



**University of
Sunderland**

Macdonald, Stephen J, Deacon, Lesley and Merchant, Jacqueline
(2016) 'Too Far Gone': Dyslexia, Homelessness and Pathways
into Drug Use and Drug Dependency. *Insights on Learning
Disabilities*, 13 (2). pp. 117-134. ISSN 1949-1212

Downloaded from: <http://sure.sunderland.ac.uk/id/eprint/6898/>

Usage guidelines

Please refer to the usage guidelines at
<http://sure.sunderland.ac.uk/policies.html> or alternatively contact
sure@sunderland.ac.uk.

‘Too Far Gone’: Dyslexia, Homelessness and Pathways into Drug Use and Drug Dependency

Stephen J Macdonald

Lesley Deacon

Jacqueline Merchant

University of Sunderland

Contact Information:

Stephen J. Macdonald, Ph.D.

University of Sunderland

Priestman Building

Sunderland, Tyne & Wear

United Kingdom

E-mail: stephen.j.macdonald@sunderland.ac.uk

Abstract

The aim of this paper is to investigate the relationship between dyslexia, homelessness, drug use and drug dependency. We analyzed data from the “Multiple Exclusion Homelessness Across the United Kingdom Survey,” a national survey that collected data from 443 respondents who have experienced some form of homelessness in the U.K. Our particular interest lied in the different experiences of drug use and drug dependency, comparing homeless people with dyslexia and homeless people without dyslexia. The study reveals that people with dyslexia are overrepresented within the survey’s homeless population.

Furthermore, the findings indicate that there is an increase in dependency problems as well as significant mental health problems for respondents with dyslexia compared to the non-dyslexic homeless control group. The results show that dyslexic respondents were more likely to use methadone, more susceptible to self-harm, and reported an increase in suicide attempts compared with the non-dyslexic control group.

Keywords: Dyslexia, Homelessness, Drug and Alcohol Services, Drug Use, Drug Dependency

Introduction

Purpose of this Paper

Over the past four decades there have been numerous studies linking drug and alcohol dependency to mental health problems (Lieb, 2015; Regier, Farmer, Rae, Locke, Keith, Judd, & Goodwin 1990; Taylor, Stuttaford, Broad, & Vostanis, 2006). Nevertheless, there is limited literature investigating links between dyslexia and drug and alcohol misuse. For the small amount of studies which have investigated this link, findings are unclear as people with dyslexia have shown both increased and decreased risk-related behaviors concerning drug and alcohol use (Wilcockson, Pothos, & Fawcett, 2015; Yates, 2006; 2012). The aim of this paper is to add to this debate by comparing drug and alcohol behaviors to two homeless populations. The first are respondents that have experienced homelessness and diagnosed with dyslexia (n=68), the second, referred to as the control group, are respondents that have experienced homelessness that do not have dyslexia (n=375). Therefore, this paper will explore if there are significant differences in drug and alcohol behaviors between the two groups.

Defining Drug Use und Drug Dependency

It is important to note that within addiction studies the terminology employed for drug use is somewhat inconsistent. In the research literature, the phenomenon is called differently (e.g. example addiction, substance abuse, substance dependency, problematic substance misuse, illicit or illegal drug use, ...) (DSM-V, 2014; Silbereisen, Robins, & Rutter 1995). Coomber, McElrath, Measham, and Moore (2013) make a distinction between the concept of *drugs* and *medicines*. They suggest that *medicines* refers to over the counter and legally-prescribed drugs for the management of health and wellbeing. Whereas illegal use of drugs relates to non-medical usage of drugs controlled under the *Drug Abuse Prevention and Control Act 1970* (US) and in the UK, *Misuse of Drugs Act 1971*. Many research articles also

refer to “drug” or “substance” use to include both legal and illegal drugs (Nutt, 2010). For the purpose of this paper, the terms “drug use” and “drug dependency” will be adopted. “Drug use” denotes people engaging in illegal drugs on a recreational basis, taking substances such as cannabis, MDMA, LSD, ketamine, etc. “Drug dependency” will be used to describe a person who experiences negative consequences such as physical and psychological experiences of addiction, taking substances such as heroin, methadone, crack-cocaine, etc. (Brown & King, 2004).

Defining Homelessness

Although a considerable amount of literature exists on homelessness both nationally and internationally, defining what the term homelessness implies is not a straightforward matter as definitions are affected by social and cultural factors. Public perceptions of homelessness predominantly portray individuals who do not have access to housing and sleep ‘rough’ on the streets of towns and cities (Lee, Tyler, & Wright, 2010). Yet, this is only one group of a larger population of people who are defined in legislation as ‘homeless’. The United Nations distinguishes the category of ‘primary homelessness’, which refers to people without shelter, living on streets and considered ‘roofless’ (UNESCO, 2009), from a significantly greater group of people who fall into the ‘secondary homeless’ category. This refers to individuals who do not have a permanent residence and fluctuate between temporary living conditions (i.e. temporary living with family/friends; housed in a shelter/hotel; squatting, etc.) (UNESCO, 2009).

In the US, Lee, Tyler, and Wright (2010) expand the UN’s ‘primary’ and ‘secondary’ definition, suggesting that patterns of homelessness fall into three clear categories which are defined as transitional, episodic, and chronic. The first group, labelled as transitional, refers to a temporary and brief homeless period where people move in with family or friends which can be described as a singular life event. The second group is defined as episodic and can be

described as temporary re-occurring cycles of homelessness which are over short periods of time. Crane and Warnes (2001) assert that it is this group that have a range of hidden unmet needs and often fall between health services, housing, and social services. Therefore, this group can be more difficult to identify as they are less visible than people living on the streets. Finally, the last group is referred to as chronic. This refers to individuals who experience long periods and permanent states of homelessness (Colane, 2007; Lee, Tyler, & Wright 2010). It is this group that usually defines the social perception of homelessness as these individuals are often visible as they are living on the streets of major cities. Lee, Tyler, and Wright (2010) suggest that although chronic homelessness is overrepresented in social research, this is actually the smallest homeless population of the three categories.

Globally, it is estimated that 500 million people can be defined as not having a home, whereas 100 million people have no housing whatsoever. In the United States, 3% of American citizens can be classified as homeless and a further 1.6 million Americans either are living in shelters or are in transitional housing (Lee, Tyler, & Wright 2010; USHUD, 2009). In the UK, the vast majority of people defined as homeless are individuals living in temporary or transitional accommodation with no permanent living residence. Official government figures for homelessness in England alone state that there are 60,490 households in temporary accommodation, with 43,420 of these households having dependent children (DCLG, 2014). These figures do not include what Reeve and Batty (2011) refer to as the 'hidden homeless', and although there are no accurate figures on this, they estimate that this population is between 310,000 and 380,000 at any given time.

Dyslexia and Homelessness

As Markos and Strawser (2004) as well as Patterson, Moniruzzaman, Frankish, and Somers (2012) note, studies that discuss disability within the homeless literature are, to a certain degree, dominated by the influence of mental health problems. As a result, very few

studies have investigated links between dyslexia and homelessness. An early study which did this was conducted by Barwick and Siegel (1996) in the US. They suggested that there was an overrepresentation of people with reading or writing disabilities within the US homeless population. Within their research, Barwick and Siegel (1996) suggest that 52% of their sample of homeless young people showed symptoms of learning disabilities. They indicate how their analysis is significantly higher than the 4%–10% of people with dyslexia in the general population. However, their research dismissed an association between poor school attendance and pathways into homelessness. They found no statistical association between poor school attendance for people with dyslexia, in comparison with that of poor school attendance in the non-dyslexic population.

Although they dismissed educational disengagement as a risk factor for the dyslexic population, they suggested there may be a link between the ‘*defects*’ of dyslexia and homelessness. Yet a review of the research literature by Markos and Strawser (2004) indirectly disputes Barwick and Siegel’s research findings. They suggest that homelessness for people with dyslexia was not *because of* symptoms of dyslexia but *due to* issues of social disadvantage and multiple and complex forms of social exclusion. For Markos and Strawser (2004) the key issue which led to an increase of people with dyslexia in the homeless population was due to issues of unemployment and poverty. They suggest that people with dyslexia are particularly vulnerable to unemployment especially if they are from a lower socio-economic background. Hence, for people with dyslexia they argue that homelessness is a result of poor educational provision and other aspects of social disadvantage such as abuse or addiction problems.

In research by Patterson, Moniruzzaman, Frankish, and Somers (2012) in Canada, they also found that dyslexia was overrepresented within their homeless population. Again, they suggested an intersectional relationship, linking dyslexia with poor physical health, poor

mental health, and drug and alcoholic use, all resulting in risk factors into homelessness. Patterson, Moniruzzaman, Frankish, and Somers (2012) implied that learning disabilities might be a strong predictor for pathways into homelessness in adulthood. Therefore, their research suggests, inferior educational experiences seem to lead to low self-esteem and for some people develop into severe issues of stress, anxiety, depression, and (in some cases) problematic drug and alcohol use. Although all of these studies highlight the importance of acknowledging that dyslexia plays a part into pathways into homelessness, they also suggest that these risk factors are interlinked with other forms of social exclusions (i.e. drug and alcohol dependency and mental health problems). As Fitzpatrick, Pawson, Bramley, and Wilcox (2012) as well as Manthorpe, Cornes, O'Halloran, and Joly (2013) illustrate, there is growing evidence that homeless people experience multiple and complex forms of social exclusion. Therefore, recent literature seems to suggest that dyslexia may be one of these forms of exclusion within the framework presented by these authors.

Drug Use and Homelessness

Rosenthal and Keys (2005) conducted a study which linked troubled home life leading to homelessness, mental and emotional instability, and youth drug use. The researchers found that many participants made strong statements regarding their inability to live with their parents or step-parents. This instability often led their interviewees to move out of the family home and seek comfort for their confused emotional state in the form of drugs. Furthermore, a large percentage of Rosenthal and Keys' (2005) sample claimed that their problematic substance misuse progressed upon becoming homeless, typically in association with other homeless young people. Several participants claimed that entering a hostel for homeless people is what initiated their drug use, thus implicating homelessness as a contributing factor towards drug use in young people. Supporting this, longitudinal studies have revealed that associating with drug users is predictive of a person's initiation into drug

use (Jessor & Jessor, 1977). It is also commonly believed that the maintenance of drug use can be determined through social contexts and is heavily reliant on immediate situational factors (Bachman, O'Malley, & Johnston, 1984). This leads us to consider drug use as a coping mechanism (Boys, Marsden, & Strang 2001; Khantzian, 1985; Fletcher, Bonell, Sorhaindo, & Strange, 2009; Rosenthal & Keys, 2005). Given that many that experience homelessness live in near poverty, the work of MacDonald and Marsh (2005) which labelled heroin as a 'poverty drug' seems relevant to this paper. MacDonald and Marsh (2005) suggest that heroin acts as a psychological anesthetic for difficult lives which may be why this form of drug misuse is prevalent in populations that experience extreme forms of social exclusion.

Dyslexia and Pathways into Drug Use

Although drug and alcohol use has been under-researched in the field of dyslexia (Wilcockson, Pothos, & Fawcett, 2015; Yates, 2006, 2012; Patterson, Moniruzzaman, Frankish, & Somers, 2012), there has been a wealth of literature which has suggested that people with dyslexia are overrepresented in the criminal justice system (Dåderman, 2012; Kirk & Reid, 2001; Macdonald, 2012; Selenius, Daderman, Meurling, & Levander 2006; Svensson, Lundberg, & Jacobson, 2001). For example, a study in Sweden by Selenius, Daderman, Meurling, and Levander (2006), discovered that 39% of their sampled prison population had some form of learning disability. A recent study by Dåderman, Meurling, and Levander (2012) also suggested that people with dyslexia and ADHD are overrepresented (40%) within the Swedish prison population. Research in the UK by Kirk and Reid (2001) also found that up to 50% of the prison population have some form of dyslexia. Studies which found a slightly lower population are Svensson, Lundberg, and Jacobson, (2001) and Macdonald (2012) where the population ranged from 11 to 17% of their overall studies. Interestingly, Svensson, Lundberg, and Jacobson (2001) illustrate the importance of

examining the intersectional relationships between socio-economics and the cultural factors that impact on children with dyslexia. In comparison, Macdonald (2012) emphasizes that people with dyslexia are overrepresented in the criminal justice system because of socio-economic factors, educational alienation and social deprivation, which all intertwine and result in an increase in offending behaviors.

With reference to the small body of research that has associated drug use to that of dyslexia, there seems to be somewhat of a contradiction within the literature. In research by Yates (2006; 2012), he advocates an intersectional relationship between psychological factors and social deprivation which are risk factors resulting in an increase of problematic drug and alcohol dependencies for individuals with dyslexia. Yates (2006; 2012) assessed and interviewed individuals accessing drug and alcohol services in Scotland and discovered that 40% of these service users had dyslexia. Within this work, Yates presents an environmental explanation by suggesting that the reason why certain groups, such as people with dyslexia, are overrepresented in drug dependency populations is down to social deprivation. Similar to the findings presented by Kirk and Reid (2001) as well as Patterson, Moniruzzaman, Frankish, and Somers (2012), he suggests that individuals with dyslexia experience higher levels of exclusion in education and employment which increases the experience of social deprivation leading, for some, into destructive behaviors.

Yet Yates's work is contradicted by Wilcockson, Pothos, and Fawcett's (2015) study on dyslexia and problematic drug use. Wilcockson, Pothos, and Fawcett (2015) studied the drug habits of undergraduate students in Wales. But instead of explaining drug use through social deprivation, the study applied a cognitive deficit approach. Rather than detecting that people with dyslexia engaged in increased drug use, they found the opposite and reported that students with dyslexia were less likely to display drug use behaviors. Their research hypothesized that this abstinence could be explained due to short-term memory problems.

Hence, people with dyslexia were less likely to develop drug dependency as their memories of the pleasurable experience of taking drugs were less clear than people without dyslexia.

Interestingly although both of these studies present opposite findings, it should be noted that the population used in each of these studies were collected from two distinct social classes. In relation to Yates's (2006) study, respondents were predominantly from a low social economic background, whereas in Wilcockson, Pothos, and Fawcett's (2015) research, their sample was obtained from respondents from a high socio-economic background. Although these studies had very different findings, they could actually be comparable. What may be revealed here is the intersectional relationship between social class, deprivation, and dyslexia. The key factor here might not be that dyslexic individuals are more prone to addiction due to a cognitive defect, but it could reveal that people with dyslexia, from a lower socio-economic background, experience increased forms of social exclusion increasing their likelihood of addiction. It is this which could lead them into destructive behaviors such as criminality, homelessness and increased substance dependency problems.

Research Question

We wanted to extend the body of existing literature about the relationship between dyslexia, homelessness, and drug use and examine the research question of how close are the connections between these three factors. Our study was based on data from the 'Multiple Exclusion Homelessness Across the United Kingdom Survey'.

Method

The present study is influenced by a critical realist approach to disability and impairment, and this article applies a 'social relational model of disability' to the data analysis (Reindal, 2008). Therefore, the authors recognize the interactional elements of disability and impairment at the molecular, biological, psychological, and sociological levels

(Danermark, 2007). The social relational model makes a distinction between ‘disability’ as disabling social barriers and ‘impairment’ as biological/neurological variations, but acknowledges that one cannot exist without the other (Reindal, 2008). Thus, limitations are due to a significant neurological variation (i.e. dyslexia), the failures of schools to identify and adequately support children with dyslexia resulting in psychological implications (low self-esteem and educational disengagement), and disabling barriers in the form of structural exclusion in education, health/social services, and job markets, etc. (Reindal, 2008; Shakespeare, 2013).

In order to explore these environmental factors, this study has attempted to analyze quantitatively the increased likelihood of respondents with dyslexia, who have experienced homelessness, engaging in drug use. The data in this study was obtained from the ‘*Multiple Exclusion Homelessness Across the United Kingdom Survey*’ accessed through the Data Archives UK Service (Fitzpatrick, Pawson, Bramley, & Wilcox 2010). The fieldwork was comprised of a questionnaire survey and extended interviews which were conducted in 2010 by Fitzpatrick, Pawson, Bramley, and Wilcox. Their survey collected information on respondents who had experienced multiple forms of exclusion and homelessness (MEH). They examined the complexities of homelessness with reference to the intersectional relationships between homelessness, drug use, mental health, and institutional care (Fitzpatrick, Pawson, Bramley, & Wilcox, 2012). The data was collected by Fitzpatrick, Pawson, Bramley, and Wilcox (2010) who worked in partnership with organisations such as street outreach teams, drop in services, day centres, direct access accommodation, soup runs, etc. From these groups, six services were randomly selected from different geographical locations in the UK (Leeds, Belfast, Birmingham, Bristol, Cardiff, Glasgow, and London) to obtain a population sample.

Within the MEH survey, there was an in-depth section on health issues and disability. The MEH survey collected information on respondents who had experienced homelessness and had some form of learning difficulties. For this present analysis, information was extracted in order to analyze the experiences of homeless respondents that had reported having dyslexia. Hence in this paper, the research compared two groups of respondents that have experienced homelessness and used them as the independent variable. The first group consists of respondents (N=68) who have experienced homelessness and who have dyslexia. The second group consisted of individuals (N=375) without dyslexia who have also experienced homelessness.

The data was analyzed using IBM's '*Statistical Package for the Social Sciences*' (SPSS) which is a statistical software used for quantitative research in the social sciences. Using SPSS, data was analyzed in the form of single variable analysis (univariate), and where data was calculated to be significant ($P \leq .05$), bivariate analysis was also applied (De Vaus, 2002). Two or more variable frequency distributions were analyzed to discover if variables are statistically independent or if they are correlated (De Vaus, 2002). In the following analysis, descriptive statistics have been used in the form of cross-tabulation and ANOVA tests to examine distribution of cases when examining the correlation between two or more variables. The data from this survey was subsequently analyzed and only data was used which was calculated to be of statistical significance ($p \leq .05$).

Results

Social Demographics

It should be noted that within the social demographics at the multivariate stage of analysis, dyslexia did not have a significant impact on variables concerning sex, age or ethnicity. Hence, there was no ratio difference between the dyslexic and control groups in

relation to sex, age and ethnicity. In both groups, males were overrepresented compared with females (males = 79.4% and females = 20.6%). In both groups age demographics reveal a steady increase in homelessness between 16 to 34 years which peaks at the 45 year age group (16–34= 38.3%; 35–54=50.4%; 55+ = 11.3%). After this age group homelessness steadily decreases dramatically in the 55 years plus category. In relation to ethnicity in this sample, 81.8% defined themselves as white European or white other; 6.5% stated that they were either black European or black other; 4.6% reported being mixed race and 6.5% reported being other; finally only 0.6% defined themselves as Asian European or Asian other. Therefore, ethnicity was over represented, at 5%, in this homeless population sample; as 18% of homeless respondents came from a minority ethnic group, compared to the UK's national average at 13% (Office for National Statistics 2011).

Dyslexia and Homelessness

As illustrated, dyslexia and homelessness has been under-researched within the literature. For the few studies that have examined the relationship between dyslexia and homelessness there has been a general consensus that people with dyslexia are overrepresented within the homeless population; these figures have suggested a range from 46% to 52% (Barwick & Siegel, 1996; Olise 2010; Patterson, Moniruzzaman, Frankish, & Somers, 2012). When examining if dyslexia was overrepresented within the present analysis, 15.3% of respondents reported having dyslexia (Figure 1). Although 15% is lower than previous studies, this figure is higher in comparison to the UK's general population which is estimated at 4% (Semple & Smyth, 2013). Hence, data in this survey seems to indicate that people with dyslexia are 11% overrepresented within this homeless sample.

--- insert Figure 1 here ---

Adult Homelessness

When examining the experiences of adult homelessness, a number of significant differences ($p \leq .01$) appeared within the data analysis. The findings in Table 1 suggest that the dyslexic group experienced episodic or chronic homelessness earlier in their lives compared with the control group. This claim seems to be supported as respondents with dyslexia described first sleeping rough on average at the age of 22 compared with that of 30 years for the general homeless population. Respondents with dyslexia also indicated that they had become homeless more times compared with the general homeless population, indicating a more chaotic and less stable lifestyle. These respondents reported experiencing homelessness on average 11 times compared with the control group who on average experienced homelessness nine times. A significant difference also appeared in relation to the amount of time people slept rough over their lifetimes. The dyslexic group reported sleeping rough on average for five years compared with the control group indicating three years. In general, these findings seem to imply that people with dyslexia are at an increased risk of becoming either episodic or chronic homeless compared to the general homeless population, and begin their homeless trajectory at an earlier age.

--- insert Table 1 here ---

Dyslexia and Mental Health

There have been a number of studies which suggest an intersectional relationship between learning impairments, mental health issues and homelessness (Markos & Strawser, 2004; Mercier & Picard, 2011; Olisa, Patterson, & Wright, 2010). Within this study there was clear evidence of an intersectional relationship between people with dyslexia, mental health problems and drug use. It should be noted that mental health problems were particularly high

in both groups of respondents who experienced homelessness, however for individuals with dyslexia there were significantly higher levels of mental health problems within this group ($P \leq .01$). In Table 2, 66.2% of individuals with dyslexia reported having anxiety and depression which was 17.7% higher than the control group (at 48.5%). The act of self-harm also seemed to be a particular problem for people with dyslexia, as 55.4% engaged in this ritual compared to 29.4% of the control group.

--- insert Table 2 here ---

Equally significant was an increase in suicide attempts for dyslexic respondents: 56.9% of people with dyslexia reported that they had attempted suicide compared to 41.2% of control respondents. Furthermore, for respondents who had attempted suicide, the dyslexic group had attempted this on average 4.5 times compared to 2.8 times for the control group. In addition, 47.1% of respondents with dyslexia (an increase of 18.6%) had been admitted to a mental health hospital compared to the control group (at 28.5%).

Dyslexia and Economic Crime

Since the 1960s there has been a wealth of research which has linked dyslexia with an increase in criminality (Critchley, 1968; Kirk & Reid, 2001; Morgan, 1996; Selenius, Daderman, Meurling, & Levander, 2006). As we can see in Table 3, there was a 17% difference in theft-related crime between the dyslexic and control group, as 56% of respondents with dyslexia stated that they shoplifted on a regular basis compared to 39% of the control group. Interestingly, for respondents who engaged in shoplifting, the dyslexic group reported on average starting this behavior earlier (19 years) compared with the control group (23 years). The data also reveals that the dyslexic group were again 17% more likely to shoplift in order to fund their drug habit. As table 3 demonstrates, 56% of dyslexic

respondents reported shoplifting in order to pay for drugs compared to 39% of respondents without dyslexia. When asked what they had spent their money on over the last month, a significant amount of respondents with dyslexia ($p < .01$) admitted spending more money on drug use than the control group. Hence, 43% of the dyslexic group spent money on drugs in the past month, compared to only 27% of the control group.

--- insert Table 3 here ---

Differences between groups were also confirmed when examining data on what respondents spent their weekly money on. If we compared data from Figure 2, this reveals the key commodity is food at 40% for the dyslexic group and 38% for the control group. Interestingly the second most common item for the dyslexic group is drugs at 28%. Hence, there was a 10% difference between groups as only 18% of the control group admitted spending their weekly money on drug use. Interestingly, for the control group, the second highest category was alcohol at 20%. Only 12% of the dyslexic group admitted spending their money on alcohol. For both groups, the third most common category was cigarettes at 12% for the control group and 10% of the dyslexic group. Although there is a difference for the control and dyslexic group in relation to drug and alcohol consumption both groups demonstrate a high level of drug and alcohol use.

--- insert Figure 2 here ---

Dyslexia, Drug Use and Drug Dependency

As discussed, previous research which explored relationships between people with dyslexia and drug use have published mixed results (Patterson, Moniruzzaman, Frankish, &

Somers, 2012; Wilcockson, Pothos, & Fawcett, 2015; Yates, 2006; 2012). In this study, the group which reported engaging in drug use the most was the non-dyslexic group, at 76% (14% more than the dyslexic group, at 62%); seemingly confirming Wilcockson, Pothos, and Fawcett (2015) research. This seems to suggest that homeless respondents with dyslexia were less likely to engage in drug use compared to the general homeless population (although drug use is still high for both groups). But, when comparing the type of drugs used, it was the dyslexic group who reported using more harmful hard¹ and addictive drugs compared with the control group.

As we can see in Table 4, there is evidence to suggest that there is a significant ($p \leq .03$) increase, at 14.3%, in the consumption of hard and addictive drugs by respondents with dyslexia. Hence, respondents with dyslexia reported an increased use of hard and addictive drugs at 55.9%, compared to the control group at 41.6%. Interestingly, 50% of the dyslexic group reported taking methadone compared with only 30% of the control group. This reveals a 20% difference in methadone use between the dyslexic and control group. This is significant because it demonstrates that not only have this group engaged in heroin use, they have in fact become addicted to heroin which has led to them engaging in the methadone maintenance treatment program² in the UK. Respondents with dyslexia also reported that they were more likely to take drugs on a monthly basis at 50% compared to the control group at 34%. Again although the dyslexic group is significantly higher, both groups score relatively high in these categories. In relation to alcohol consumption on average dyslexic respondents started drinking earlier than the control group by four years. As the dyslexic

¹ Respondents in this survey defined 'hard drugs' as 'Heroin, Crack-cocaine and Cocaine'

² In the UK persons that are addicted to opiates (i.e. heroin), and are using daily, can obtain access to treatment through the National Health Service (NHS) to stabilize their dependency. Under the NHS, heroin is substituted for *methadone* to reduce symptoms of withdraw. The aim of this is to: 'stabilize drug use; stop the use of illegal drugs; change risky behavior, such as injecting and sharing needles; and to stop the need to commit crimes to fund habit'. (Coomber, McElrath, Measham, and Moore, 2013; NHS Choice 2014)

group appear to have more serious drug issues, they are more likely to engage in drug and alcohol services (47%) compared to the control group (30%).

--- insert Table 4 here ---

In research by Mercier and Picard (2011), Taylor, Stuttaford, and Broad, and Vostanis, (2006) they suggest that drug use features significantly in the experiences of homeless people which is somewhat confirmed in this study. For homeless respondents with dyslexia the overall analysis is not clear-cut, as table 4 seems to reveal that homeless people with dyslexia are less likely to engage in general drug use, but are more likely to engage in hard and addictive drug use, compared to the general homeless population. Although the analysis is not explicit, this study seems to confirm Yates's (2006) findings which suggest that individuals with dyslexia do in fact have increased problems with drug dependency.

Discussion

Main Findings

In general, the study recognizes that drug use in particular, is overrepresented within the overall homeless population (Patterson, Moniruzzaman, Frankish, & Somers, 2012; Yates, 2006, 2012). Yet, the aim of this paper was to explore a relationship between dyslexia, homelessness, and drug use. This article presents evidence that dyslexia is overrepresented within the homeless sample. As demonstrated, a number of statistically significant relationships have appeared that seem to suggest that, for respondents with dyslexia, once they become homeless, they have an increased risk of spiraling into the episodic and chronic homeless population. For respondents with dyslexia, there was an increased risk of mental health problems relating to increased anxiety and depression, self-harm, and suicide attempts.

Yet, when examining if there was an increase in drug use there were mixed results. Primarily, people with dyslexia were less likely to engage in drug use compared to the control group. However, it was the dyslexic group who reported that they were more likely to use hard and addictive drugs compared with the control group. This is confirmed because the dyslexic group were more likely to be on a methadone program (opiate dependent), therefore more likely to be in touch with a drug worker, and be drug dependent compared with the control group. Finally, this group was more likely to spend their money regularly on drug use compared with the control group (Yates, 2013).

Although it would be impossible based on this study's findings to conclude that the overrepresentation of drug dependency and homelessness for participants with dyslexia are due to environmental issues (Macdonald, 2009; 2012; Reindal, 2008; Yates, 2013), rather than cognitive 'dysfunction' (Dåderman, 2012; Wilcockson, Pothos, & Fawcett, 2015), the authors of this study do advocate a sociological approach rather than a cognitive deficit explanation. The key evidence for this claim is that out of the four studies which have explored the relationship between dyslexia and drug use, the three that discovered an increase in drug dependency (including this study) were conducted on populations which experienced increased social deprivation (Patterson, Moniruzzaman, Frankish, & Somers, 2012; Yates 2006; 2012). The study which did not see an increase in drug dependency was on a population which experienced limited forms of social deprivation as they were from a high socio-economic background (Wilcockson, Pothos, & Fawcett 2015).

If we consider the data presented in this study, it seems to suggest that the dyslexic group becomes homeless at an earlier age, live in hostels for longer and are more inclined to be drug dependent. These findings could support Rosenthal and Keys (2005) research which claims that drug use progresses once individuals' become homeless and enter into the hostel support system. Hence, in this study, in line with research by Rosenthal and Keys (2005) and

Yates (2012), homeless adults with dyslexia who are suffering from emotional and mental health difficulties also might use drugs partly as a coping mechanism to deal with their difficult lives. Given that these lives are likely to be in or near poverty, the work of MacDonald and Marsh (2005) which labelled heroin as a ‘poverty drug’ – acting as a psychological anesthetic for difficult lives – seem to fit the profile of the drug-dependent homeless individuals as described in this paper. To conclude, this paper has attempted to add knowledge to this under researched area of dyslexia and drug use/addiction. Yet before any assumptions are made, more research is needed to explore the intersectional relationships between socio-economics, social deprivation and addictive behaviors of people with dyslexia.

Limitations

Despite the strength of the overall design of this study, a number of limitations must be considered. Firstly, when analyzing data from a secondary source, the questionnaire design and type of questions asked is out of the control of the researchers. Secondly, all variables are based on self-reporting and there is the possibility that participants might have unintentionally misinformed researchers collecting data in this survey. Finally, this type of data analysis only allows a very broad overview of social exclusion with reference to the complex experiences of homeless individuals with dyslexia. Further qualitative research is needed in order to explore the complexities of homelessness and dyslexia. A more in-depth analysis needs to take place in order to examine the perceptions of homeless people with dyslexia; regarding how professionals have engaged and supported them outside of the education system in order to improve educational and social services.

Practical Recommendations

This study suggests that there have potentially been numerous missed opportunities by practitioners in order to support people with dyslexia that have experienced multiple forms

of social exclusion. In order to improve practice the data seems to indicate that contemporary adult services in the UK must broaden their scope beyond mental health and addiction support in order to include explicit issues that affect people with dyslexia and other learning disabilities (Markos & Strawser, 2004; Olisa, Patterson, & Wright 2010). To coincide with Markos and Strawser, 2004; Olisa, Patterson, and Wright 2010's (2010) proposals, specific educational support, including access to assistive technologies, must be integrated into current housing, health and social welfare policy and strategies to help this group break the cycle of homelessness and addiction. By doing this, partnerships need to be developed between education, health care, social care and housing practitioners within adult services in the UK. Only by developing successful partnerships, where a range of practitioners have specific knowledge of risk factors linking social exclusion to learning disabilities, is there a possibility to effectively deal with the multiple problems experienced by people with dyslexia that have become homeless and have spiraled into addiction and destructive behaviors.

References

- Bachman, J. G., O'Malley, P. M., & Johnston, L. D. (1984). Drug use among young adults: The impacts of role status and social environment. *Journal of Personality and Social Psychology, 47* (3), 629-645.
- Barwick, M.A. & Siegel, L.S. (1996). Learning difficulties in adolescent clients of a shelter for runaway and homeless street youths. *Journal of Research on Adolescence, 6*(4), 649-670.
- Boys, A., Marsden, J., & Strang, J. (2001). Understanding reasons for drug use amongst young people: A functional perspective. *Health Education Research, 16*(4), 457-469.
- Coomber, R., McElrath, K., Measham, F., & Moore, K. (2013). *Key concepts in drugs and society*. London, UK: SAGE Publications.
- Cornes, M., Manthorpe, J., Joly, L., & O'Halloran, S. (2014). Reconciling recovery, personalization and housing first: Integrating practice and outcome in the field of multiple exclusion homelessness. *Health and Social Care in the Community, 22*(2), 134-143.
- Crane, M. & Warnes A.M. (2001). The responsibility to care for single homeless people. *Health and Social Care in the Community, 9*(6), 436-444.
- Critchley, M. (1968). Reading retardation, dyslexia and delinquency. *The British Journal of Psychiatry, 114*(12), 1537-1547.
- Dåderman, A. M., Meurling, A. W., & Levander, S. (2012). 'Speedy action over goal orientation': Cognitive impulsivity in male forensic patients with dyslexia. *Dyslexia: An International Journal of Research and Practice, 18*(4), 226-235.
- Danermark, B. (2007). Interdisciplinary research and critical realism: The example of disability research. *Journal of Critical Realism, 5*(1), 56-64.

De Vaus, D. A. (2002). *Surveys in social research*. London, UK: UCL Press.

Fitzpatrick, S. Pawson, H. Bramley, G., & Wilcox, S. (2010). *Multiple exclusion homelessness across the United Kingdom*, [computer file]. Colchester, Essex: UK Data Archive [distributor], December 2011. SN: 6899, <http://dx.doi.org/UKDA-SN-6899-1>.

Fitzpatrick, S. Pawson, H. Bramley, G. & Wilcox, S. (2012). *The homelessness monitor*. York, UK: Heriot-Watt University and Centre for Housing Policy, University of York.

Fletcher, A., Bonell, C., Sorhaindo, A., & Strange, V. (2009). How might school influence young people's drug use? Development of theory from qualitative case-study research. *Journal of Adolescent Health, 45*(2), 126-132.

Jessor, R. & Jessor, S. L. (1977). *Problem behavior and psychological development*. New York: Academic Press.

Khantzian, E. J. (1985). The self-medication hypothesis of addiction disorders: Focus on heroin and cocaine dependency. *American Journal of Psychiatry, 142* (11), 1259-1264.

Kilpatrick, D. G., Acierno, R., Saunders, B., Resnick, H. S., Best, C. L., & Schnurr, P. P. [Dean, G. et al.] (2000). Risk factors for adolescent substance abuse and dependence: Data from a national sample. *Journal of Consulting and Clinical Psychology, 68*(1), 19-30.

Kirk, J, & Reid, G. (2001). An examination of the relationship between dyslexia and offending in young people and the implications for the training system. *Dyslexia: An International Journal of Research and Practice, 7*(2), 77-84.

Lee, B. A., Tyler, K. A., & Wright, J.D. (2010). The new homelessness revisited. *Annual Review of Sociology, 36*(1), 501-521.

- Lund, B. (2011). *Understanding housing policy*. Bristol, UK: Policy Press.
- MacDonald, R. & Marsh, J. (2005). *Disconnected youth? Growing up in Britain's poor neighborhoods*. Basingstoke, UK: Palgrave Macmillan.
- Macdonald, S. J. (2009). Windows of reflection from adults with dyslexia: Conceptualizing dyslexia using the social model of disability. *Dyslexia: An International Journal of Research and Practice*, 15(4), 347-362.
- Macdonald, S. J. (2012). "Journey's end": Statistical pathways into offending for adults with specific learning difficulties. *Journal of Learning Disabilities and Offending Behavior*, 3(2), 85-98.
- Rosenthal, D. A. & Keys, D. (2005). Young people, drug use and family conflict: Pathways into homelessness. *Journal of Adolescence*, 28(2), 185-199.
- Manthorpe, J., Cornes, M., O'Halloran, S. & Joly, L. (2013). Multiple exclusion homelessness: The preventive role of social work. *British Journal of Social Work*, 1(45), 1-13
- Markos, P. A. & Strawser S., (2004). The relationship between learning disabilities and homelessness in adults. *Guidance and Counselling*, 19(2), 1-24.
- Means, R. (2007). Safe as houses? Ageing in place and vulnerable older people in the UK. *Social Policy and Administration*, 41(1), 65-85.
- Mercier, C. & Picard, S. (2011). Intellectual disability and homelessness. *Journal of Intellectual Disability Research*, 55(4), 441-449.
- Morgan, W. (1996). *London offender study: Creating criminals - Why are so many criminals dyslexic?* (Unpublished doctoral dissertation). University of London, London, UK.
- Nalavany, B. A., Carawan, L. W., & Sauber, S. (2013). Adults with dyslexia, an invisible disability: The mediational role of concealment on perceived family support and self-esteem. *British Journal of Social Work*, 18(1), 58-74.

Nutt, D. King, L. A., & Phillips, L. D. (2010). Drug harms in the UK: A multi-criterion decision analysis. *The Lancet*, 376(11), 1558-1565.

Olisa, J., Patterson, J., & Wright, F. (2010). *Homeless literacy report*. London, UK: Thames Reach.

Patterson, M. L., Moniruzzaman, A., Frankish, C. J., & Somers, J. M. (2012). Missed opportunities: Childhood learning disabilities as early indicators of risk among homeless adults with mental illness in Vancouver, British Columbia. *BMJ Open*, 22(6), 1-9.

Regier, D. A., Farmer, M. E., Rae D. S., Locke, B. Z., Keith S. J., Judd, L. L., & Goodwin, F. K. (1990). Comorbidity of mental disorders with alcohol and other drug abuse. *JAMA*, 264(19), 2511-2530.

Reindal, S. M. (2008). A social relational model of disability: A theoretical framework for special needs education? *European Journal of Special Needs Education*, 23(2), 135-146.

Reeve, K & Batty, E. (2011). *The hidden truth about homelessness: Experiences of single homelessness in England*. London, UK: The Centre for Regional Economic and Social Research and Crisis.

Selenius, H., Daderman, A. M., Meurling, A. W. & Levander, S. (2006). Assessment of dyslexia in a group of male offenders with immigrant backgrounds undergoing a forensic psychiatric investigation. *Journal of Forensic Psychiatry and Psychology*, 17(1), 1-22.

Semple, D. & Smyth, R., (2013). *Oxford handbook of psychiatry*. Oxford, UK: Oxford University Press.

- Silbereisen, R. K., Robins, L., & Rutter, M. (1995). Secular trends in substance use: Concepts and data on the impact of social change on alcohol and drug abuse. In M. Rutter & D. J. Smith (Eds.), *Psychosocial disturbances in young people*. Chichester, UK: Wiley.
- Shakespeare, T. (2013). *Disability rights and wrongs*. London, UK: Routledge.
- Svensson, I., I. Lundberg, & C. Jacobson. (2001). The prevalence of reading and spelling difficulties among inmates of institutions for compulsory care of juvenile delinquents. *Dyslexia: An International Journal*, 7(1), 62-76.
- Taylor, H., Stuttaford, M., Broad, B & P., Vostanis, (2006) Why a 'roof' is not enough: The characteristics of young homeless people referred to a designated mental health service. *Journal of Mental Health*, 15(4), 491-501.
- Wilcockson, T., Pothos, E.M., & Fawcett, A. (2015). Dyslexia and substance use in a university undergraduate population. *Substance Use and Misuse*, 51(1), 15-22.
- Yates, P. R. (2013) Bad mouthing, bad habits & bad, bad boys: An exploration of the relationship between dyslexia and drug dependence. *Mental Health and Substance Use*, 6(3), 184-202.

Table 1

Severity of Homelessness within the Adult Sample

Experiences of Homelessness	Group	M	Significance Level
Age of homelessness (slept rough)	dyslexic	22 years	p<.00
	non-dyslexic	30 years	
Number of times of homelessness	dyslexic	11 times	p<.00
	non-dyslexic	9 times	
Years spent sleeping rough	dyslexic	5 years	p<.05
	non-dyslexic	3 years	

Table 2

Mental Health and Dyslexia

Mental Health	Group	Yes	No	Significance Level
Anxiety and Depression	dyslexic	66.2%	33.8%	p<.00
	non- dyslexic	48.5%	51.5%	
Self- harmed	dyslexic	55.4%	44.6%	p<.00
	non-dyslexic	29.4%	70.6%	
Attempted Suicide	dyslexic	56.9%	43.0%	p<.00
	non-dyslexic	41.2%	58.8%	
Admitted to Mental Health Hospital	dyslexic	47.1%	52.9%	p<.00
	non-dyslexic	28.5%	71.5%	

Mental Health	Group	M	Significance Level
Average Times of Attempted Suicide	dyslexic	5 times	p<.02
	non-dyslexic	3 times	
Age Admitted to Mental Health Hospital	dyslexic	23 years	p<.01
	non-dyslexic	28 years	

Table 3

Economic Crime

Economic Crime	Group	Yes	No	Significance Level
Shoplifted	dyslexic	55.9%	44.1%	p<.01
	non-dyslexic	39.2%	60.8%	
Shoplifted because of Drugs	dyslexic	55.9%	44.1%	p<.01
	non-dyslexic	39.2%	60.8%	
Spent Money on Drugs over the Past Month	dyslexic	42.6%	57.4 %	p<.01
	non-dyslexic	27.2%	72.8%	

Economic Crime	Group	Mean	Significance Level
Age First Shoplifted	dyslexic	19.5years	p<.02
	non-dyslexic	23.5years	

Table 4

Drug Misuse and Dyslexia

Drug Use		Yes	No	Significance Level
Used Hard Drugs	Dyslexic	55.9%	44.1%	p<.03
	Non- Dyslexic	41.6%	58.4%	
Monthly Use of Drugs	Dyslexic	50.0%	50.0%	p<.01
	Non- Dyslexic	33.6%	66.4%	
Do you have a Problem with Taking Drugs	Dyslexic	61.8%	38.2%	p<.01
	Non- Dyslexic	76.0%	24.0%	
Methadone	Dyslexic	50.0%	50.0%	p<.03
	Non- Dyslexic	30.2%	69.8%	
Access to Drug Worker	Dyslexic	47.1%	52.9%	p<.01
	Control	30.4%	69.6%	
Drug Use	Group	M	Significance Level	
Age When Start Drinking Alcohol Daily (6+)	Dyslexic	21 years	p<.01	
	Non- Dyslexic	25 years		

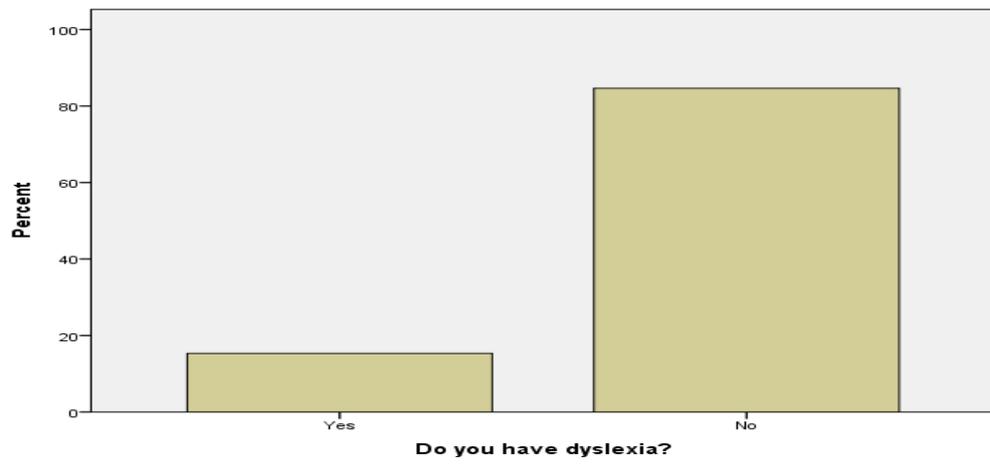


Figure 1. *Dyslexic Population and Control Group*

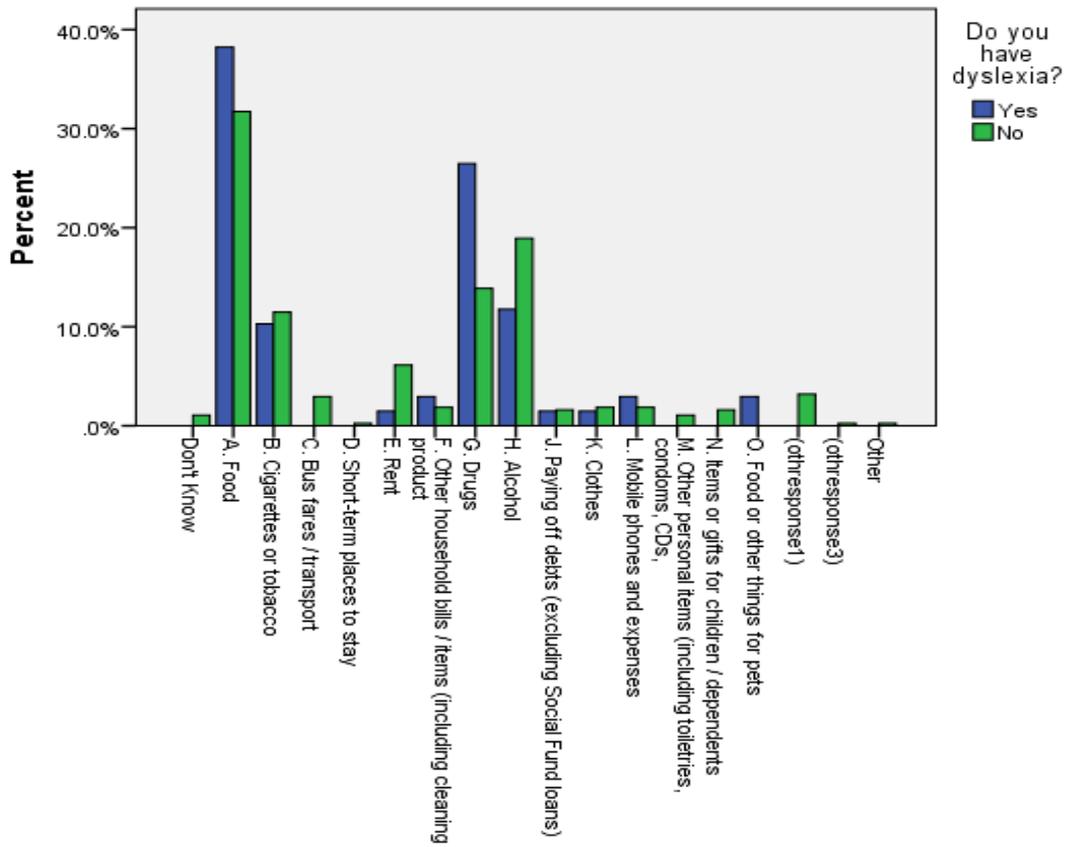


Figure 2. Weekly Money Outcomes