to manage this group to ensure that the requirements of receiving an OST prescription don't limit the individual's ability to work e.g. the provision of evening clinics. They might also consider proactive advocacy work with local employers to explain the process of treatment and the assessment and monitoring safeguards in place. Clear advice about employees' legal rights (and responsibilities) should be made more available.

In contrast, the unemployed group had worse physical and mental health both before and after the current episode of treatment. A logistic regression model suggested that a longer period of previous employment, fewer chronic medical problems and fewer current psychological problems were associated with employment when other predictive factors were controlled for. The unemployed group were also receiving high levels of sickness-related benefits. The cross-sectional design of this study means that it is not possible to determine whether employment was a cause or an effect of better physical or mental health. However, poor health has been recognised as a significant barrier to gaining employment in individuals with substance dependence (Sutton et al., 2004). Interventions to tackle physical or mental health problems may need to come before attempts to secure employment. The Individual Placement and Support model provides employment support alongside clinical treatment, and has been recommended by a recent report to the UK Government (Black, 2016). This has a strong evidence base in the mental health field, but requires evaluation in OST services.

Ultimately it may be that the changes required to facilitate progress in the unemployed group cannot be delivered by treatment services alone, but instead need to come from wider societal change. For those receiving benefits or engaging in lucrative illegal activity, the prospect of a low-paid job has been shown to act as a deterrent in seeking employment as it leads to financial insecurity, therefore creating a so-called 'unemployment trap' (Bauld et al., 2010, Richardson et al., 2012b). This study shows that people that use drugs can sustain employment, and report good levels of quality of life whilst doing so. Therefore there is an argument that if jobs were created for people with drug use and multiple disabilities (rather than expecting them to become abstinent from drugs first), this would be a potentially stabilising force in their lives that could precede drug use cessation (Richardson et al., 2012a). However, this would require external intervention in the increasingly competitive open market for jobs. In reality what may be required is an 'employment continuum', whereby a number of stages exist between unemployment and employment including treating mental and physical health problems, building motivation, stabilising drug use, providing appropriate stable accommodation, developing 'soft skills', training, work trials and job placements, and in-work support (Spencer et al., 2008).

These findings may provide a stepping-stone for future research, but several limitations must be considered. A cross-sectional design involving a limited number of variables was adopted due to time and resource limitations. Future studies should investigate a broader range of factors including ethnicity, having a criminal record, and personal barriers such as self-esteem. A longitudinal design would also allow some of the issues of causality to be explored, and hence all participants were asked for consent to follow them up in the future. The parallel qualitative study in the same population will add further depth to the understanding of individual factors in employment. The opportunistic sampling strategy may also have introduced selection bias, although the study sample was shown to be representative of the SIAS population. Similarly, generalisability to other OST populations cannot be assumed. Employment was conceptualised as a dichotomous variable allowing for a smaller

sample size, but the results suggest that it would be valuable to include sub-groups such as full-time and part-time workers to explore the 'employment spectrum' described above. The issue of employment in OST, and its inter-relation with the concept of recovery, is important but cannot be easily reduced to a few key factors.

Disclosure of interest

The authors report no conflicts of interest.

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