

Gender and recovery pathways in the UK

ANDERSSON, Catrin <<http://orcid.org/0000-0003-4336-4771>>, WINCUP, Emma <<http://orcid.org/0000-0001-5243-073X>>, BEST, David <<http://orcid.org/0000-0002-6792-916X>> and IRVING, Jamie <<http://orcid.org/0000-0001-9994-3102>>

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Gender and recovery pathways in the UK

Catrin Andersson^{a*}, E. Wincup^b, D. Best^c and J. Irving^a

^a Department of Law and Criminology, Sheffield Hallam University, Sheffield, UK

^b Joseph Rowntree Foundation

^c College of Business, Law and Social Science, University of Derby, One Friar Gate Square, Derby

Corresponding author:

Department of Law and Criminology

Heart of the Campus, Collegiate Crescent

Sheffield,

S10 2BP

Telephone: 0114 225 6372

E-mail: c.andersson@shu.ac.uk

Dr Catrin Andersson is a Senior Lecturer in Criminology at Sheffield Hallam University. She has a broad range of research interests including addiction and recovery, violence, gambling and comparative studies.

Dr Emma Wincup is now Research Manager (Qualitative) at the Joseph Rowntree Foundation. The paper was written whilst she was employed as Senior Lecturer in Criminology at the School of Law (University of Leeds) and does not represent the views of the Joseph Rowntree Foundation.

David Best is Professor of Criminology in College of Business, Law and Social Science at University of Derby and Visiting Associate Professor of Addiction Studies at Monash University in Melbourne. He has written three books on addiction recovery and edited two more and is the author or over 170 peer-reviewed academic papers.

Dr Jamie Irving is a Senior Lecturer in Criminology at Sheffield Hallam University. His research focuses on desistance and recovery.

Gender and recovery pathways in the UK

Abstract

Recovery is now the defining feature of UK drug and alcohol policy. Despite this policy emphasis, little attention has been paid to the lived experience of those in recovery. Instead, research has typically concentrated on treatment populations, which are predominantly male. Consequently, we have little insight into recovery experiences in general, and specifically how they might differ for females and males. This paper makes an important contribution through offering a unique insight into the addiction/recovery pathways of 342 female and 410 male participants using data gathered via the UK Life in Recovery survey. Participants were recruited via social media and recovery groups. Bivariate analyses were used to explore gender differences in relation to personal characteristics, addiction and recovery (self-defined), well-being and family life. The data suggests that a greater proportion of females in recovery report having specific needs in relation to mental health and relationships with children or partners whilst a greater proportion of males disclosed having specific needs in relation to physical health. Whilst the findings reflect the importance of ongoing support for everyone in recovery, they also suggest the need to provide gender-responsive recovery support.

Keywords: Gender, recovery, drugs, alcohol, family violence, mental health, addiction

Word count: 8729

Gender and recovery pathways in the UK

Whilst the concept of recovery is not new (Berridge, 2012; Yates & Malloch, 2010), during the past decade it has become a significant feature of drug and alcohol policy across the UK (HM Government, 2008; 2010; 2017; Northern Ireland Executive, 2011; The Scottish Government, 2008, 2018; Welsh Assembly Government, 2008). Such developments are part of a global trend with similar developments in the US, Australia and parts of Western Europe (Humphreys & Lembke, 2014; Lancaster et al., 2015; McKeganey, 2014). The emergence of the recovery agenda has been accompanied by considerable debate about what defines recovery (Lancaster et al., 2015; Best et al., 2016), with two groups established to come up with consensus statements, first in the US (Betty Ford Institute Consensus Group, 2007) and then in the UK (UK Drug Policy Commission, 2008). Both groups produced definitions that included global health and citizenship as well as reductions in substance use, fitting with a broader view that recovery involves more than tackling substance use and requires an individual to be supported to improve their life and their life chances (Roberts & Bell, 2013). Despite the growth of interest in recovery, relatively little is known about the lived experiences of those in recovery (Best et al., 2017; Timpson et al., 2016), and particularly those who do not access treatment. This paper aims to make a significant contribution to understanding those experiences through a focus on the gendered nature of recovery experiences. We focus in particular on women's experiences.

Academic and policy literature largely refers to women and men so this terminology is used in this section and the discussion section. We note the tendency to conflate sex and gender and at the end of the paper consider ways to enhance understanding of gender and recovery from substance use.

In a chapter focused on women in recovery, Thom (2010, p. 68) remarked upon the lack of research on women in recovery. Similarly, Hennessey (2016) has drawn attention to the lack of consideration of gender in both the conceptualisation and measurement of recovery capital (defined as 'the breadth and depth of internal and external resources that can be drawn upon to initiate and sustain recovery' (White & Cloud, 2008, p. 22)). In recognition of the dearth of research attention on diversity and recovery, the Advisory Council for the Misuse of Drugs (ACMD) – an independent expert advisory body – recommended that the UK government should commission research to establish how best to maximise recovery outcomes among different groups, including different genders (ACMD, 2013). An important contribution is offered by Neale et al. (2014), based on qualitative interviews with 40 current or former heroin users. They found that gender was an important factor in structuring participants' experiences but there was no essential recovery experience among women. Neale et al (2014) argue that women's access to recovery resources was shaped by a complex mix of intrapersonal (e.g. health), interpersonal (e.g. relationships) and structural (e.g. housing) factors. Beyond the UK, the work of Christine

Grella and her colleagues (Grella et al., 2008) has helped to understand the role gender plays as individuals progress, although not always in a linear way, through the treatment, relapse and recovery cycle. They argue that whilst the broad contours of the recovery cycle are similar for women and men, gender (even after controlling for other key variables identified in the literature such as potential predictors) is the key moderator of outcomes following treatment in the same way that it influences the course of substance use initiation, addiction onset and treatment participation. Gender differences were most marked in relation to the role of interventions that steer individuals toward treatment, prior treatment experience and accessing self-help. Grella et al. (2008) found that whilst women were more likely than men to sustain their recovery, there was a greater likelihood of relapse among women who had previously been in treatment.

The scarcity of research on the gendered dimensions of recovery is disappointing as there is evidence to suggest women's and men's experiences may be distinct. First, there are well-documented differences in the nature and extent of women's and men's drug and alcohol use. Across a wide range of jurisdictions, men outnumber women when drug and/or alcohol use becomes regular and damaging (European Monitoring Centre for Drugs and Drug Addiction, 2016; United Nations Office on Drugs and Crime, 2018). In the UK, men by far outnumber women in estimates of the 'problem' drug-using population (Hay et al., 2017; Scottish Government, 2011). In population surveys, men have disclosed much higher rates of hazardous, harmful and dependent drinking (NHS Digital, 2019; Scottish Government, 2017). Unsurprisingly, there are significantly more men than women in treatment populations. For example, almost three-quarters of clients accessing drug and alcohol treatment in England from 2018-2019 were male (Public Health England, 2019). The under-representation of women may reflect the barriers they face in accessing treatment. These barriers include stigma, guilt and shame; mental health difficulties; fear of losing custody of children and caring responsibilities (see Tweed et al. 2018 for a recent review of the literature). Reviews of the literature point to specific barriers faced by sub-groups of women including those who have experienced trauma and violence; those with comorbidity (i.e. poor mental health) and women who are pregnant or who have parenting responsibilities (Arpa, 2017). The gender difference is, however, too stark to be attributed solely to differential access.

Second, there is growing evidence of gendered pathways to substance use, highlighting the role of trauma and mental health in particular. Literature on women and drug use points to higher rates of poor mental health (including suicide and self-harm) and experiences of physical and sexual abuse within childhood and adulthood (Becker & Duffy, 2002; Neale et al., 2014; Simpson & Nulty, 2008). The evidence base in relation to alcohol is less developed in the UK context but a recent review of research from the US emphasises the role of alcohol as a means of self-medication to cope with stress, trauma, childhood maltreatment and poor mental health (Guinle & Sinha, 2020). The drivers of women's

substance use are likely to impact on their experiences of recovery. One of the few studies available on gender and recovery suggest that women continue to experience poor mental health and abuse in recovery (McQuaid & Dell, 2018).

Third, there is emerging evidence of gender differences in recovery capital. These differences are most apparent in relation to human capital, which incorporates health and well-being, and social capital, which includes relationships (see Wincup, 2016). Women appear to be exposed to higher rates of negative recovery capital. This refers to factors which 'actually impede one's ability to successfully terminate substance misuse and keep people trapped in the world of addiction' (Cloud & Granfield, 2009, p. 1977). These include biological differences between women and men which can shape the acute effects and long-term consequences of substance use; for example, a more rapid shift towards dependency for women alongside implications for reproductive health (Hankins, 2008; McHugh et al. 2018). They also include social factors such as the socio-cultural taboos associated with women's substance use, poor mental health and exposure to violence and abuse (Hankins, 2009). Much of this work is derived from treatment populations in which women are under-represented. Looking at recovery across a wider range of settings, Best et al. (2020) suggest that whilst women report fewer recovery strengths than men in addiction, they report more than men in recovery suggesting that women are skilled in achieving and sustaining recovery once they have opportunities to do so. The challenge is overcoming residual problems (for example, relating to trauma and mental health) which may persist even after someone has recovered.

Finally, and following on from the discussion of negative recovery capital above, there is evidence which suggests differential responses to women's use of alcohol and drugs. A review of the literature on stigmatisation of drug users revealed that being female was one of the most commonly experienced stigmas (Lloyd, 2010). The review noted that often the stigma of being a female drug user is compounded by belonging to other stigmatised groups (being Black, homeless, a sex worker or an offender). In particular, being a mother or pregnant led to greater stigma. A number of studies have explored the clash between idealised images of motherhood and stereotypical images of women who use substances (Radcliffe, 2011; Stengel, 2014). For example, Staddon's (2015b) recent edited collection highlights the ongoing censure of women's use of alcohol and the construction of women's drinking as a greater problem than men's. Stigma matters because it is understood to be a barrier to recovery (Lloyd, 2010; Singleton, 2010).

The implication that recovery journeys might be distinct for women warrants further research attention, and this paper presents the findings of an investigation which set out to

explore whether the lived experiences of recovery are different for female and male¹ participants. It uses data gathered via the UK Life in Recovery (LIR) survey (Best et al., 2015). Using a self-completion questionnaire, the LIR survey was able to capture the experiences of individuals who might otherwise be 'hard to reach'. This group were no longer engaged with drug and alcohol treatment services and may not have used them in the first instance, preferring to access support through other means; for example, mutual aid. It provides an insight into how recovery has transformed the lives of many people in the UK but also reveals the ongoing difficulties faced by those in recovery. The LIR survey offers a significant advance in recovery research by mapping key life domains and identifying self-assigned recovery status. The survey cannot claim to be representative of all those in recovery but its success in achieving a sample comprising of almost equal numbers of women and men provides a unique opportunity to explore gender differences in recovery. This is a far higher proportion of women than that typically found in treatment-based outcome studies and permits exploration of women's and men's pathways to recovery and their access to recovery capital.

This paper provides evidence which suggests that a gendered analysis should be central to understanding recovery. We highlight how the needs of females and males differ, particularly in relation to health and wellbeing and family relationships. Whilst cognisant of shared experiences of recovery and the need for greater access to appropriate services for all those in recovery, we suggest that there are sufficient differences between female and male participants to explore further what tailored interventions might look like.

Materials and methods

Prior to 2012, information about how individuals in addiction and recovery fare across a number of life domains was largely limited to those who had previously accessed drug and alcohol treatment. Following the creation of the LIR survey there is now a growing body of knowledge from different countries about the lived experiences of recovery which captures those who had not accessed formal treatment. In 2012, Faces and Voices of Recovery, a US recovery advocacy organisation, distributed their findings from the LIR survey on wellbeing during active substance use and recovery. The US LIR survey was developed using a large number of items that reflect events and experiences of individuals in active addiction. These items were narrowed down to 44 items through an iterative process of review by the Faces and Voices' board of directors and additional stakeholders (Faces and Voices, 2013). Since then, an Australian version, (Best & Turning Point, 2015), and a Canadian version have been completed (McQuaid, et al., 2017). The UK LIR survey largely replicates previous surveys, with the inclusion a few additional measures: an amended version of the World Health Organisation Quality of Life (WHOQOL) BREF, which has high reliability (Skevington, Lotfy &

¹ The LIR survey uses the terms female and male. This is discussed in more detail in the next section of the paper.

O'Connell, 2004); The Treatment Outcomes Profile (TOP) is used to monitor substance use and related outcomes, and has been shown to have high reliability in England (Marsden et al., 2008); and measures of social identity from the Exeter Identity Transition Scales (EXITS; Haslam et al., 2008). To the authors' knowledge, no psychometric tests have been published on any of the LIR surveys.

The UK LIR survey collected data online via Survey Monkey, and the link to the online survey was distributed to numerous recovery groups and communities through the personal networks of the researchers. One of the chief mechanisms deployed for the dissemination of the online LIR survey was the Sheffield Addiction Recovery Research Group (SARRG). This comprises of members of the local treatment provider community, drug and alcohol treatment service commissioners, service users and academics in the field. The SARRG group's diverse membership ensured widespread and enthusiastic dissemination secured a significant sample size for the UK LIR survey. The survey link was 'shared' via social media (i.e. retweeted/liked) with others interested in recovery. The survey took approximately 20 minutes to complete. Similar to the Australian LIR study, hard copies were made available for those who were unable to access, or were not comfortable completing, the online survey.

Following the approach adopted in the US LIR, participants were asked to identify themselves as female or male. There was no option for individuals not to disclose their gender identity other than by not answering the question and 12 participants did not select either option. Neither was there an opportunity to provide information on sex at birth and current gender identity, a two-step method increasingly used to capture the experiences of transgender individuals (see for example, Reisner et al., 2014). We will return to this issue in the limitations sections of the paper.

The LIR survey is predominantly based upon a 'then and now' design of key life domains. 'Then' refers to when the participant experienced active addiction and 'now' indicates their current recovery status [at the time of completion]. Four recovery categories were used: medically assisted recovery (MAR), in recovery, recovered, and 'used to have a drug or alcohol problem but no longer do'. These categories were not defined and participants were simply asked to choose which category best captured their experience. By using the 'then and now' design, it was possible to note whether there was stability or changes in life domains as the person transitioned from addiction to recovery. To facilitate data analysis, 'used to have a drug or alcohol problem but no longer do' was subsumed into the recovery category.

The key life domains included family and relationships; finances; psychological and physical health; employment, education and training; and contact with the criminal justice system. In order to capture the key life domains, the LIR consisted of subscales based on Likert scales, semantic differential scales, dichotomous questions, open-ended questions, narrative questions and others (see Best et al., 2015 for more detailed information on the

survey design and item scoring). Further explanation of the key variables included in analyses is in table 1.

Table 1 about here

The UK LIR project was approved by the ethics committee of the Faculty of Development and Society at Sheffield Hallam University.

Statistical analysis

Statistical analyses were carried out using the Statistical Package for Social Sciences (SPSS), version 22. Bivariate analyses included independent samples t-tests and Chi-squared tests. Due to non-normality in some key variables Kruskal-Wallis H tests were also conducted. The proportion of missing values ranged between 3.8% and 26.6%. Missing values in all analyses were listwise deleted. Bivariate statistical analyses were conducted for two reasons. First, the primary purpose of this paper is to compare gender differences. Second, the number of missing values was up to 26.6% (with the lowest number of missing values at 3.8%). Missing values in all analyses were listwise deleted.

Participants

The survey data were collected between March and June 2015. A total of 802 UK Life in Recovery 2015 surveys were completed. 790 respondents identified themselves as female or male, of whom 53.1% were male and 46.9% were female, representing a near ideal matched sample for analyses by gender. The ages of the participants were distributed as follows: 24.6% were aged between 50 and 59; 19.4% were aged between 30 and 39; 13.9% were aged 60 or older; 3.8% were aged between 21 and 29; and 0.3% were aged between 18 and 20. Female and male participants had similar usage rates of the three most common substances: alcohol, cocaine and heroin (see table 2).

Table 2 illustrates the lack of statistically significant differences between female and male participants with the exception of a greater proportion of males describing themselves as retired.

Table 2 about here

Results

Addiction career and recovery status

Table 3 compares female and male participants in terms of their addiction and recovery careers and draws attention to some noteworthy differences. Females had significantly shorter addiction career lengths compared to males, with mean ages of 17.7 years and 22.4 years respectively. There were significant gender differences in age at start of recovery.

Female participants typically started their recovery journeys several years earlier than males and they had been in recovery for a significantly shorter period of time. Female and male participants reported comparable rates of using recovery groups and treatment services and reported similar levels of using substitute medication to manage their recovery. There were no significant gender differences in self-identified recovery status at the time the survey was completed.

Table 3 about here

Gender, health and wellbeing

Wellbeing is a core dimension in the LIR survey, and consequently was measured by a range of measures (see table 1). Participants were asked to make a self-assessment of their own health and quality of life during the past four weeks. The results indicate (see table 4) that while female and male participants scored similarly on physical health, females reported significantly lower levels of psychological health and quality of life compared to males. In terms of help-seeking, a greater proportion of female participants reported seeking help for mental health-related issues and disclosed accessing mental health treatment, both in the past and currently. However, despite this, a higher percentage of female participants stated they had untreated emotional and mental health concerns during active addiction. In recovery, there were no significant gender differences, but approximately one-third of the sample (both females and males) still reported experiencing unresolved mental health and emotional problems.

A large proportion of the sample reported that they had used some type of health care service while they were in active addiction. Use of these services dropped markedly when participants were in recovery, though gender differences emerged with a greater proportion of male participants seeking health care services. One possible explanation for this is the higher rates of ongoing medical conditions reported by male participants, although the gender difference was not statistically significant (see table 4). Further investigation is needed to explore whether male participants' greater use of health care services is a consequence of residual problems stemming from addiction.

Next, a set of analyses explored links between key health variables for female and male participants. Correlations by gender revealed differences in wellbeing dependent on time in recovery. For female participants, there was a weak but positive relationship between psychological health in the past four weeks and length of time in recovery (i.e., years; $r=.21$, $p<.001$). Similarly, female participants reported that their perceived quality of life in the past four weeks was positively related to their time in recovery ($r=.14$, $p<.001$). In contrast, none of these relationships held for male participants. These findings suggest that the mental health of female participants improves the longer they are in recovery. These

results were replicated when examining self-ascribed recovery categories. There was a significant difference in psychological health and quality of life between recovery categories for female participants. Those who were in MAR had significantly lower psychological health assessments than all other recovery categories (i.e., in recovery and recovered; $\chi^2=7.85$ (2), $p<.05$)². Similarly, those who were in MAR had lower quality of life assessments than the other groups, but this failed to reach significance. For male participants, there were differences in psychological health ($\chi^2=15.83$ (2), $p<.001$) and quality of life between recovery categories ($\chi^2=15.89$ (2), $p<.001$), specifically males who described themselves as in recovery or recovered rated their psychological health and quality of life higher than those in MAR. The small number of participants in MAR³ and the lack of depth provided by an online survey did not allow us to explore further why those in MAR reported poorer mental health.

For both female and male participants, there was a relationship between time in recovery and currently seeking help for mental health-related problems ($t= 3.22$, $p<.001$; $t= 3.32$, $p<.001$, respectively). Individuals accessing mental health treatment at the time of survey completion had been in recovery significantly fewer years than those who were not. Female participants currently receiving mental health treatment had been in recovery for an average of 6.0 years while males had been in recovery slightly longer at 6.5 years. Those who were not seeking help at the moment had been in recovery for longer, an average of 8.6 years for females and 10.0 years for male. These findings indicate that for both female and male participants mental health support is needed for a significant period following active addiction, and suggest that even reaching stable recovery (defined as five years or more, see Betty Ford Institute Consensus Group, 2007) does not always provide sufficient time to address residual mental health issues.

Table 4 about here

Gender and family relationships

The LIR survey asked participants about their family relationships during addiction and recovery, allowing exploration of the impact of recovery on this domain. Table 5 shows the findings on family relationships split by gender. While experiencing active addiction, many respondents reported experiences of family violence as either a perpetrator or victim. Prevalence was considerably higher amongst female participants with half of them

² There were only 9 female participants and 14 male participants in the MAR recovery category. However, these are appropriate group sample sizes for the Kruskal-Wallis H test.

³ This may be because those still in medically-assisted treatment did not define themselves as 'in recovery', particularly given the current policy emphasis on abstinence.

experiencing some form of family violence, a rate significantly higher than among males. In recovery, the prevalence of violence decreased substantially, especially for female participants, and there was no significant gender difference.

The question, originally used in the US survey, covered victimisation and offending because it was felt that individuals may not be keen to disclose being a perpetrator. The question was not changed for the UK LIR survey because effort was taken to maintain the integrity of the survey for comparison. The limitations of the question have been noted elsewhere (Faces and Voices, 2013). Even adopting this cautious approach, the extent of missing responses for the family violence questions (between 14.1% and 19.8%) points to an unwillingness to reveal such personal information (see table 5). Nonetheless it provides a broad picture of family violence in addiction and recovery even if it does not permit specific inferences about victimisation and perpetration. We can, however, make some reasonable assumptions based on previous research that female participants are more likely to be the victims rather than be perpetrators of domestic violence. For example, the Crime Survey of England and Wales reports that women are almost twice as likely to be victimised compared to men (Office for National Statistics, 2019). Studies specifically on males engaged in substance use treatment have found higher rates of being a perpetrator of intimate partner violence (see Gilchrist et al., 2017) and also exposed how substance use can be a contributing factor for intimate partner violence (Radcliffe et al., 2019).

Survey respondents were asked to state whether they had dependent children. A higher proportion of females than males reported having dependent children (40.1% and 36.5%, respectively), though this difference was not statistically significant (see table 2). Furthermore, there were no significant gender differences in recovery status for those who had dependent children (see table 5). At the time of completion, participants were also asked if they had lost custody of their children (other than through divorce) and whether they had regained child custody from child protection or foster care either during active addiction or since they came into recovery. A significantly higher percentage of female participants reported having lost custody of their children (i.e., no longer being able to live with their children) in both active addiction and recovery (see table 5). Whilst a greater proportion of female participants regained custody of their children in active addiction and recovery, not all were reunited with them.

Table 5 about here

Discussion

The results of the UK LIR survey point to the importance of a gendered understanding of recovery. Whilst there are many similarities between the recovery pathways of females and males, the findings suggest crucial differences in relation to mental ill-health and well-being,

and family relationships. These gender differences need to inform the development of recovery policies and service provision.

First, female participants reported experiencing poorer psychological/mental health and lower levels of wellbeing in comparison to males, mirroring the findings of population-based surveys (McManus et al., 2016) and treatment-based surveys (Jones et al., 2007; Neale et al., 2004). There is, however, indicative evidence of greater improvements for females (c.f. males) as they continue on their recovery journeys. These improvements may be due to women's greater use of services, again reflecting similar patterns in treatment and general populations. Results from the LIR survey reveal that a greater proportion of female participants accessed mental health services than men, a finding which can only partially be explained in terms of lower levels of mental health in comparison with men. Population surveys also suggest that being female is an important predictor of service use, even after controlling for differences in level of common mental disorder symptoms (McManus et al., 2016). A greater proportion of male participants reported making frequent use of health care services, particularly in recovery. In general populations, the pattern is reversed (see for example, Wang et al., 2013).

Second, consistent with a growing body of literature which points to close connections between substance use and family violence (Galvani & Toft, 2015; Simonelli et al., 2014), findings from the LIR survey suggest that a greater proportion of female participants experienced family violence. These gender differences disappeared as participants moved from active addiction to recovery. For the reasons noted earlier in the paper, no information was collected on the nature of involvement in family violence (i.e. victim or perpetrator) but it is likely that the female participants were victims rather than perpetrators, and if this is the case this group continue to report higher levels of victimisation than those found from population surveys (Office for National Statistics, 2018).

Finally, a further difference between female and male participants relates to relationships with their children. In both addiction and recovery, a greater proportion of female participants disclosed losing custody of their children. Whilst maternal substance use is a significant risk factor for child maltreatment and neglect (Canfield et al, 2017), this finding is likely to reflect the gendered nature of caring responsibilities. Studies of treatment populations have found men who use drugs tend to have their children cared for by a partner rather than placed in alternative care such as a foster home (National Treatment Agency, 2010). Conversely, a greater proportion of women reported regaining custody of their children. However, crucially not all were reunited with their children, causing enduring harm which might threaten their recovery. Broadhurst and Mason (2020) argue that a combination of collateral consequences with grief intersecting with socio-economic disadvantage and stigma.

The results of the UK LIR survey have two significant implications for the delivery of services for those in recovery. First, they provide empirical evidence of the need for ongoing

recovery support services, even for those who describe themselves as 'recovered'. Our findings illustrate a demand for provision in relation to psychological/mental health, relationships and family support for females, and for males with primary care and specialist medical services. Whilst the majority of our sample were well-established in their recovery journeys and had made significant improvements across a range of life domains, they reported ongoing problems. This is particularly striking in relation to in relation to emotional/mental health since approximately one-third of the sample reported untreated emotional/mental health problems. Whether these difficulties are a consequence of their use of alcohol and/or drug, are new problems which have emerged in recovery or are resurfacing of earlier problems requires additional exploration but the findings point to the need for services which can support individuals, Second, drawing attention to the gendered nature of recovery opens up the debate about whether the needs of women are recognised in recovery services. There has been considerable debate about the appropriateness of treatment services for women with research highlighting the multiple barriers which impact negatively on women's engagement with treatment services (see Tweed et al., 2018 for an overview). There has also been considerable debate about the most appropriate way to provide treatment for substance-using women (i.e. through single-sex or mixed-sex provision, see Neale et al., 2018) and substantial support for gender-responsive services (Covington, 2002; Grella, 2008; O'Neil & Lucas, 2015). Gender-responsive refers to services which are based on the following principles (Bloom et al., 2003): gender (recognition that gender makes a difference); environment (the importance of safety, respect and dignity); relationships (supporting individuals to establish healthy relationship); services (comprehensive, integrated and cultural relevant); socio-economic status (providing opportunities for enhancement); and community (comprehensive and collaborative community services) and increasing a seventh principle of being trauma-informed is added in recognition of the high levels of trauma experiences by substance-using women in childhood and/or adulthood (Covington, 2008; Puurunen & Vis, 2017; Tompkins & Neale, 2018). The same debates have yet to take place in relation to recovery services. Our findings suggest the need for further exploration of women's and men's experiences of using, or attempting to access, services needed to support recovery, alongside their preferences in terms of service provision.

Limitations

A limitation that affects this paper, and all of the Life in Recovery studies, is sampling and representativeness. We do not know what the overall recovery population looks like so no sampling frame could be constructed which would have allowed us to establish a representative sample. Moreover, the method used, an online survey which recruited participants through 'digital snowballing' (Graham et al., 2018, p. 16) via use of cross-posting on social media, may create a significant bias towards more educated, more technologically literate or better connected groups, despite considerable efforts to mitigate against this described earlier in the paper. The method also means that we have limited

information about how or why individuals found out about the survey or chose to take part. Similarly, the method precludes us knowing anything about individuals who self-excluded or started but did not complete the survey. Nonetheless, as other researchers (Barratt & Lenton, 2015) working in the alcohol and other drugs field have noted use of digital communication methods offers the potential to reach out to large number of people who would otherwise be under-represented in probability-based surveys.

A further limitation of the LIR is that it adopted a binary approach to gender rather than allowing participants to choose from a wider range of options to define their gender identity. This means, for example, that the study was not able to contribute to the growing body of literature on transgender individuals which has begun to expose the complexity of the relationship between gender and substance use. The emerging evidence points to high rates of substance use among transgender populations (Keuroghlian et al., 2015) and more severe problems upon entering treatment (Flentje et al., 2014; Cochran & Cauce, 2006). Whilst the treatment experiences of transgender individuals have been considered (Lyons et al., 2015), little is known about their recovery journeys.

A final limitation is that the survey format, and the additional constraints of using a pre-existing survey, did not permit us to capture the complexities of people's lives. This was a particular issue when looking at the relationship between gender and family relationships. We recognise the importance of qualitative research to capture lived experiences of recovery in ways which complement our analysis here. This approach is particular suited to capturing in greater depth the experience of specific groups such as women (see for example, Lay & Larimer, 2018) and facilitating the exploration of sensitive issues such as experiences of trauma (for example, adverse childhood experiences or abusive relationships in adulthood).

Conclusion

The LIR survey method offered an approach that engaged a significantly higher proportion of female participants than the vast majority of addiction research study designs which tend to focus on treatment populations, allowing us to access some individuals who may otherwise be hidden. This means that we have had the opportunity to observe what recovery pathways look like for females, which are clearly different than for males, at least within the participating sample. While female participants typically reported shorter addiction careers than males and progressed well in their recovery careers, they also reported lower levels of wellbeing, experiences of family violence and loss of custody of their children. Whilst the findings point to the importance of ongoing support for all those in recovery, they also suggest the need for further exploration of how to provide gender-responsive recovery support.

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Declaration of Interest

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Table 1. Measurement of key variables

Survey questions	Scoring
<i>General Information</i>	
Do you have dependent children?	No/Yes
How many of your children are under 18? (Please enter number of children under 18)	Open-ended
Which one below best describes your employment status?	Employed full time Employed part time Unemployed Student Retired Other (please specify)
When you were in ACTIVE ADDICTION, what did you experience primary issues with? (e.g. tick all that apply)	Alcohol Gambling Prescription drugs 'Legal highs'
*Please specify primary drug or drugs	Illicit drugs Other behaviours that caused problems (please specify) * open-ended
<i>Addiction career and recovery status</i>	
For how long did you use drugs and/or alcohol? (enter number in years and/ or months)	Open-ended
How old were you when you started your recovery? (please enter age when initiated recovery)	Open-ended
Thinking about the answers you provided to the previous question, how long have you been in recovery/ recovered etc.? (enter duration in years and months)	Open-ended

Have you ever gone to a treatment program such as detox, methadone clinic, community alcohol or drug service, or rehab to deal with drugs and/or alcohol problems? No/Yes

Have you ever taken medications prescribed by a health care professional to deal with drug and/or alcohol problems? (e.g. methadone, buprenorphine, Vivitrol, Camparal, naltrexone (DO NOT INCLUDE MEDICATION FOR MENTAL HEALTH) No/Yes

Have you ever attended a 12step addiction recovery meeting such as Alcoholics or Narcotics Anonymous? No/Yes

Have you ever attended a NON 12step addiction recovery support group? (e.g. LifeRing, SMART Recovery/ Rationale Recovery) No/Yes

Which category best describes how you define yourself now, with respect to your prior alcohol and/ or drug use? (choose one)

In recovery
Recovered
Ex-addict⁴ or alcoholic
Used to have an alcohol or drug problem, but don't any more
In medication-assisted recovery

Well-being

How would you rate your quality of life in the last four weeks?(e.g. able to enjoy life, get on well with family and partner, satisfied with living conditions) 1- Poor
10- Good

How would you rate your physical health status in the past four weeks? (e.g. extent of physical symptoms and bothered by illness) 1- Poor
10- Good

⁴ We are aware of the potentially stigmatising nature of the term. For comparability purposes, it was retained in the UK version of the questionnaire. No one in the sample chose to define themselves in this way.

Are you currently under a doctor's care for an ongoing ('chronic') medical condition? (e.g. high blood pressure, diabetes, high cholesterol, asthma, arthritis)? (no/yes) No/Yes

How would you rate your psychological health status in the past four weeks? (e.g. anxiety, depression and problem emotions and feelings?) 1- Poor
10- Good

Are you CURRENTLY receiving help or treatment for emotional or mental health problems? (e.g. therapy, counselling, medication)? No/Yes

Have you EVER been treated for an emotional or mental health problem? No/Yes

Frequent use of health care services (e.g. hospitals, clinics, detox) No/Yes

Family life in addiction and recovery

Was victim or perpetrator of family violence No/Yes

Participated in family activities No/Yes

Lost custody of children (other than through divorce) No/Yes

Regained child custody from child protection or foster care No/Yes

Table 2. General information about participants (n=802)

General information	Male (n=410)	Female (n=342)	Parameter, significance
	Mean(SD)/%		
Dependent children	36.5%	40.1%	ns
Number of dependent children	1.73 (1.2)	1.74(1.4)	ns
Employed (full-time, part-time, self-employed)	58.6%	57.6%	ns
Unemployment or disability	19.1%	21.3%	ns
Retired	11.5%	7.1%	$\chi^2=4.32, p<.05$
Students	5.4%	5.3%	ns
Volunteer	2.6%	3.6%	ns
Substance used*			
Alcohol	50.5%	53.5%	ns
Cocaine	28.3%	27.3%	ns
Heroin	33.6%	31.5%	ns

*Note: Participants could choose more than one category.

Table 3. Addiction career and recovery status

Variables	Male (n=410)	Female (n=342)	Parameter, significance
	Means (SD)/%		
Substance use career length (years)	22.42 (9.71)	17.67(9.44)	t=-6.56, p<.001
Age at start of recovery (years)	39.19 (10.37)	37.17(9.64)	t=-2.67, p<.01
Years in recovery	8.92 (8.92)	7.58 (7.33)	t=-2.11, p<.05
Treatment clinic	79.7%	74.9%	ns
Prescription for substance use	60.5%	55.7%	ns
Used 12-step	80.6%	79.1%	ns
Used non-12 step	53.2%	57.7%	ns
Recovery status			ns
In recovery	76.8%	76.3%	
Recovered	20.8%	19.2%	
MAR	4.5%	2.5%	

Table 4. Gender and well-being

Well-being items	Male (n=410)	Female (n=342)	Parameter, significance
	Means (SD)/%		
Physical health	7.46(2.10)	7.37 (2.10)6	ns
Ongoing medical condition	22.0%	17.7%	ns
Psychological health	7.26 (2.26)	6.73 (2.33)	t=-3.16, p< .01
Quality of life	8.37 (2.03)	7.97 (2.26)	t=-2.37, p< .05
Mental health treatment			
Ever	73.1%	86.6%	$\chi^2=20.61, p<.001$
Currently	29.8%	45.6%	$\chi^2=19.78, p<.001$
Untreated mental health problems			
Addiction	71.5%	81.5%	$\chi^2=9.40, p<.01$
Recovery	29.7%	34.3%	ns
Frequent use of health care services			
Addiction	55.3%	50.6%	ns
Recovery	19.8%	14.2%	$\chi^2=3.53, p<.10$

Table 5. Family life and gender in addiction and recovery

Relationship items	Male (n=410)	Female (n=342) %	Parameter, significance
Victim/perpetrator of family violence			
Addiction	29.0%	50.2%	$\chi^2=31.65, p<.001$
Recovery	4.9%	8.6%	ns
Engage in family activities			
Addiction	30.2%	24.5%	ns
Recovery	48.8%	41.4%	ns
Dependent children and recovery status			ns
In recovery	71.7%	73.1%	
Recovered	25.2%	18.5%	
MAR	3.1%	8.4%	
Lost custody of children			
Addiction	12.8%	23.8%	$\chi^2=13.68, p<.001$
Recovery	1.5%	6.4%	$\chi^2=10.70, p<.001$
Regained custody of children			
Addiction	3.3%	8.6%	$\chi^2=7.94, p<.01$
Recovery	8.1%	16.5%	$\chi^2=9.85, p<.01$