

“Too Far Gone”: Dyslexia, Homelessness, and Pathways to Drug Use and Dependency

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This study investigated the relationship between dyslexia, homelessness, and drug use and dependency based on data from the Multiple Exclusion Homelessness Across the United Kingdom Survey, a national survey of 443 respondents who had experienced some form of homelessness in the U.K. Of particular interest was a comparison of the various experiences involving drug and dependency of homeless people with dyslexia vs. homeless people without dyslexia. The study revealed that individuals with dyslexia were overrepresented within the survey's homeless population. Furthermore, the findings indicated higher dependency problems as well as significant mental health problems for respondents with dyslexia compared to the nondyslexic homeless control group. Specifically, the dyslexic respondents were more likely to use methadone, were more susceptible to self-harm, and reported a higher rate of suicide attempts than the nondyslexic control group.

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

INTRODUCTION

Purpose of the Paper

Over the past four decades, numerous studies have linked drug and alcohol dependency to mental health problems (Lieb, 2015; Regier et al., 1990; Taylor, Stuttaford, Broad, & Vostanis, 2006). Nevertheless, the literature investigating links between dyslexia and drug and alcohol misuse is scant. Moreover, the findings of the limited number of studies of this link are unclear, showing some individuals with dyslexia have increased and others have decreased risk-related behaviors concerning drug and alcohol use (Wilcockson, Pothos, & Fawcett, 2015; Yates, 2006, 2012).

The aim of this paper was to fill the void in the literature by comparing the drug and alcohol behaviors of two homeless populations: (a) respondents who had experienced homelessness and been diagnosed with dyslexia ($N = 68$); and (b) respondents, referred to as the control group, who had experienced

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homelessness and who did not have dyslexia ($N = 375$). In short, we investigated whether there were significant differences in drug and alcohol behaviors between the two groups.

Drug Use und Drug Dependency

Within existing addiction studies, the terminology employed for drug use is somewhat inconsistent. For example, in the research literature, the phenomenon is variously called *addiction*, *substance abuse*, *substance dependency*, *problematic substance misuse*, and *illicit* or *illegal drug use* (DSM-V, 2014; Silbereisen, Robins, & Rutter 1995). Coomber, McElrath, Measham, and Moore (2013) made a distinction between *drugs* and *medicines*, suggesting that the term *medicines* refers to over-the-counter and legally prescribed drugs for managing health and wellbeing, whereas illegal use of drugs relates to nonmedical use of drugs controlled under the *Drug Abuse Prevention and Control Act 1970* (U.S.) and the *Misuse of Drugs Act 1971*, in the U.K. In addition, many research articles also refer to *drug* or *substance* use, to include both legal and illegal drugs (Nutt, King, & Phillips, 2010).

For the purpose of this paper, the terms *drug use* and *drug dependency* will be used. Specifically, *drug use* denotes people engaging in illegal drugs on a recreational basis, taking substances such as cannabis, MDMA (commonly known as ecstasy), LSD, ketamine, and so on. The term *drug dependency*, in turn, is used to describe a person who demonstrates negative consequences such as physical and psychological experiences of addiction, taking substances such as heroin, methadone, crack-cocaine, and so on (Brown & King, 2004).

Homelessness

Although a considerable amount has been written about homelessness, both within specific countries and internationally, defining the term *homelessness* is complicated, as it is affected by social and cultural factors. Public perceptions of homelessness predominantly refer to 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.” For example, the United Nations (UN) distinguishes between the categories of “primary homelessness,” which refers to people without shelter who live on streets and are considered “roofless” (UNESCO, 2009), and a significantly greater group of people who fall into the so-called “secondary homeless” category, which includes 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 U.S., Lee et al. (2010) have expanded the UN’s “primary” and “secondary” definitions to suggest that patterns of homelessness fall into three clear categories: transitional, episodic, and chronic. The first, *transitional*, refers

to a temporary and brief homeless period, which can be described as a singular life event, where people move in with family or friends. The second category, *episodic*, may be described as temporary re-occurring cycles of homelessness occurring over short periods of time. According to Crane and Warnes (2001), it is this group that demonstrates a range of hidden, unmet needs and that often falls between health services, housing, and social services. Therefore, the members of this group are more difficult to identify, as they are less visible than people living on the streets. Finally, the last category, referred to as *chronic*, refers to individuals who experience long periods and permanent states of homelessness (Colane, 2007; Lee et al., 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 and colleagues (2010) suggest that although chronic homelessness is overrepresented in social research, this is actually the smallest of the three categories.

Globally, it is estimated that 500 million people may be defined as not having a home, whereas 100 million people have no housing whatsoever. In the U.S., 3% may be classified as homeless and an additional 1.6 million are either living in shelters or in transitional housing (Lee et al., 2010; USHUD, 2009). By comparison, in the U.K., the vast majority of people defined as homeless are living in temporary or transitional accommodations with no permanent living residence. According to official government figures for homelessness in England alone, 60,490 households reside in temporary accommodations, with 43,420 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 for this group, the authors estimate that the size of this population ranges between 310,000 and 380,000 at any given time.

Dyslexia and Homelessness

Studies on disability within the homeless literature are, to a certain degree, dominated by a focus on mental health problems (Markos & Strawser, 2004; Patterson, Moniruzzaman, Frankish, & Somers, 2012). As a result, few studies have investigated the specific links between dyslexia and homelessness, with the exception of an early study in the U.S. by Barwick and Siegel (1996), who suggested that individuals with reading or writing disabilities were overrepresented within the U.S. homeless population. Specifically, the authors found that 52% of their sample of homeless young people showed symptoms of learning disabilities, a percentage that 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 to homelessness. That is, there was no statistical association between the poor school attendance of people with dyslexia and that of nondyslexics.

Although they dismissed educational disengagement as a risk factor for the dyslexic population, Barwick and Siegel (1996) noted that there may be a link between the “defects” (their term) of dyslexia and homelessness. Yet, a review of the research literature by Markos and Strawser (2004) indirectly disputes Barwick and Siegel’s findings, suggesting that homelessness for people with dyslexia is not *due to* the symptoms of dyslexia but *due to* issues of social disadvantage and multiple and complex forms of social exclusion. Thus, for Markos and Strawser (2004), the higher number of people with dyslexia in the homeless population was due to unemployment and poverty. Indeed, the authors noted that people with dyslexia are particularly vulnerable to unemployment, especially if they come from lower socio-economic backgrounds. Hence, they argue that for people with dyslexia homelessness is a result of poor educational and other aspects of social disadvantage such as abuse or addiction.

In Canada, Patterson et al. (2012) also found that dyslexia was overrepresented within the homeless population and, again, suggested an intersectional relationship linking dyslexia with poor physical health, poor mental health, and drug and alcoholic use, all resulting in risk factors for homelessness. Patterson et al. (2012) implied that learning disabilities might be a strong predictor of pathways to homelessness in adulthood. Therefore, the findings of their research suggest that inferior educational experiences lead to low self-esteem and, for some, 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 in pathways to homelessness, at the same time, they suggest that these risk factors are interlinked with other forms of social exclusions (e.g., drug and alcohol dependency and mental health problems). Thus, there is growing evidence that homeless people experience multiple and complex forms of social exclusion (Fitzpatrick, Pawson, Bramley, & Wilcox, 2012; Manthorpe, Cornes, O’Halloran, & Joly, 2013). Therefore, recent studies seem 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 that linked problems at home to homelessness, mental and emotional instability, and youth drug use. Specifically, the researchers found that many participants made strong statements about their inability to live with their parents or stepparents, an instability that often led the 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. For example, several participants maintained

that entering a hostel for homeless people initiated their drug use, thus implicating homelessness as a contributing factor towards drug use in young people. Supporting this claim, 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; Fletcher, Bonell, Sorhaindo, & Strange, 2009; Khantzian, 1985; Rosenthal & Keys, 2005). Given that many who experience homelessness live in near poverty, the work of MacDonald and Marsh (2005), which labeled heroin as a "poverty drug," seems relevant to this study. Thus, MacDonald and Marsh (2005) suggested that heroin acts as a psychological anesthetic for difficult lives, which may be why this form of drug misuse is prevalent in populations who experience extreme forms of social exclusion.

Dyslexia and Pathways to Drug Use

While drug and alcohol use is under-researched in the field of dyslexia (Patterson et al., 2012; Wilcockson et al., 2015; Yates, 2006, 2012), there is a wealth of literature suggesting that individuals with dyslexia are overrepresented in the criminal justice system (Dåderman, Meurling, & Levander, 2012; Kirk & Reid, 2001; Macdonald, 2012; Selenius, Dåderman, Meurling, & Levander, 2006; Svensson, Lundberg, & Jacobson, 2001). For example, Selenius et al. (2006) discovered that 39% of their sampled prison population in Sweden had some form of learning disability. Similarly, according to a recent study by Dåderman et al. (2012), people with dyslexia and attention deficit-hyperactivity disorder (ADHD) were overrepresented (40%) within the Swedish prison population. Further, Kirk and Reid (2001) found that up to 50% of the prison population in the U.K. had some form of dyslexia.

While still pointing to a significant number among the prison population as having dyslexia, Svensson and colleagues (2001) and Macdonald (2012) noted a slightly lower percentage, ranging from 11 to 17%. The latter two studies illustrate the importance of examining the intersectional relationships between socio-economics and the cultural factors that impact on children with dyslexia. Thus, Macdonald (2012) emphasized that individuals 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.

Within the small body of research that has associated drug use with dyslexia, findings seem somewhat contradictory. Yates (2006, 2012), for example, advocated for the existence of an intersectional relationship between psychological factors and social deprivation as risk factors resulting in increased problem-

atic drug and alcohol dependencies for individuals with dyslexia. Specifically, assessing and interviewing individuals accessing drug and alcohol services in Scotland, Yates (2006, 2012) discovered that 40% of these service users had dyslexia. Based on these findings, Yates presented an environmental explanation by suggesting that certain groups, such as people with dyslexia, are overrepresented in drug dependency populations due to social deprivation. Similar to the findings presented by Kirk and Reid (2001) as well as Patterson and colleagues (2012), Yates suggested 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 findings are contradicted by those of Wilcockson et al. (2015), who studied the drug habits of undergraduate students in Wales using a cognitive deficit approach. Rather than detecting that people with dyslexia engaged in increased drug use, they reported that students with dyslexia were less likely to display drug use behaviors. Given their approach, the authors hypothesized that this abstinence could be explained by short-term memory problems, whereby people with dyslexia are less likely to develop drug dependency, as their memories of the pleasurable experience of taking drugs are less clear than those of people without dyslexia.

It should be noted that the population used in the latter studies represented two distinct social classes. In Yates's (2006) study, respondents came predominantly from a low socio-economic background, whereas Wilcockson et al.'s (2015) sample represented a high socio-economic background. Although the two studies appear to have led to very different findings, they might, in fact, be comparable by revealing the intersectional relationship between social class, deprivation, and dyslexia. Thus, the key factor here might not be that dyslexic individuals are more prone to addiction due to a cognitive defect but that people with dyslexia from a lower socio-economic background experienced higher forms of social exclusion thereby increasing their likelihood of addiction, which in turn led to destructive behaviors such as criminality, homelessness, and increased substance dependency problems.

Research Question

In the current study, we wanted to extend the literature on the relationship between dyslexia, homelessness, and drug use by examining the connections between these three factors. Our study was based on data from the Multiple Exclusion Homelessness Across the United Kingdom Survey: (Fitzpatrick, Pawson, Bramley, & Wilcox, 2010).

METHOD

The present study was guided by a critical realist approach to disability and impairment and, as such, applied a social relational model of disability to the data analysis (Reindal, 2008). That is, the authors recognized the in-

teractional 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 failure of schools to identify and adequately support students 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, the job market, and so on (Reindal, 2008; Shakespeare, 2013).

In order to explore these environmental factors, the study analyzed quantitatively the increased likelihood of respondents with dyslexia who had experienced homelessness engaging in drug use. The data were obtained from the Multiple Exclusion Homelessness Across the United Kingdom Survey accessed through the Data Archives UK Service (Fitzpatrick, Pawson, Bramley, & Wilcox, 2010). In addition, a questionnaire survey and extended interviews were conducted in 2010 with respondents who had experienced multiple forms of exclusion, including learning disabilities, and homelessness (MEH) in 2010 by Fitzpatrick et al., in partnership with organizations such as street outreach teams, drop-in services, day centers, direct access accommodation, soup kitchens, and so on. From these groups, six services were randomly selected from different geographical locations in the U.K. (Leeds, Belfast, Birmingham, Bristol, Cardiff, Glasgow, and London) to obtain a population sample. Specifically, the complexities of homelessness were investigated with reference to the intersectional relationships between homelessness, drug use, mental health, and institutional care (Fitzpatrick et al., 2012). The MEH survey also contained an in-depth section on health issues and disability.

For the present analysis, information was extracted in order to analyze the experiences of homeless respondents who had reported having dyslexia. Hence two groups of respondents who had experienced homelessness served as the independent variable. The first group consisted of respondents ($N = 68$) who had experienced homelessness and who had dyslexia. The second group consisted of individuals ($N = 375$) without dyslexia who had also experienced homelessness.

Using IBM’s Statistical Package for the Social Sciences (SPSS), data were analyzed in the form of single-variable analysis (univariate), and where data were found to be significant ($p \leq .05$), bivariate analysis was also applied (De Vaus, 2002). Two or more variable frequency distributions were analyzed to determine if the variables were statistically independent or if they were correlated (De Vaus, 2002). In the following analysis, descriptive statistics were 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 the survey were subsequently analyzed and only data that was calculated to be of statistical significance ($p \leq .05$) was included.

RESULTS

Social Demographics

Within the social demographics at the multivariate stage of analysis, dyslexia was not found to have a significant impact on variables such as sex, age, or ethnicity. Hence, there was no ratio difference between the dyslexic and the control group with regard to sex, age, or ethnicity. In both groups, males were overrepresented compared with females (males = 79.4%; females = 20.6%). In both groups, age demographics revealed a steady increase in homelessness between 16 to 34 years old, peaking at the 45-year age group (16–34 = 38.3%; 35–54 = 50.4%). Homelessness steadily decreased dramatically in the 55 years-plus category (55+ = 11.3%). With regard to ethnicity, 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, 0.6% defined themselves as Asian European or Asian other. Therefore, ethnicity was overrepresented, at 5%, in this sample as 18% of the respondents came from a minority ethnic group, compared to the national U.K. average of 13% (Office for National Statistics, 2011).

Dyslexia and Homelessness

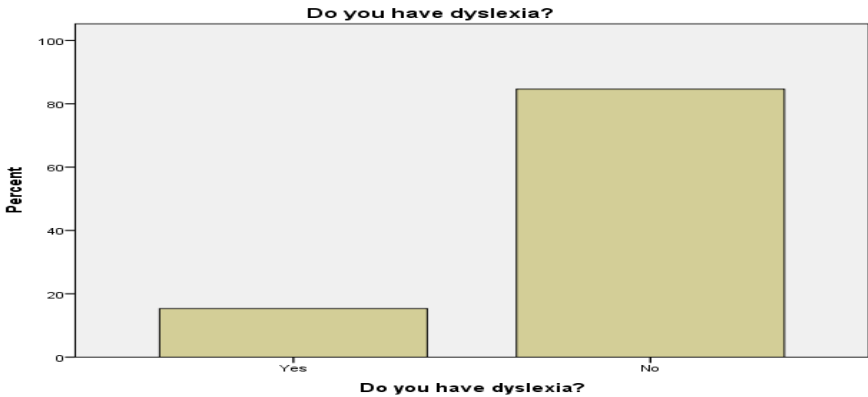
Among the few studies that have examined the relationship between dyslexia and homelessness, there has been a general consensus that individuals with dyslexia are overrepresented within the homeless population, within a range from 46% to 52% (Barwick & Siegel, 1996; Olise, 2010; Patterson et al., 2012). By comparison, in the present analysis, 15.3% of respondents reported having dyslexia (see Figure 1). Although 15% is lower than the percentages in previous studies, this figure is higher than that of the general population in the U.K., which is estimated at 4% (Semple & Smyth, 2013). Hence, the data in this survey seem to indicate that people with dyslexia were overrepresented by 11% within this homeless sample.

Adult Homelessness

A number of significant differences ($p \leq .01$) appeared within the data analysis with regard to adult homelessness. As illustrated in Table 1, the dyslexic group had experienced episodic or chronic homelessness earlier in their lives than the control group, as evidenced by respondents with dyslexia describing first sleeping rough, on average, at the age of 22 compared with of the age of 30 years for the general homeless population. Respondents with dyslexia also indicated that they had become homeless more times compared than the general homeless population, indicating a more chaotic and less stable lifestyle. Thus, on

average, they reported experiencing homelessness 11 times compared with the control group who reported experiencing homelessness 9 times.

Figure 1. Dyslexic population and control group.



A significant difference also appeared in terms of the amount of time people slept rough over their lifetimes to date. For example, the dyslexic group reported sleeping rough on average for five years compared with the control group, which indicated 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.

Table 1. Severity of Homelessness Within the Adult Sample

Experiences of Homelessness	Group	<i>M</i>	Significance Level
Age of Homelessness (Slept Rough)	Dyslexic	22 years	$p < .00$
	Nondyslexic	30 years	
Number of Times of Homelessness	Dyslexic	11 times	$p < .00$
	Nondyslexic	9 times	
Years Spent Sleeping Rough	Dyslexic	5 years	$p < .05$
	Nondyslexic	3 years	

Dyslexia and Mental Health

The results of a number of studies have pointed to an intersectional relationship between learning impairments, mental health issues, and homeless-

ness (Markos & Strawser, 2004; Mercier & Picard, 2011; Olisa, Patterson, & Wright, 2010). Likewise, the present study showed clear evidence of an intersectional relationship between people with dyslexia, mental health problems, and drug use. The occurrence of mental health problems was high in both groups of respondents who had experienced homelessness; however, individuals with dyslexia reported significantly higher levels of mental health problems ($p \leq .01$).

As illustrated in Table 2, 66.2% of individuals with dyslexia reported having anxiety and depression, which is 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, with 55.4% engaging in this ritual compared to 29.4% of the control group.

Table 2. Mental Health and Dyslexia

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

Equally significant was a higher rate of suicide attempts among dyslexic respondents: 56.9% reported that they had attempted suicide compared to 41.2% of control respondents. Furthermore, among respondents who had attempted suicide, those with dyslexia reported having attempted suicide, on

average, 4.5 times compared to 2.8 times for the control group. In addition, 47.1% of respondents with dyslexia had been admitted to a mental health hospital compared to 28.5% of the control group for a difference of 18.6%.

Dyslexia and Economic Crime

Since the 1960s, a wealth of research has linked dyslexia with a higher rate of criminality (Critchley, 1968; Kirk & Reid, 2001; Morgan, 1996; Selenius et al., 2006). As illustrated in Table 3, we found a 17% difference in theft-related crime between the dyslexic and the control group, as 56% of respondents with dyslexia stated that they shoplifted on a regular basis compared to 39% of the control group. Further, among respondents who engaged in shoplifting, on average, the dyslexic group reported starting this behavior earlier than the control group, at 19 and 23 years old, respectively.

The data also reveal that members of the dyslexic group were 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 number of respondents with dyslexia ($p < .01$) reported 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 27% of the control group.

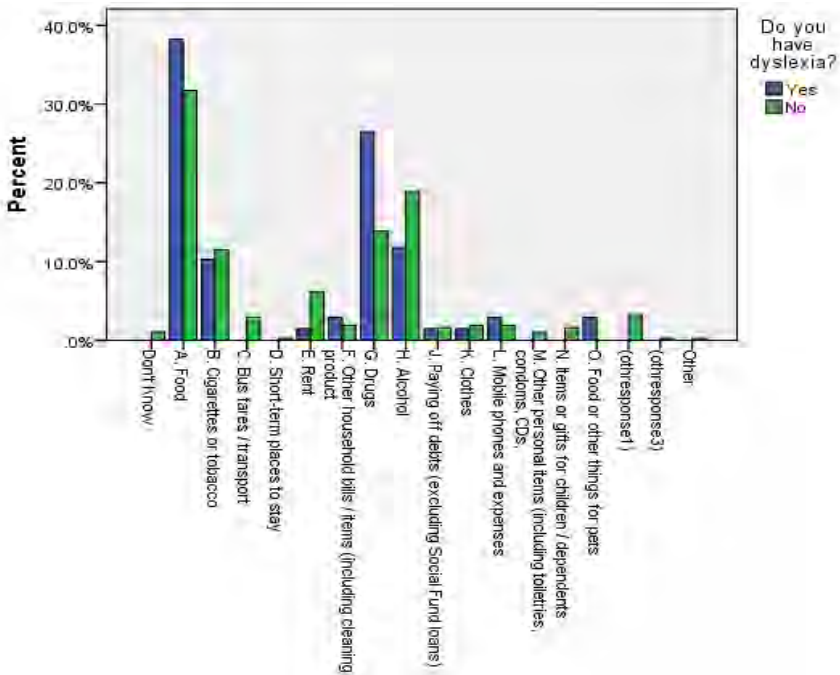
Table 3. Economic Crime

Economic Crime	Group	Yes	No	Significance Level
Shoplifted	Dyslexic	55.9%	44.1%	$p < .01$
	Nondyslexic	39.2%	60.8%	
Shoplifted Because of Drugs	Dyslexic	55.9%	44.1%	$p < .01$
	Nondyslexic	39.2%	60.8%	
Spent Money on Drugs Over the Past Month	Dyslexic	42.6%	57.4 %	$p < .01$
	Nondyslexic	27.2%	72.8%	
Economic Crime	Group	Mean	Significance Level	
Age First Shoplifted	Dyslexic	19.5 years	$p < .02$	
	Nondyslexic	23.5 years		

Differences between groups were also confirmed when examining the data on what respondents spent their weekly money on. As illustrated in Figure 2, the key commodity was food, at 40% for the dyslexic group and 38% for the

control group. Not surprisingly, given the previous findings, the second most common item for the dyslexic group was drugs, at 28%. Hence, there was a 10% difference between the two groups as the control group only reported spending 18% of their weekly money on drug use. For the control group, the second highest category was alcohol, at 20%. By comparison, only 12% of the dyslexic group reported 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. In summary, despite differences between the two groups with regard to drug and alcohol consumption, both groups demonstrated a high level of drug and alcohol use.

Figure 2. Weekly money outcomes.



Dyslexia, Drug Use and Drug Dependency

As discussed, previous research exploring the relationships between people with dyslexia and drug use has led to mixed results (Patterson et al., 2012; Wilcockson et al., 2015; Yates, 2006, 2012). In the current study, the group that reported engaging in drug use the most was the nondyslexic group, at 76% (14% more than the dyslexic group, at 62%), seemingly confirming the findings

of Wilcockson and colleagues (2015). While this seems to suggest that homeless respondents with dyslexia were less likely to engage in drug use than the general homeless population (although drug use is still high for both groups), when comparing the type of drugs used, the dyslexic group reported using more harmful hard¹ and addictive drugs than the control group.

As illustrated in Table 4, evidence suggests a significant ($p \leq .03$) increase, at 14.3%, in the consumption of hard and addictive drugs by respondents with dyslexia. That is, 55.9% of respondents with dyslexia reported using hard and addictive drugs compared to 41.6% of the control group. Further, 50% of the dyslexic group reported taking methadone compared with 30% of the control group. This 20% difference is significant because it demonstrates that not only have the members this group engaged in heroin use, they have become addicted to heroin, leading them to engage in the methadone maintenance treatment program² in the U.K. Fifty percent of respondents with dyslexia also reported that they were likely to take drugs on a monthly basis compared to 34% of the control group. Again, although the percentage among the dyslexic group is significantly higher, both groups scored relatively high in these categories. Finally, in terms of alcohol consumption, on average, dyslexic respondents started drinking earlier than the control group by four years. As the dyslexic 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%).

Mercier and Picard (2011) and Taylor et al. (2006) noted that drug use features significantly in the experiences of homeless people, a finding that is somewhat confirmed in the present study. For homeless respondents with dyslexia, the results of the overall analysis are not clear-cut, as Table 4 seems to reveal that members of this group 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 suggesting that individuals with dyslexia do have increased problems with drug dependency.

1 Respondents in this survey defined "hard drugs" as heroin, crack-cocaine, and cocaine.

2 In the U.K. persons who are addicted to opiates (e.g., 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 withdrawal. The aim 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 their habit (Coomber et al., 2013; NHS Choice, 2014).

Table 4. Drug Misuse and Dyslexia

Drug Use		Yes	No	Significance Level
Used Hard Drugs	Dyslexic	55.9%	44.1%	$p < .03$
	Nondyslexic	41.6%	58.4%	
Monthly Use of Drugs	Dyslexic	50.0%	50.0%	$p < .01$
	Nondyslexic	33.6%	66.4%	
Do You Have a Problem With Taking Drugs	Dyslexic	61.8%	38.2%	$p < .01$
	Nondyslexic	76.0%	24.0%	
Methadone	Dyslexic	50.0%	50.0%	$p < .03$
	Nondyslexic	30.2%	69.8%	
Access to Drug Worker	Dyslexic	47.1%	52.9%	$p < .01$
	Control	30.4%	69.6%	

Drug Use	Group	<i>M</i>	Significance Level
Age When Start Drinking Alcohol Daily (6+)	Dyslexic	21 years	$p < .01$
	Nondyslexic	25 years	

DISCUSSION

Main Findings

In general, results showed that drug use, in particular, is overrepresented within the overall homeless population (Patterson et al., 2012; Yates, 2006, 2012). Further, within the overarching goal of exploring the relationship between dyslexia, homelessness, and drug use, the evidence suggests that dyslexia is overrepresented within the homeless sample. As demonstrated, a number of statistically significant relationships appeared that suggest that once respondents with dyslexia become homeless, they have an increased risk of spiraling into the episodic and chronic homeless population. In addition, this group is at increased risk of mental health problems relating to higher rates of anxiety and depression, self-harm, and suicide attempts.

Yet, the results are mixed with regard to the rate of drug use. Primarily, individuals with dyslexia were less likely to engage in drug use than the control group. However, at the same time, they were more likely to use hard and addictive drugs. Thus, they were more likely to be on a methadone program (opiate

dependent) than the control group. Finally, this group was more likely to spend their money regularly on drug use than the control group (Yates, 2013).

Based on our findings, we cannot conclude that the overrepresentation of drug dependency and homelessness for participants with dyslexia is due to environmental issues (Macdonald, 2009, 2012; Reindal, 2008; Yates, 2013) rather than cognitive “dysfunction” (Dåderman et al., 2012; Wilcockson et al., 2015). However, we propose a sociological approach rather than a cognitive deficit explanation based on the fact that out of the four studies that have explored the relationship between dyslexia and drug use, the three that discovered a higher rate of drug dependency (including the present study) were conducted on populations that experienced increased social deprivation (Patterson et al., 2012; Yates, 2006, 2012). By contrast, the one study that did not find an increase in drug dependency was conducted with a population that experienced limited forms of social deprivation as they were from a high socio-economic background (Wilcockson et al., 2015).

Based on the data presented in this study, the dyslexic group became homeless at an earlier age, lived in hostels for longer periods of time, and was more inclined to be drug dependent. These findings support Rosenthal and Keys (2005), who claimed that drug use progresses once people become homeless and enter the hostel support system. Hence, 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 might use drugs partly as a coping mechanism to deal with their difficult lives. Given that they are likely to live in or near poverty, the work of MacDonald and Marsh (2005), which labeled heroin as a “poverty drug” – acting as a psychological anesthetic for difficult lives – seem to fit the profile of the drug-dependent homeless individuals described in this paper.

To conclude, this study attempted to add knowledge to the under-researched area of dyslexia and drug use/addiction. Yet, before any final conclusions can be 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. First, when analyzing data from a secondary source, the questionnaire design and type of questions asked are beyond the control of the researchers. Second, all variables were based on self-reporting; hence it is possible that participants unintentionally misinformed the researchers collecting data in this survey. Finally, the type of data analysis conducted here 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. Further, a more in-depth analysis needs to take place to examine how homeless people with dyslexia perceive the professionals who have engaged and supported them outside of the education system as a means of improving both educational and social services.

Practical Recommendations

This study suggests that there have potentially been numerous missed opportunities by practitioners to support people with dyslexia who have experienced multiple forms of social exclusion. In order to improve practice, the data seem to indicate that contemporary adult services in the U.K. 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 et al., 2010). As proposed by Markos and Strawser (2004) and Olisa and colleagues (2010), 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. To that end, partnerships need to be developed between education, health care, social care, and housing practitioners within adult services in the U.K. Only by developing successful partnerships, where a range of practitioners have specific knowledge of risk factors linking social exclusion to learning disabilities, is it possible to effectively deal with the multiple problems experienced by people with dyslexia who have become homeless and have spiraled into addiction and other destructive behaviors.

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