



FACULTY OF  
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# Journeys Home Research Report No. 4

Findings from Waves 1 to 4: Special Topics

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Nicolas Herault, Guy Johnson, Julie Moschion and  
Mark Wooden

August 2014



**JOURNEYS HOME  
RESEARCH REPORT No. 4  
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**Report prepared for the Australian Government Department of  
Social Services**

By Rosanna Scutella, Abraham Chigavazira, Eoin Killackey, Nicolas  
Herault, Guy Johnson, Julie Moschion and Mark Wooden

**Acknowledgements**

This report describes, and presents data collected from, the Journeys Home project, a longitudinal survey based study managed by the Melbourne Institute of Applied Economic and Social Research on behalf of the Australian Government Department of Social Services (DSS). The findings and views reported in this paper, however, are those of the authors and should not be attributed to either DSS or the Melbourne Institute.

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## **Executive Summary**

In late 2010 the Australian Government commissioned the Melbourne Institute of Applied Economic and Social Research (at the University of Melbourne) to design and implement a new longitudinal survey, subsequently named Journeys Home (JH). Over approximately three years, JH will track a national sample of individuals exposed to high levels of housing insecurity employing much more rigorous sampling methods than ever previously used.

This research report presents important findings from the first four waves of the JH study, which were conducted over an 18-month period between September 2011 and May 2013. The report is structured into eight chapters, five of which explore, in depth, a key issue affecting the homeless and people facing housing insecurity. The five issues examined are: the duration of homelessness, mental illness, psychological distress, substance use, and links with and between child and adult abuse and violence.

### *The duration of homelessness*

The chapter on the duration of homelessness shows that homelessness appears to be quite persistent among many JH respondents. It is also true that different population subgroups experience different durations of homelessness, with males, the relatively young and relatively old, migrants and people from Aboriginal or Torres Strait Islander origin all experiencing longer periods of time homeless on average. People are also less likely to exit homelessness the longer they remain homeless, and there is evidence of considerable cycling in and out of homelessness, particularly for those with a diagnosed mental illness.

### *Diagnosed mental illness and homelessness*

This chapter examines the dynamic relationship between homelessness and the diagnosis of mental illness. It reminds us of the complications involved in assessing causal relationships, and that knowledge of which condition precipitates the other is unlikely to be adequate to ascertain causality. Evidence is presented to support earlier propositions in the literature that there are two typical pathways with respect to homelessness that involve mental illness. The first is one in which the mental illness is developed in adolescence and early adulthood. There is then a long period of time – 8 years on average – before the individual has their first experience of homelessness. The second path is one in which the first experience of homelessness occurs relatively early, followed by a relatively late onset of mental illness some 9 years later on average. Drilling down further in the available data from the Journeys Home study may reveal other differences between these two groups that provide insight into potential interventions, both for housing and for mental illness.

A key concluding theme is the importance of prevention. Given the difficulty people with mental illness have exiting homelessness, preventing homelessness in this population should be a priority. It is also important to prevent the onset of mental illness among those who are already experiencing homelessness. People who experience homelessness in their childhood and adolescence are at higher risk for later developing a mental illness. This group may indeed benefit from a preventative approach to mental health care.

### *Psychological distress and homelessness*

Psychological distress is typically much more common among homeless populations than diagnosed mental illness. This is of significant concern as distress has been found to not only be a precursor to more severe forms of mental illness but to have other detrimental effects on health and wellbeing. The analysis of psychological distress levels of JH respondents, found that while there is evidence that the homeless experience higher levels of distress than the housed, the extent of the differences between the two groups depends very much on the length of time individuals have been homeless or housed. Individuals in stable housing generally report lower levels of psychological distress than the homeless or, in the case of men, those recently housed. The analysis also uncovers evidence to support the thesis that the longer people remain homeless, the more likely they are to adapt to it, although this appears to be much stronger for women than it is for men. For services and workers assisting the homeless, attending to their housing needs is an obvious way to ameliorate levels of distress (among other things). However, the findings also suggest that individuals who have recently become homeless are likely to be experiencing heightened levels of psychological distress. When people are distressed, their capacity to do things and/or make sensible decisions can be compromised. Agencies need to be sensitive to this, particularly at the point of initial engagement. Finally, although women appear to adapt to housing very quickly, men do not. The implication is that men may well need higher levels of settlement support to ensure they retain their housing.

### *Substance use and homelessness*

In prior research reports we highlighted the finding that JH respondents are more likely to smoke, drink alcohol at risky levels and use illicit drugs than the general population. In the chapter examining the relationship between substance use and homelessness in more detail, we see that not only are respondents more likely to consume these substances but they also do so at relatively high levels and, in the case of smoking and cannabis use, quite persistently. Risky drinking and the use of illegal/street drugs, while not as persistently observed as smoking and cannabis use, do tend to be quite common behaviours over time, with respondents cycling in and out of the user population.

There also appears to be clear relationships between homelessness and risky drinking, cannabis use, and illegal/street drug use. There are however different patterns of substance use according to the nature of the homeless experience. For instance risky drinking is more common amongst the long-term homeless who do not move around much (typically boarding house residents), whereas use of illegal/street drugs is more common among the long-term homeless that move around a lot.

### *Violence*

In previous research reports we have highlighted the high rates of exposure to childhood and adult abuse and violence among JH respondents. We also highlighted that there is an empirical association between abuse and violence and homelessness. In this report, recent experiences of violence are examined in more detail, focussing in particular on the potential links between traumatic events in childhood and the likelihood of experiencing violence as an adult. Evidence is reported that exposure to childhood traumatic events such as emotional abuse or neglect, physical violence or sexual abuse, place people at an elevated risk of experiencing either physical or sexual violence as an adult.

The findings also support evidence from other research that the relationship between childhood and adult trauma has a gendered dimension, with females being much more vulnerable to sexual assault in both childhood and adulthood than men. Males, on the other hand, are more vulnerable to general physical violence. Young women and young men are also most vulnerable to sexual and physical violence as adults respectively.

It is argued that the links between childhood trauma, housing instability and adult violence is an area that warrants sustained research and policy interest. Yet despite the evidence from Journeys Home and other studies that the lives of the homeless and those experiencing housing instability are marked by extreme and often ongoing traumatic experiences, trauma remains conspicuous by its absence from the policy literature. In recent times there have been calls for greater reflection on the need for Trauma Informed Care approaches, yet there has been little policy interest in the idea. While Trauma Informed Care is not necessarily relevant to all homelessness and housing providers, its potential to enrich service design in the broader homelessness and housing areas remains unrealised.

# 1 Introduction

Current understandings of homelessness are limited by a dearth of nationally representative data capturing the pathways into and out of homelessness of a broad reference population. To address this the Australian Government commissioned the Melbourne Institute of Applied Economic and Social Research in late 2010 to design and implement a new longitudinal survey, subsequently named Journeys Home (JH), which would track a national sample of individuals exposed to high levels of housing insecurity. Importantly, the JH survey employs more rigorous sampling methods than previously used on this population either nationally or internationally.

This research report, the fourth in our series, presents important findings from the first four waves of the JH study, with interviewing for wave 1 occurring over the period September to November 2011 and waves 2 to 4 subsequently occurring at roughly six-month intervals. In this research report we value depth over breadth, and rather than take the broad brush approach to the analysis of the survey data of previous research reports, and focus on examining a handful of particular issues relevant to our population of interest in greater depth.

As with prior reports we define homelessness using the ‘cultural definition of homelessness’, which the Australian Bureau of Statistics used to enumerate the homeless population in 1999, 2001 and 2006 (Chamberlain 1999; Chamberlain & Mackenzie 2003 and 2008), and has come to be widely accepted in the literature. The core idea underpinning the cultural definition is that there are shared community standards about the minimum accommodation that people can expect to achieve in contemporary society (Chamberlain & MacKenzie 1992). The minimum for a single person (or couple) is a small rental flat with a bedroom, living room, kitchen and bathroom and an element of security of tenure provided by a lease.

According to this approach, the following people are defined as homeless: people without conventional accommodation (for example, those sleeping rough or living in squats); people who stay temporarily with other households, which includes those ‘couch surfing’; people in emergency accommodation (refuges and shelters); and people in boarding houses. Respondents in other forms of accommodation considered to meet the minimum community standard are all defined as housed.

Before turning to the in-depth analyses, we provide a refresher on the Journeys Home sample design in Chapter 2 and also present details of response outcomes over the first four waves of the survey. We then begin in Chapter 3 with the first of our in-depth analyses. This analysis focuses on the duration of homelessness – an issue which is at the core of any assessment of homelessness dynamics. In Chapter 4 the complex relationship between mental illness and homelessness is investigated. This is followed by an examination of the association between homelessness, durations of homelessness and housing, and psychological distress in Chapter 5. Chapter 6 then examines a somewhat related and equally complex relationship between substance use and homelessness, where patterns of smoking, drinking and illicit drug use are investigated. The final feature article in Chapter 7 looks at the potential links between traumatic events in childhood and exposure to violence and abuse in adulthood. Concluding comments are provided in Chapter 8.

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## 2 Journeys Home: sample design and response

### 2.1 Sample design and survey administration

Journeys Home is an interviewer-administered survey that is following a sample of Centrelink income support customers over time. As explained in more detail in Wooden et al. (2012) and in Melbourne Institute (2012), the JH sample was drawn from the Research Evaluation Database (RED) developed by the Department of Education, Employment and Workplace Relations. RED is drawn from Centrelink's customer database, and contains payment records, together with a range of personal details, for all Centrelink income support customers since 1 July 2002. Given that the large majority of homeless people in Australia receive Centrelink income support payments, it follows that this sampling frame provides much wider coverage of the homeless population than previous studies utilising other samples and sampling methods.

The main problem with this approach, however, is that the population in receipt of income support payments is very large (4.75 million as at 27 May 2011), most of whom will not have experienced homelessness at any point in their life. Drawing a small random sample of this population will thus generate few insights into the homelessness experience. Fortunately, since 1 January 2010, Centrelink's customer database also identifies clients who have been flagged by Centrelink staff as being 'homeless' or 'at risk of homelessness'. The target population for JH was thus initially restricted to recipients of an income support payment that had been flagged by Centrelink as either 'homeless' or 'at-risk of homelessness' (n=42,336).

Centrelink's internal homelessness awareness training material (which is not publicly available) defined a person as being 'homeless' if he or she:

is without conventional accommodation (e.g., sleeping rough, squatting, or living in a car); or lives in, or moves frequently between, temporary accommodation arrangements (e.g., with friends or extended family, emergency accommodation, or youth refuges).

A person who is 'at risk' of homelessness is one that:

lives medium to long term in a boarding house, caravan park or hotel, where accommodation is not covered by a lease; lives in accommodation which falls below the general community standards which surround health and wellbeing, such as access to personal amenities, security against threat, privacy and autonomy; is facing eviction; or lives in accommodation not of an appropriate standard which may be detrimental to their physical and mental well-being, or where they have no sense of belonging or connection (e.g., Indigenous Australians living in crowded conditions or disconnected from their land, family/kin, spiritual and cultural beliefs and practices).

As discussed in Scutella et al. (2012), the flagging process is intended as a way of providing targeted service delivery for people who are homeless or at risk of becoming homeless. It was not intended to be a tool for enumerating homeless and at-risk people. It relies on customers who engage with the Department of Human Services to be prepared to disclose details of their personal situation to departmental staff. Most obviously, customers who both engage more frequently with Department of Human Services' staff and are prepared to disclose details of their personal situation are more likely to be flagged. As a result, the non-flagged group will include some people who are homeless or at risk of homelessness. The Centrelink

Homeless Indicator is thus not appropriate by itself for enumerating the homeless population, nor was it ever intended for this purpose.

We therefore augmented the target population with a group of Centrelink customers selected using statistical techniques that identify income support recipients that have not been flagged as homeless (or at risk of homelessness) but nevertheless have characteristics similar to those that have been. More specifically, and as explained in Wooden and colleagues (2012), we considered as in-scope those persons whose predicted probability of being flagged was in the top two per cent of all income support recipients who were not already flagged (n=95,755). This group includes persons who should have been defined as homeless or at risk of homelessness, as well as other persons who might be described, at least in a statistical sense, as vulnerable to homelessness.

From this still large population (n=139,801) we then attempted to select a random sample, but subject to the goal of obtaining responding samples of approximately equal size from each of the three groups: i) Centrelink customers flagged as 'homeless'; ii) Centrelink customers flagged as 'at risk of homelessness'; and iii) other Centrelink customers who we identify as being vulnerable to homelessness.

The total sample allocated to interviewers (employed by Roy Morgan Research) comprised 2992 individuals distributed across 36 distinct locations or areas (with an area defined to have a 10km radius in the major cities and a 20km radius in regional centres). Of this group, 273 were subsequently determined to be out of scope (because they had moved out of the designated survey interview area prior to fieldwork commencing, were away for the entire survey period, were in prison or another institution on a long-term basis, were young people living at home with their parents or had died), leaving us with an effective sample of 2719. Almost 62 per cent of this group (n=1682) agreed to participate in wave 1, which was conducted between September and November 2011. This is a very respectable rate for studies of such disadvantaged populations (cf. Thomson Goodall Associates 2001; RPR Consulting 2003; Mission Australia 2012).

## *2.2 Sample characteristics and response bias*

A problem for all voluntary surveys is that non-respondents may be systematically different from respondents. To assess this we report, in Table 2.1, figures on the distribution of the responding sample by selected known sample member characteristics (as recorded in the RED) and how they compare with equivalent distributions for the attempted in-scope sample. In addition, we also report corresponding figures for the wider population of Centrelink clients.

It should be immediately apparent that the JH sample is markedly different from the broader income support population, which in large part reflects the almost total absence of age pensioners from the JH sample and the relatively high spatial mobility of JH sample members. On average, JH sample members are relatively young and are relatively more likely to be male, single and an Indigenous Australian, to have previously spent time in prison and to be recorded as having experienced mental illness.

More important is the evidence of response bias presented in Table 2.1. Thus men, while still representing the largest fraction of the responding sample, were relatively less likely to respond than women). This is a result common to many surveys. Other statistically significant differences in response were uncovered with respect to: age (both the very young

**Table 2.1: Population and sample member characteristics (%)**

Characteristic <sup>a</sup>	Income support population <sup>b</sup> (n=4,830,357)	Attempted in-scope sample (n=2719)	Respondents (n=1682)
Gender			
Male	43.1	58.8	54.6
Female	56.9	41.2	45.4
Age group			
15-17	3.4	11.4	12.6
18-20	4.7	14.3	14.9
21-24	5.5	12.8	12.1
25-34	9.5	23.0	21.6
35-44	9.7	20.7	19.7
45-54	9.1	12.8	14.0
55-64	12.5	4.1	4.5
65+	45.6	0.9	0.7
Indigenous status			
Non-Indigenous	95.9	82.3	82.8
Indigenous	4.1	17.7	17.2
Country of birth			
Australia	68.4	87.1	87.3
English speaking country	9.6	5.8	6.1
Non-English speaking country	22.0	7.2	6.6
Marital status			
Single	58.7	93.6	93.0
Married	36.4	0.7	0.7
Defacto	4.3	5.1	5.7
Unknown	0.7	0.6	0.5
Has dependent children			
No	84.7	86.2	83.6
Yes	15.3	13.8	16.4
Benefit type			
Not on income support	1.6	2.7	2.6
Students	7.8	5.8	6.2
Youth Allowance (other)	1.8	16.8	18.0
New Start Allowance	11.7	42.4	38.7
Disability support Pension	16.7	21.6	22.1
Parenting payment	9.2	8.2	10.0
Other	51.3	2.6	2.5
Ex-offender			
No	98.1	80.6	82.5
Yes	1.9	19.4	17.5
Ever recorded psychological / psychiatric problem			
No	89.0	60.5	60.1
Yes	11.0	39.5	40.0
Numbers of recorded changes in home address in past year			
0	82.9	18.8	18.2
1	12.3	28.0	28.2
2	3.1	24.4	24.5
3+	1.7	28.9	29.1

## Notes

a All characteristics are as recorded in the RED on the 27<sup>th</sup> May 2011.

b Those who were on income support at any time between 30<sup>th</sup> April 2011 and 27<sup>th</sup> May 2011.

– under 21 – and older persons – 45 to 64 – were most likely to respond); the presence of dependent children (persons with children had much higher response rates than those without children); whether an ex-offender (with ex-offenders being less likely to respond); and benefit type. Differences with respect to Indigenous status, country of birth, marital status, whether a respondent had a recorded history of psychological problems, and recent residential mobility, however, were all statistically insignificant.

Overall, and despite the presence of a number of statistically significant differences, the characteristics of the responding sample mostly do not seem to be so different from the initial selected sample to suggest response bias is a major problem.

### 2.3 Response rates in follow up surveys

Attempts were made to reapproach all 1682 JH participants in the three follow-up waves of the study. A summary of response outcomes from waves 2 through 4 is provided in Table 2.2. As shown, re-interview rates are quite high and have been falling only slowly. Thus by the fourth wave, 18 months later, we were still interviewing more than 86 per cent of our initial responding sample.

**Table 2.2: Response outcomes, Waves 2 to 4**

<i>Outcome</i>	<i>Wave 2</i>		<i>Wave 3</i>		<i>Wave 4</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Completed interview	1529	90.9	1473	87.6	1454	86.4
Out of scope	22	1.3	47	2.8	50	3.0
Non-contact	68	4.0	70	4.2	84	5.1
Other non-response <sup>a</sup>	63	3.7	92	5.5	94	5.4
TOTAL SAMPLE (W1 respondents)	1682	100	1682	100	1682	100

a This category includes outcomes classified as: refusal, termination, incapable, and contact made but no interview resulted. This includes persons who refused at previous waves and indicated they no longer wish to be approached at future waves.

These rates are very high compared to other Australian studies targeting disadvantaged populations. For example, the Longitudinal Study of Reconnect Clients achieved a follow-up response rate of 57.1 per cent (RPR Consulting 2003), the Residents Outcomes Study achieved a re-interview rate of 40 per cent (Thomson Goodall Associates 2001), and a study of single homeless men in Sydney achieved a re-interview rate just over 40 per cent (Mission Australia 2012). Indeed, Journeys Home’s response rates also surpass those recorded in Australia’s general population panel survey, the HILDA Survey, which successfully re-interviewed 86.8 per cent of its initial sample of respondents one year later in wave 2 (Watson and Wooden 2010, Table 2, p. 328).

The success of the fieldwork company in gaining cooperation from sample members is even more remarkable when account is taken of the number of persons that die and the fact that we do not require interviews to be attempted with persons who are in prison or other institutions, or have moved overseas.

In wave 4, a total of 50 out of the initial 1682 wave 1 respondents were identified as out-of-scope. This includes: 12 persons known to have died; 31 persons that were in prison; and 6 persons reported to be overseas.

Despite the mobility of the sample (45% of respondents in wave 4 were living at a different address in wave 3), only 14.8% of interviews in wave 4 were conducted by telephone. Of these, about two-thirds were the result of a sample member moving well outside one of the original cluster locations, and hence travel costs precluded a face-to-face interview.

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## 3 The duration of homelessness

### 3.1 Introduction

International studies suggest that a large number of those homeless at any point in time have a short, one-off experience of homelessness (Rossi 1989; Ziesemer, Marcoux and Marwell 1994; Kuhn and Culhane 1998; Avramov 1999; van Doorn 2005). A second group tends to cycle in and out of homelessness, and while they generally return to housing, it often takes a little more support. A third group are the persistent or chronic homeless. While this group tends to be the smallest, it is typically the most intensive user of support services.

To design more effective support services we need to know what differentiates the short-term homeless from the longer-term homeless. It is only then that we will be able to determine how to prevent people ending up chronically homeless and in need of such intensive assistance.

In this chapter we therefore examine durations of homelessness in more depth than in previous research reports.

While much can be learnt from prior studies of homeless durations, most suffer from significant limitations due to the sampling strategy used. Allgood, Moore and Warren (1997), Culhane and Kuhn (1998) and Shinn et al. (1998) use administrative data of shelter users, who are not necessarily representative of the overall homeless population. Hall and Freeman (1989), on the other hand, focus on the street population and uses opportunistic sampling methods.

Allgood and Warren (2003) attempt to remedy these shortcomings by using large-scale national survey data for the US (the National Survey of Homelessness Assistance Providers and Clients, NSHAPC). However the NSHAPC has its own shortcomings. Again, the sample is not entirely random, since the survey was administered to clients of homeless-assistance providers who may be not fully representative of the homeless population. Its main shortcoming, however, is that it is a cross-sectional survey of people who, for the most part, remain homeless at the time of the survey. Thus the vast majority of homeless spells are right-censored (i.e., their length is unknown).

Journeys Home, on the other hand, does not suffer from these limitations; the sample provides wide coverage of the population of people within Australia facing difficulties securing stable housing, and sample members are followed over time. Also, the survey instruments were designed to capture information on the durations of homeless episodes in more or less continuous time.

In the following section we present an analysis of these homeless durations across all relevant Journeys Home respondents. Then in Section 3.3 we examine whether different population subgroups experience different durations of homelessness. As some individuals experience multiple homeless episodes, we examine cumulative homeless durations in Section 3.4. Then, in Section 3.5, we introduce readers to the concept of duration dependence in the study of homelessness dynamics, highlighting directions for future research. Section 3.6 provides a short conclusion to the chapter.

### 3.2 *The duration of homeless spells*

The survey instruments in JH include an accommodation calendar that is designed to capture all changes in housing status since the previous interview. Specifically, respondents were asked questions about the timing of all of their moves into and out of particular types of accommodation, the responses to which allow us to estimate more precisely the length of time people were homeless for. Also, for most of those that we observe to be homeless at their first interview, we obtain information retrospectively on the date that their homeless spell began. We therefore have information on durations of homeless episodes in more or less continuous time for the vast majority of JH respondents.

A total of 1366 homeless episodes are observed during the study period from wave 1 to wave 4; 721 of these spells are left-censored (that is, they started before wave 1) and 653 are right-censored (they were still ongoing at the time of wave 4 survey). Three hundred and fifty three spells are both left- and right- censored. Left-censored spells are the most problematic when examining homeless durations as there is little that can be done to estimate durations if the start date of a homeless episode is unknown. Hence, we use retrospective information to obtain a conservative estimate of the duration of the current spell.<sup>1</sup> Right censored spells are less problematic, as it is relatively straight forward to account for right censoring when preparing statistics on event histories.

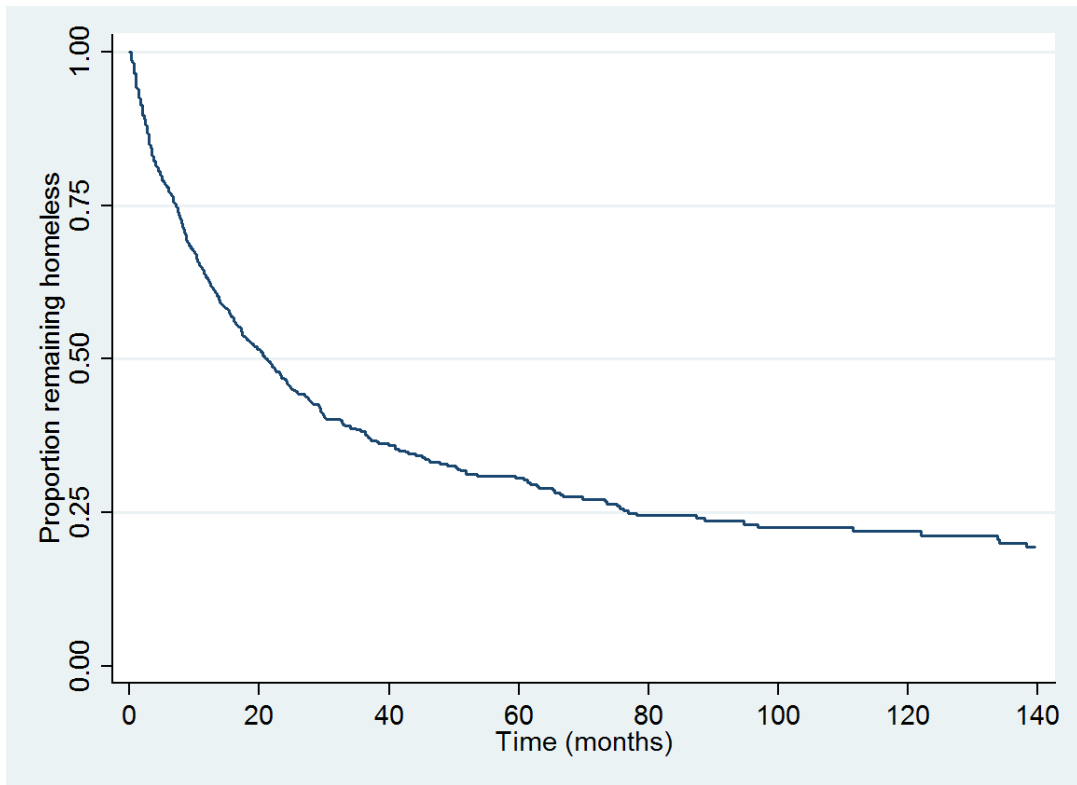
In Figure 3.1 and Figure 3.2 we examine the persistence of homelessness using these data on homeless episodes. First we present, in Figure 3.1, what is known as the Kaplan-Meier estimate of the survival function, which shows the proportion of people that remain homeless after a given length of time has passed. It should be obvious from this figure that the distribution of homeless episodes is quite skewed, with short- to medium-term spells more common than those at the extreme tail of the distribution. However, that is not to say that homelessness is mainly a short-term experience for JH respondents. Although most spells are observed at the shorter end of the distribution, it still appears that the majority of episodes last for significant periods of time. For instance, 63 per cent of all homeless spells last for at least 12 months; a further 14 per cent had lasted for at least 6 months; and less than a quarter of spells were what would be considered as being ‘short’, having lasted for less than 6 months.

This pattern differs somewhat from what is typically found in overseas studies of the homeless. Researchers in both the United States and Europe have concluded that the overwhelming majority of people have a short, one-off experience of homelessness (Rossi 1989; Kuhn and Culhane 1998; Avramov 1999; van Doorn 2005). Our findings, at first glance, appear to challenge this. However, it is also quite likely that people experiencing brief one-off experiences of homelessness are under-represented in the JH study, since they are much less likely to be identified by Centrelink staff as being at risk of homelessness.

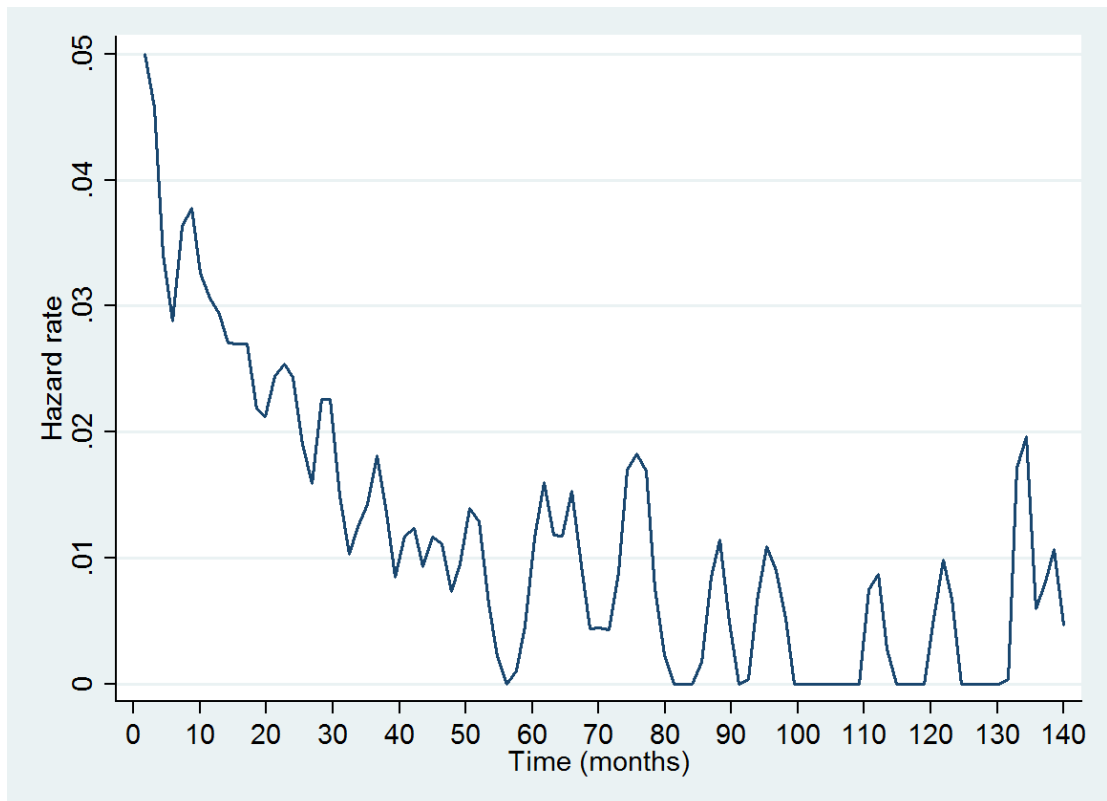
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<sup>1</sup> We use information about how long ago the respondent had a place to live for three months or more. For the 400 spells where this information is not available we use the length of time the respondent had been staying in their current place, which systematically underestimates homeless durations as this may not necessarily coincide with the start of their homeless spell.

**Figure 3.1: Kaplan-Meier homelessness survival function**



**Figure 3.2: Homelessness hazard function**





It is also of interest to examine whether there is any relationship between the likelihood of exiting homelessness and the length of time people remain homeless. To get a clearer insight into this issue, we present in Figure 3.2, what is known as a ‘hazard function’. A hazard function presents the rate at which people exit homelessness per unit of time (which is one month in the figure), conditional on having remained homeless (or having ‘survived’) until then.

It is the general pattern of the hazard function that is of interest. Here we see that the hazard function is downward sloping for spells less than 4 years, and then tends to stabilise for spells longer than this. Thus, in general, it appears that people are less likely to exit homeless the longer they remain homeless. This pattern is consistent with US studies on shelter stays (Culhane and Kuhn 1998) and homeless durations for those using homelessness support services (Allgood and Warren 2003).

### *3.3 Different population subgroups experience different durations of homelessness*

In the previous section we examined homeless spell durations for the average JH respondent. However, homelessness may be more persistent for certain subgroups than others. In this section we investigate whether this is the case by examining homeless durations by gender, age, country of birth, reason for being homeless and mental health status.

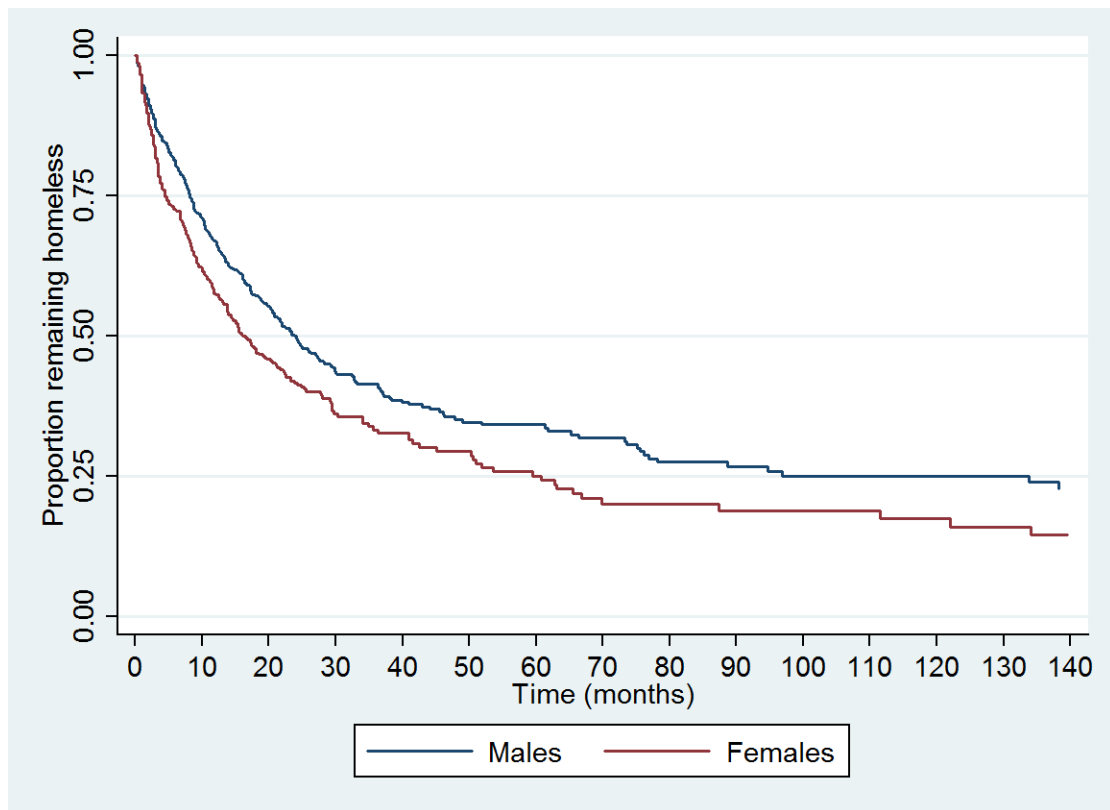
We find that different subgroups differ in the length of their homeless spells. Figure 3.3 shows that the duration of homeless spells is clearly shorter for females than for males. The median duration of homeless spells is 24 months for males compared to 16 months for females.

Figure 3.4 shows that homeless duration also varies with age. Those aged 24 years or younger and those aged 45 years or older experience the longest spells, whereas those between 25 and 44 years of age tend to exit more rapidly. However, the proportion of very long spells (i.e., spells longer than 75 months) is similar for those aged 45 or older and for those aged between 25 and 44. Those who become homeless before 24 years of age are the most likely to experience very long homeless spells.

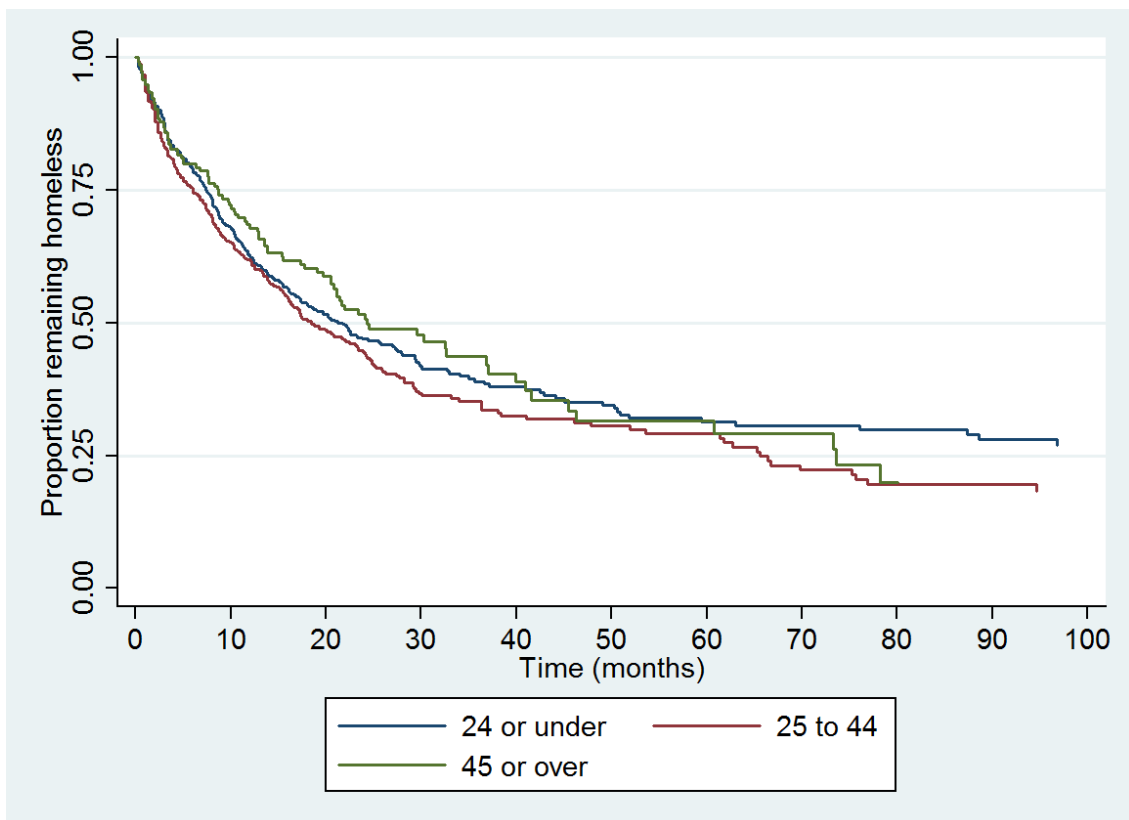
In Figure 3.5 we see that migrants, and to a slightly lesser extent Aboriginal and Torres Strait Islanders (ATSI), experience longer homeless spells than the non-Indigenous Australian born. Interestingly, there appears to be little difference in homelessness exit patterns between migrants from English-speaking and non-English-speaking backgrounds.

Figure 3.6 presents homeless survival functions by dividing the sample of respondents who have experienced homelessness in two. The first group consists of those who report becoming homeless for the first time because of family or relationship breakdown or conflict or because of domestic or family violence or abuse. The second group contains all other respondents. As with the previous figures, all subsequent homeless episodes (falling partly or entirely in the two-year observation window) are considered. Figure 3.6 reveals that homeless spells are longer for the first group than for the second group. In particular, the proportion of very long spells is significantly higher for the first than for the second group.

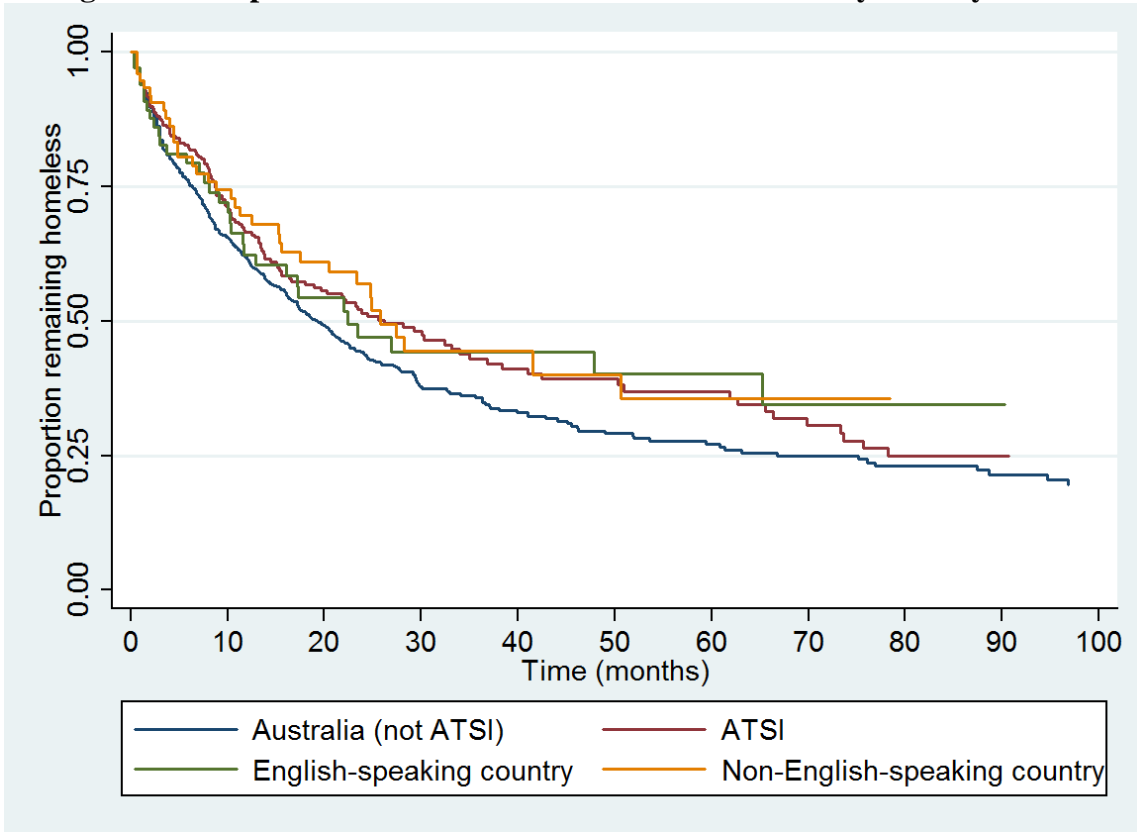
**Figure 3.3: Kaplan-Meier homelessness survival function by gender**



**Figure 3.4: Kaplan-Meier homelessness survival function by age at the start of the spell**



**Figure 3.5: Kaplan-Meier homelessness survival function by country of birth**



**Figure 3.6: Kaplan-Meier homelessness survival function by reason first homeless**

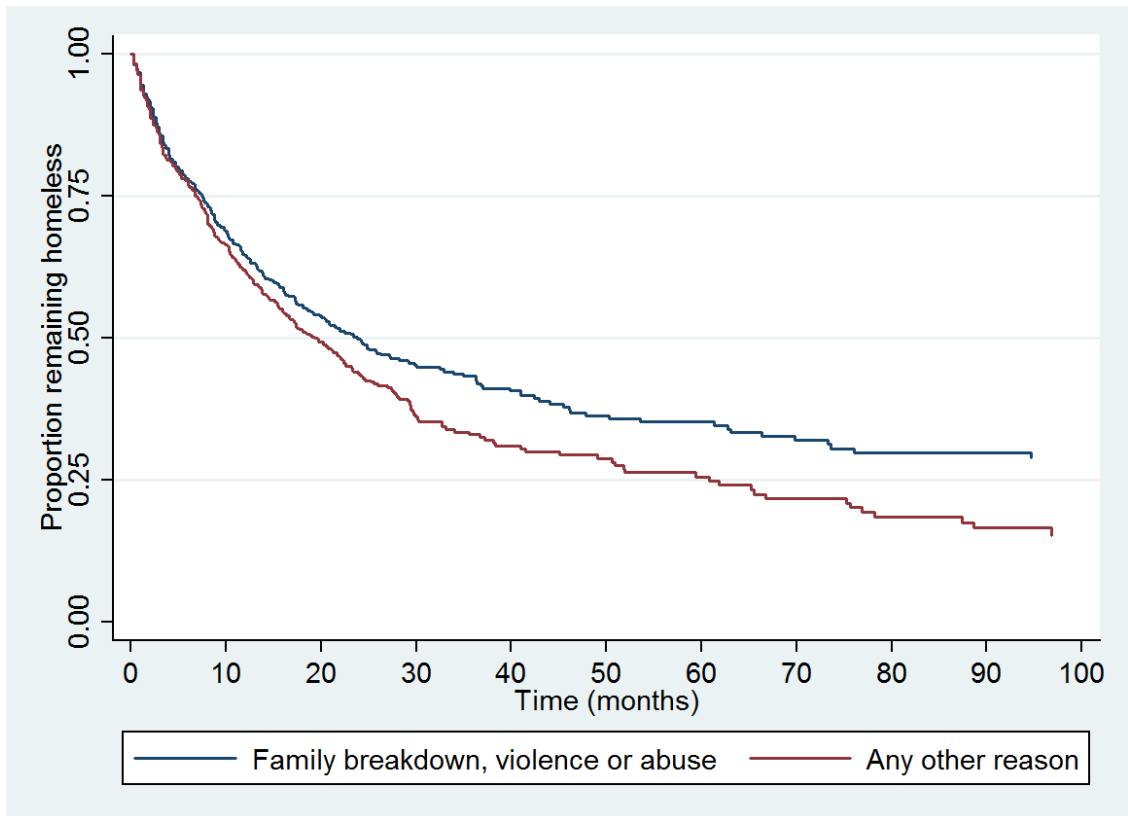
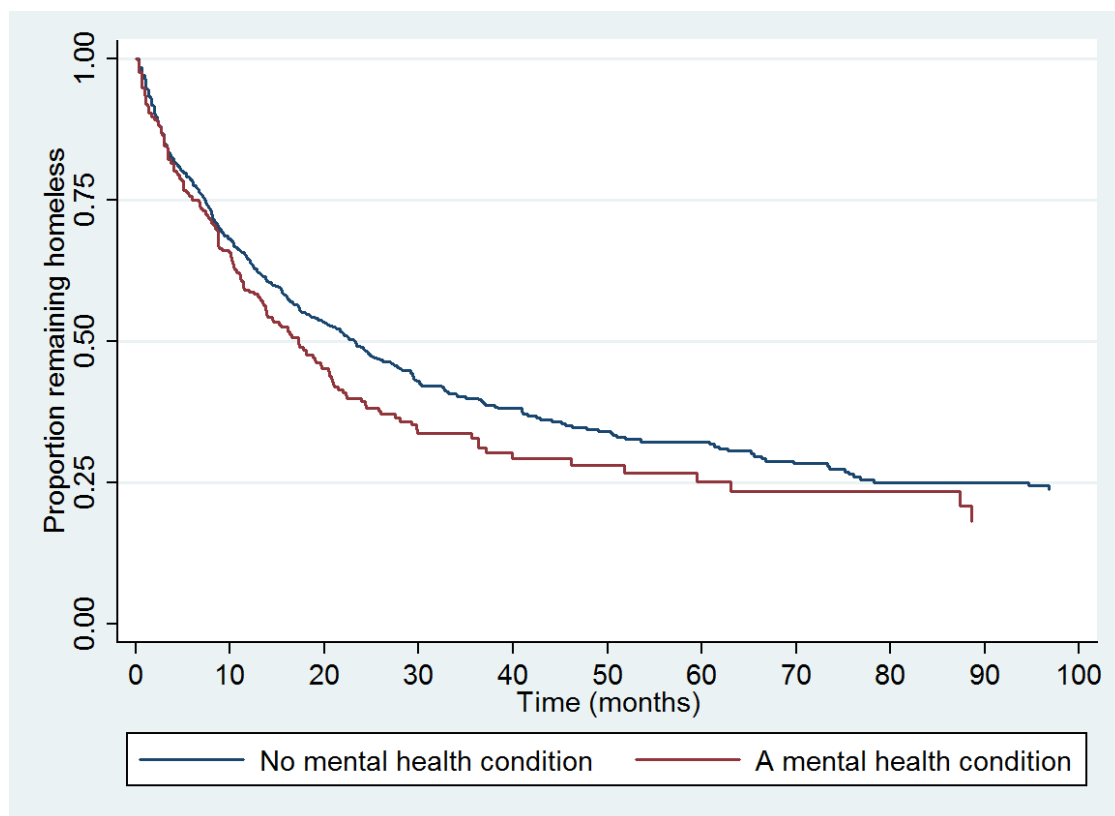


Figure 3.7 presents the survival functions depending on whether the respondent had a mental health issue before his or her first homeless episode. Mental health conditions considered here include bipolar affective disorder, schizophrenia, depression, post-traumatic stress disorder and anxiety disorder. Contrary to expectations, the figure shows that those who had a mental health condition before becoming homeless tend to have shorter homeless spells than those who did not have any mental health condition. However, a closer look at the data also reveals that those with a mental health condition are more likely to cycle in and out of homelessness, experiencing a larger number of homeless spells than other respondents.

**Figure 3.7: Kaplan-Meier homelessness survival function by mental health status prior to first homeless spell**

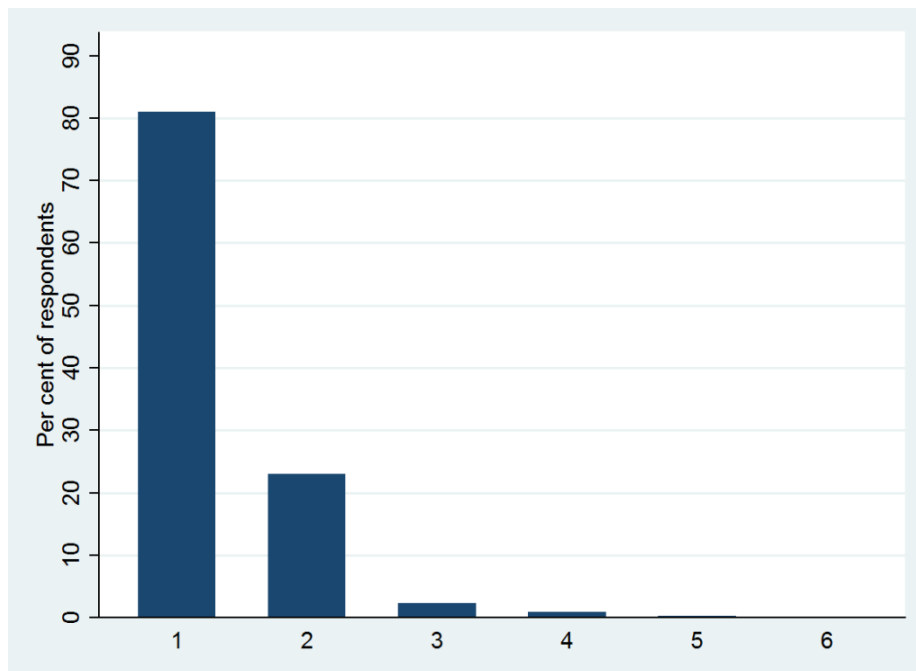


### 3.4 Cumulative durations of homelessness

The analysis of homeless durations in the previous section treated each homeless episode as a separate observation and as if each individual only experienced homelessness once. Numerous studies, however, emphasise that many homeless people have been homeless on at least two separate occasions (Piliavin et al. 1993; Kuhn and Culhane 1998; Dworsky and Piliavin 2000). Thus in this section we examine whether there is evidence of cycling in and out of homelessness among JH respondents.

The number of homeless episodes experienced by JH respondents over the four waves of the survey is summarised in Figure 3.8. Bear in mind of course that the JH observation window is just two years in length, and hence this figure is not that informative about the likelihood of multiple episodes of homelessness over a lifetime.

**Figure 3.8: Number of homeless episodes experienced over 2-year period**

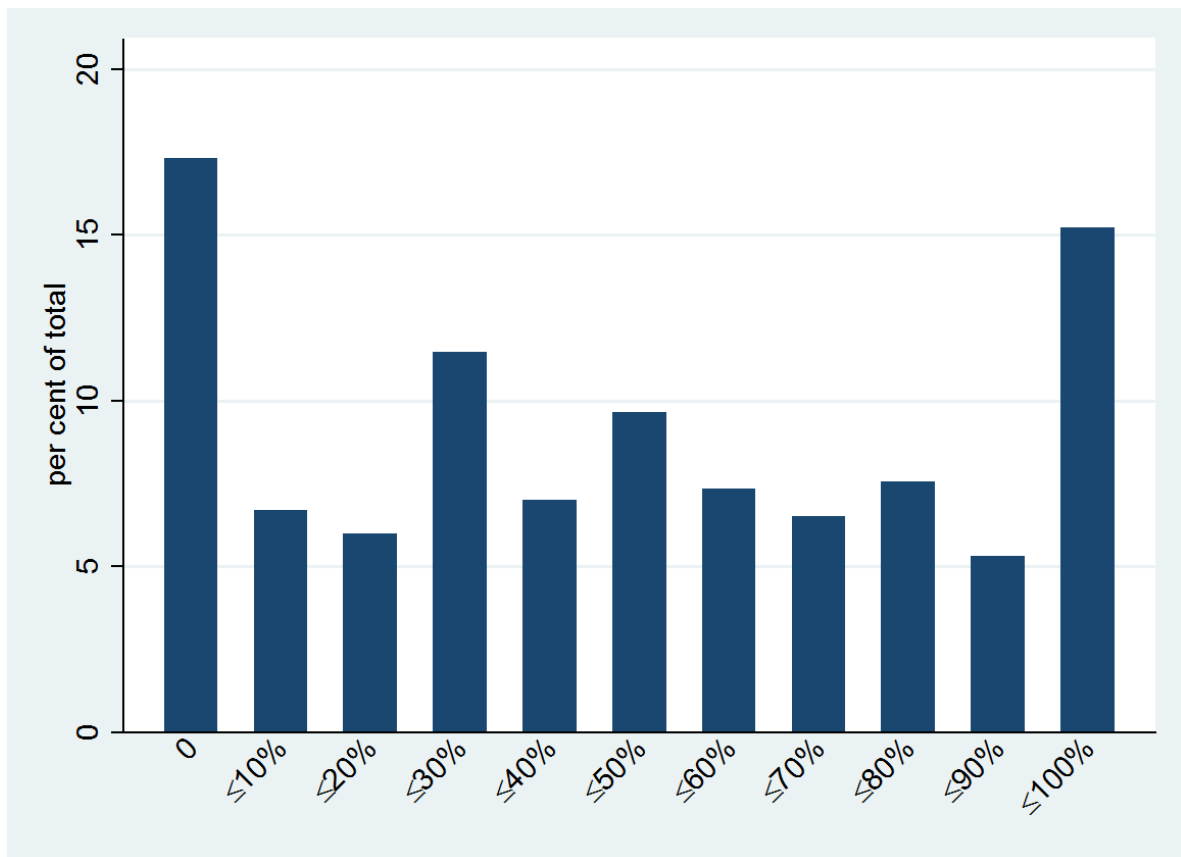


This figure reveals that just over 80 per cent of all respondents who experienced homelessness only experienced one homeless spell. This means that about 20 per cent of those that do experience homelessness over the 2-year period reported multiple episodes.

For those experiencing more than one spell, it may be that each individual spell they experience is not particularly long, but nevertheless the total amount of time spent homeless may still be considerable. Some attention has been given to this issue in the literature, where it is generally acknowledged that chronic homelessness involves spending long periods of time homeless, and is not necessarily restricted to people who experience one single long uninterrupted spell of homelessness. It is, therefore, important to examine a measure of cumulative incidence of homelessness over a particular period of time. For instance, Kuhn and Culhane (1998) examined time spent in shelters over a finite period, whereas others, such as Piliavin et al. (1993) and Scutella et al. (2013), examined total lifetime homeless duration.

In Figure 3.9 we take the former approach and examine the total proportion of time that JH respondents have spent homeless over the period covered by the four survey waves, which we again re-iterate only covers a 2-year period. More than three quarters experienced homelessness at some point during the 2-year reference period, with more than half homeless for at least a year in total. Further, 15 per cent were homeless for almost the entire period (more than 90 per cent of time). Thus it does appear that many respondents are spending considerable amounts of the survey period homeless.

**Figure 3.9: Total proportion of time homeless over 2-year period**



### 3.5 Duration dependence and individual heterogeneity

In Figure 3.2 we showed that the proportion of JH respondents who exit homelessness declines as homeless durations increase. But do individuals experiencing longer durations have different characteristics to individuals experiencing shorter durations; characteristics that make them less likely to exit homelessness? For example, we know from other literature that the chronic homeless are more likely to have severe mental illness, be heavy drinkers and to use substances (Phelan and Link 1999; Johnson, Gronda and Coutts 2008; Johnson and Chamberlain 2011). Is it therefore these risk factors that explain their longer homeless durations relative to those with shorter homeless spells (who are less likely to experience these risk factors, some of which may be unobserved in the data used by the analyst)? Or does it actually become harder for people to exit homelessness the longer they are homeless? That is, is there ‘duration dependence’? For instance, people experiencing homelessness might get used to being homeless after a period of time and adapt to the associated lifestyle, thus making it harder to get them to leave life on the streets. It could also be the case that the longer a person is homeless and without a record of their rental history, the harder it becomes to convince a potential landlord that they are a good prospective tenant.

It is important to make the distinction between dependence and differences in individual characteristics as the implications of the two are very different. If it is the case that observed persistence in homelessness over time is mostly due to differences in the characteristics of those examined, then it makes sense for policy makers to target these factors to reduce homelessness; in the above example you would therefore target substance users. However, if the reverse is true and there is evidence of duration dependence in the experience of

homelessness over time, then policy makers should target homelessness more explicitly, paying particular attention to preventing long-term or chronic homelessness.

At a practical level, it is of course much more difficult to differentiate between ‘true’ dependence and unobserved factors that contribute to risks of experiencing homelessness, but there are advanced statistical techniques that allow this to be done with longitudinal data. Examples of this type of analysis can be found in the literature on unemployment (for example, Gorier, Nijkamp and Rietveld 1992; van den Berg and van Ours 1996). As representative longitudinal data on a homeless population are required to examine these issues, prior to Journeys Home it was just not possible to undertake this type of analysis in the study of homelessness.

### *3.6 Conclusion*

This article has examined patterns in the dynamics of homelessness using data from the first four waves of the Journeys Home study. Durations of homeless episodes were examined, with a view to assessing the degree to which homelessness is persistent and whether cycling in and out of homelessness is common.

Homelessness does indeed appear to be quite persistent among many JH respondents, with only a quarter of spells being what would be considered ‘short’, having lasted for less than six months. However, different population subgroups experience different durations of homelessness, with males, both the relatively young and the relatively old, migrants and people from Aboriginal or Torres Strait Islander origin experiencing longer periods of time homeless on average. People are also less likely to exit homelessness the longer they remain homeless and there is evidence of considerable cycling in and out of homelessness.

What we do not yet know is whether it is the characteristics of those experiencing homelessness that is driving these results or whether it is driven by the experience of homelessness itself. As quite advanced statistical techniques are required to make these distinctions, which are outside the scope of this chapter, we are not able to answer this question here. However, this is the subject of future research.

*By Rosanna Scutella and Nicolas Haurault*

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## 4 Mental illness and homelessness

### 4.1 Introduction

In lay conceptualisations of homelessness, mental illness is often considered to be one of the main contributory factors (Johnson and Chamberlain 2011). While it is known that other factors, such as financial and relationship difficulties, are more consistently involved in people entering homelessness, there still remains a significant two-way relationship between mental illness and homelessness. It is also notable that many of the risk factors for homelessness, such as childhood exposure to trauma and time in out-of-home care, are also risk factors for the development of mental illness. Furthermore, it is well known that people with mental illness have a harder time exiting homelessness.

Despite this knowledge and a larger body of literature on elements of mental illness and homelessness, such as prevalence rates and descriptive features, there is little actual knowledge of where in the process of homelessness to intervene for people with, or at risk of developing, mental illness. Because of this lack of knowledge about where best to locate interventions there is little guidance as to what those interventions should be. For example, is contact with the mental health system as helpful as we would hope, or does it not offer the protections that intuitively one might think that it does? And how many people with a mental illness and who are homeless or at risk of homelessness actually seek help for their mental health condition?

Part of the reason for the lack of knowledge in this area is the preponderance of cross-sectional data. Many of these questions are concerned with the dynamic nature of the relationship between homelessness and mental illness and so can only be answered through a longitudinal examination. By looking at the data collected in the Journeys Home study, therefore, it may be possible to identify protective factors and possible intervention points to make exits from homelessness easier for the group of homeless people with mental illness. It is these issues which are at the centre of this chapter.

In this chapter on mental health in the Journeys Home study we will look at a range of these issues in the data that has been gathered to date. Following a brief review of background material we will briefly draw on some of the earlier published Journeys Home material to describe the mental health profile of the cohort. We will then examine the association of mental illness diagnosis to experiencing homelessness over the four waves. This will be done by looking at the ways in which the members of this cohort who experienced mental illness also experienced homelessness. For example is there a difference in the duration of homelessness for those with versus those without a mental illness. Also is there a difference in homelessness for those who experienced homelessness prior to the development of a mental illness compared to those whose mental illness preceded their first experience of homelessness. We will also look to examine the idea that homelessness prior to the onset of a mental illness is correlated with other indices of declining functioning such as vocational underachievement. A key aim of these analyses is to attempt to uncover potential points of intervention.

It is important to emphasise the distinction between mental illness, considered in this chapter, and psychological distress, which is covered in the next chapter. Mental illness refers to one of the five diagnoses covered in the Journeys Home study. These include Depression, Bipolar Affective Disorder, Post-traumatic Stress Disorder, Schizophrenia and Anxiety. In the

Journeys Home study, participants self-reported if they had ever been diagnosed with these conditions. Psychological distress, on the other hand, was measured using the six-item version of the Kessler Psychological Distress scale. High psychological distress scores may indicate an increased likelihood of the presence of a mental illness, but they are neither diagnostic nor specific to a given disorder.

## 4.2 Background

Approximately a fifth to a quarter of the general population will experience a mental illness in any 12-month period, with nearly half experiencing an episode of mental illness across the lifespan (ABS 2008). As is well known, mental illness has its main onset in late adolescence and early adulthood (Morgan et al. 2011; Vos and Begg 2003). This is a phase of life when a number of important developmental tasks are being undertaken. The onset of mental illness in this phase of life can be the catalyst for significant disability through the disruption of these tasks. In practice that can mean that even where the symptoms of mental illness are well treated and managed, the disability that has accrued in other domains of an individual's life leaves them incapacitated. As a consequence, people with, or who have experienced, mental illness are more likely to be unemployed (Killackey et al. 2006), have lower levels of education and receive less pay than their similarly educated peers (Degney et al. 2012), and have poor physical health and shorter life expectancy (Thornicroft 2011). In addition to these poor outcomes, they are significantly more likely than the general population to have experienced homelessness (for e.g. see Harvey et al. 2012).

Further, when the focus is turned around so that there is a consideration only of those who have experienced homelessness, the levels of reported mental ill health are significantly higher than those found in the general population. The National Survey of Mental Health and Wellbeing found that of those who had ever experienced homelessness, the 12-month prevalence of mental illness was 54 per cent. This compares with only 19 per cent among those who had never experienced homelessness (ABS 2008). The first report from the Journeys Home study found that compared to the general population, levels of bipolar affective disorder, schizophrenia, depression, post-traumatic stress disorder and anxiety disorders were all significantly elevated (see Scutella et al. 2012).

This correlation between mental illness and homelessness however does not mean that mental illness is the cause of homelessness, or that all homeless people experience a mental illness (Johnson and Chamberlain 2011). In fact, mental illness is a much less frequently reported cause of homelessness than relationship breakdown, financial difficulties and problematic substance use (Scutella et al. 2012). However Scott (1993) notes that it is in fact difficult to separate cause and effect with respect to homelessness and mental illness, but that is entirely unsurprising given the reliance on cross-section data in this area. Disentangling cause and effect requires a better understanding of how homelessness and mental illness interact over time, which in turn requires data that track people through time.

What is certain though is that once homeless, either having or developing a mental illness exacerbates the difficulty of exiting homelessness (Chamberlain and Johnson 2013). Research has suggested that people with mental illness form a discrete category of homeless people who may be less able to find exits from homelessness than other groups (Chamberlain and Johnson 2013). For those people with mental illness who find themselves homeless, or for those homeless who develop mental illness, this lowered agency to identify and act on exits to homelessness, compounds disadvantage. As such, even among a marginalised group

such as the homeless, people with mental illness may end up being among the most marginalised.

Further, in an analysis of the mental health behaviours and experiences of over 4000 clients of homelessness services in Melbourne, Johnson and Chamberlain (2011) show that the experiences of people who had a mental illness prior to becoming homeless are different from those who developed a mental illness after becoming homeless. For example, those whose mental illness followed their experience of being homeless tended to have first become homeless at younger ages compared to those whose mental illness preceded their homelessness. Johnson and Chamberlain point to a number of possible environmental factors to explain the experiences of both groups. However, it is also possible that impact of the illness is contributing to these patterns. Those homeless prior to the onset of mental illness may be experiencing the well-recognised functional decline that tends to precede the onset of illness (Cannon et al. 2008). While traditionally this has been discussed in terms of social withdrawal and vocational underachievement, it is feasible that for some people this functional decline contributes to the development of homelessness. For those whose illness precedes homelessness, Johnson and Chamberlain paint a vivid picture of one pathway involving the gradual erosion of familial patience to provide support, brought about through illness-related behaviours. For others, the support is ended through the death or infirmity of the supportive relative, leaving the person with a mental illness in a situation of less stable accommodation. The time taken for the erosion of support, or for the ageing and death of the supportive relative, explains the age differences in the two profiles. Limitations of the study are that it used file notes to gather its information and may have missed including people with a mental illness who did not disclose their illness to their housing worker.

It also appears that those diagnosed with mental illness prior to their first episode of homelessness, seen in Chapter 3 and in international studies such as Allgood and Warren (2003) and Piliavin et al. (1993), experience shorter durations of homelessness. The hypothesis for why this is the case is that those already diagnosed with mental illness may have more resources to draw on in order to exit homelessness. As opposed to other sub-groups of people experiencing or vulnerable to homelessness, the mentally ill have a support system available to them in the form of the mental health system. It is also possible that this pattern may be a result of the individual having more experience of a service system and therefore more proficiency in using it.

In Australia the mental health system consists of the state funded public mental health systems dealing with tertiary level mental illness. There are an increasing number of primary care mental health options also available and funded through the Australian Government. These include the Better Access Scheme and, for those aged between 12 and 25 years, the headspace program. Additionally, the Australian Government is committed to the roll out of nine early psychosis prevention and intervention centres. Further, under the National Partnership Agreement on Homelessness, state and territory governments were to implement a policy of 'no exits into homelessness' from a mental health facility. It would be hoped both that those with mental illness are able to access this system and the supports that it can provide, and that through accessing it they are less likely to become homeless. We investigate this further in this chapter.

### 4.3 *Sample selection and definitions*

#### *Sample*

To examine if mental health services are protective against homelessness we examine whether individuals ever used mental health services at any time during the survey period. Therefore we only include the 1316 individuals who participated in all four waves, and who fully completed their interviews. To account for the possibility of non-random attrition we use the balanced panel response weights to account for differential response. We also test for differences in the rates of mental illness of those who responded in all four waves compared to those who did not and found the difference to be statistically insignificant.

#### *Use of mental health services*

The use of mental health services was measured as a respondent ever answering yes to seeing a mental health professional in either wave 2, 3 or 4. The question in the survey asked, in a retrospective manner, whether one saw a mental health professional in the last 6 months. Answering yes to the question in wave 1 was not included since we aim to measure the impact of using mental health services during rather than before the survey period. Another question that asked about mental health service usage in the survey was whether the respondent saw a doctor for mental or emotional reasons in the last 6 months. If the respondent answered yes to this question in wave 2, 3 or 4 they were classified as having seen a doctor for mental or emotional reasons during the survey period.

#### *Diagnosed mental illness*

We also, of course, need a measure of mental illness. At wave 1, respondents were asked if they had been diagnosed with any of five types of mental health condition: schizophrenia, anxiety disorder, depression, post-traumatic stress disorder, and bipolar affective disorder. If respondents answered yes to any of these conditions they were classified as having a diagnosed mental illness. In the follow-up waves, respondents were asked if they had been diagnosed with a mental health condition since the last time they were interviewed. Using this information we constructed a variable to describe the mental illness diagnosis since wave 1. Depending on whether or not they had a mental illness diagnosis at wave 1, respondents could also receive a first diagnosis during the survey period, they could experience a relapse or get diagnosed with an additional condition, or they could not be diagnosed with anything else after wave 1. Additionally, there are a group who had no diagnosis at wave 1 and who did not receive one during the survey; that is, they did not ever have a mental illness diagnosis.

#### *Experiences of homelessness*

To examine patterns among those experiencing different homeless transitions over the four waves we categorise people according to whether they: experienced homelessness at each of the four waves ('stayed homeless'); had been either in marginal, short-term or stable accommodation in each of the four waves ('stayed housed'); or had transitioned in or out of homelessness at some stage over the four waves ('experienced homelessness'). Note that any individual whose homeless status was missing at any wave was excluded from the analysis, reducing the sample further from 1316 respondents to 1285.

#### 4.4 Results

We know from earlier reports that the Journeys Home cohort is demographically different from the general Australian population (Scutella et al. 2012). This is no different with respect to the mental health profile of the cohort. Table 2 in the Wave 1 report of the Journeys Home study showed that the rates of lifetime disorder were much higher in the Journeys Home cohort than in the general population. This was true for every disorder ranging from anxiety, which was 1.6 times more prevalent in the Journeys Home cohort, through to depression, which was 4.6 times more prevalent. The Wave 1 report made use of the National Survey of Mental Health and Wellbeing (ABS 2008) (NSMHWB) to derive general population prevalence figures. There was no measure of schizophrenia in the NSMHWB. Data from prevalence studies of schizophrenia suggest that the lifetime prevalence of the disorder is approximately 0.7 per cent (McGrath and Susser 2009; Saha et al. 2005). With a lifetime prevalence rate in the Journeys Home sample of 8.9 per cent there was a 12.7 times greater prevalence of schizophrenia than in the general population. Overall, 61.5 per cent of the people in the Journeys Home study had a lifetime diagnosis of some mental illness at Wave 1.

As well as having very high levels of mental illness in the cohort, those who had accumulated a greater duration of lifetime homelessness at Wave 1 also had higher levels of mental illness. This is seen in that only a third of those who had never been homeless had mental illness, whereas nearly three-quarters of those who had accumulated four or more years of homelessness had mental illness (Scutella et al. 2012).

A further exploration of the demographic composition of those with mental illness compared to those without is provided in Table 4.1. As can be seen, people with mental illness diagnoses at Wave 1 were more likely to be female, non-Indigenous and slightly older. They were more likely to be single and to have had slightly more education. It was more likely that they had a carer who themselves had been admitted to a hospital for a mental health reason when they were growing up. They were also more likely to consume marijuana and other illicit drugs, and were marginally more likely to drink.

In Table 4.2 the number of people with a diagnosis at Wave 1 and at each of the subsequent waves is presented. It is important to note that in each of the new waves there were people who had received a first-ever diagnosis in the preceding 6 months. These are relatively small numbers that may reflect the already high rate of mental illness in this cohort at Wave 1. However, of interest are the large numbers of people at each wave who have either relapsed or had new additional diagnoses. Given both the fluid nature of psychopathology and the high degree of co-morbidity that is seen among the various mental illnesses, it is unsurprising that people would receive new diagnoses. In addition, the episodic nature of many mental illnesses will lead to relapse in a proportion of people with those illnesses.

In Table 4.3 patterns of mental health service usage for those diagnosed and not diagnosed with mental illness are presented by homeless transitions across the four waves. In addition to showing patterns for those 'having sought help from a mental health professional', patterns for those 'having consulted a doctor about a mental health or emotional problem' are also presented. In relation to mental illness diagnosis status, 31.9 per cent of those who had no mental health diagnosis experienced homelessness. This then serves as a baseline for determining whether mental ill-health, or seeing a mental health professional or a doctor, is protective or not. Rates of experiencing homelessness higher than this are seen as indicating less protection.

**Table 4.1: Distribution of characteristics by mental health status at Wave 1**

Characteristics	No diagnosed mental illness at wave 1 (%)	Diagnosed mental illness at wave 1 (%)	
Male	65.2	55.2	**
Female	34.8	44.9	**
<i>Indigenous status</i>			
No	71.7	84.6	
Yes	28.3	14.9	**
<i>Country of birth</i>			
Australia	83.3	87.7	
Main English speaking country	6.0	5.3	
Non-main English speaking country	10.7	7.0	
<i>Age category</i>			
15-17	9.3	8.5	
18-20	20.9	14.1	**
21-24	15.5	12.4	
25-34	21.1	23.5	*
35-44	17.8	22.2	**
45-54	9.9	14.7	*
55+	5.5	4.7	
<i>Have dependent children</i>			
No	83.7	81.8	
Yes	16.3	18.1	
<i>Marital status</i>			
Single	81.8	85.2	
Married/De-facto	18.2	14.8	**
<i>Highest education level</i>			
Less than year 10	17.9	18.3	
Year 10 or 11	42.5	37.1	**
Year 12/equivalent	11.0	13.5	
Certificate	18.6	20.9	#
Degree/diploma	9.3	9.3	
<i>Carer ever admitted into hospital for mental health problems</i>			
No	86.5	80.9	**
Yes	11.5	15.9	**
No carer growing up	0.6	0.9	
<i>Frequency of marijuana use</i>			
None	71.0	57.2	**
Less than once per week	13.1	17.4	**
At least once per week but not everyday	10.8	12.0	
Every day	5.0	12.8	*
<i>Ever in prison, juvenile detention or remand prior wave 1</i>			
No	66.2	63.4	
Yes	33.5	36.7	

*(continued...)*

Characteristics	No diagnosed mental illness at wave 1 (%)	Diagnosed mental illness at wave 1 (%)	
<i>Alcohol consumption at wave 1</i>			
low risk	40.0	39.9	
one to two days per week have 3-9 drinks	31.0	25.1	#
three to four days per week have 3-9 drinks	5.8	10.7	
one to two days per week have 10+ drinks	14.9	14.9	
three to four days per week have 10+ drinks	8.0	9.3	
<i>Frequency of illicit drug use</i>			
None	91.5	83.3	**
Less than once per week	6.4	11.9	**
At least once per week but not everyday	2.1	4.4	*
Total (N)	396	920	

# p<0.10, \* p<0.05, \*\*p<0.01

**Table 4.2: Diagnosis of mental illness by wave (n=1316)**

Mental illness diagnosis	Wave			
	1	2	3	4
None	495	449	418	392
First ever diagnosis	.	44	32	23
Additional/re-diagnosis/relapse	.	365	265	224
Pre-existing diagnosis	821	447	595	668
Missing	.	11	6	9

**Table 4.3: Diagnosed mental illness and mental health service usage by homeless experience**

Characteristics	Stayed housed	Experienced homelessness	Stayed homeless	Total (N)
<i>Saw a mental health professional in last 6 months</i>				
No	56.7	34.8	8.5	820
Yes	54.9	38.6	6.5	465
<i>Mental illness diagnosis status</i>				
None	57.7	31.9	10.4	391
First time diagnosis	47.5	47.4	5.1	97
Additional diagnosis	55.1	38.2	6.7	473
Diagnosed at Wave 1	58.5	34.8	6.7	324

(continued...)



Characteristics	Stayed housed	Experienced homelessness	Stayed homeless	Total (N)
<i>Mental illness diagnosis status &amp; whether saw mental health professional</i>				
<i>None</i>				
Did not see mental health professional	58.1	31.6	10.3	369
Saw a mental health professional during survey period	50.6	37.5	11.9	22
<i>First time diagnosis</i>				
Did not see mental health professional	53.1	43.0	3.9	53
Saw a mental health professional during survey period	40.4	52.9	6.7	44
<i>Additional diagnosis</i>				
Did not see mental health professional	50.9	40.7	8.4	162
Saw a mental health professional during survey period	57.4	36.8	5.8	311
<i>Pre-existing diagnosis</i>				
Did not see mental health professional	59.6	34.0	6.5	236
Saw a mental health professional during survey period	55.4	37.3	7.3	88
<i>Mental illness diagnosis status &amp; whether saw a doctor</i>				
<i>None</i>				
Saw doctor for mental/emotional issues during survey period	59.6	29.6	10.7	341
Did not see doctor for mental/emotional issues	43.2	48.7	8.1	50
<i>First time diagnosis</i>				
Saw doctor for mental/emotional issues during survey period	42.5	54.5	3.0	26
Did not see doctor for mental/emotional issues	49.9	44.0	6.1	71
<i>Additional diagnosis</i>				
Saw doctor for mental/emotional issues during survey period	51.1	37.3	11.6	61
Did not see doctor for mental/emotional issues	55.8	38.3	6.0	412
<i>Pre-existing diagnosis</i>				
Saw doctor for mental/emotional issues during survey period	58.8	35.1	6.2	175
Did not see doctor for mental/emotional issues	58.1	34.5	7.4	149
<b>Total (%)</b>	<b>56.1</b>	<b>36.1</b>	<b>7.8</b>	<b>1285 (N)</b>

With respect to the mental health variables, getting a new or subsequent diagnosis is associated with a higher incidence of experiencing homelessness. Interestingly, having seen a mental health professional is also associated with an elevated incidence of experiencing homelessness.

As mentioned above, as part of the policy reforms around homelessness, mental health was identified as a key area for prevention and intervention in relation to homelessness. As such, one would hope to see that contact with a mental health or medical professional in the context of a mental illness would also be associated with a reduction in experiencing homelessness. Even at the individual level, this is a complicated issue. At a health system level, there is continual pressure to free up beds and there is a shortage of places to discharge people to. Anecdotally, in this author’s (EK) clinical experience in the public mental health system people have been discharged to the office of a housing agency, to out-of-area caravan parks and to other non-suitable accommodations. Further, when one steps away from the public system and considers GPs, psychiatrists and psychologists in private practice, many would not have the expertise, resources or time to arrange accommodation services for their clients.

However, the results presented above show that, even in the presence of seeking help for their mental health condition, many people with first and additional diagnoses will experience homelessness. For over half of people with a first-time diagnosis, both seeing a mental health professional and seeing a doctor does not prevent them experiencing homelessness. This is an identifiable area in which change can be targeted.

An additional concern is that there are many people who appear to need care but don’t access it. Table 4.4 shows that even for people who have received a first diagnosis, only 21 per cent see a mental health professional. This might mean, for example, that they receive a diagnosis from a GP or a doctor in a hospital but then do not make any contact with specialist mental health services.

**Table 4.4: Percentage ever saw mental health professional**

Mental illness diagnosis status	Saw mental health professional	
	No	Yes
None	97.6	2.4
First diagnosis	79.0	21.0
Additional diagnosis	53.0	47.0
From previous waves / prior to Wave 1	81.8	18.2
Missing	82.5	17.5

The low rate of access among people vulnerable to homelessness is also seen in the general population where only about a third of the people with mental health needs access the help that they require (ABS 2008). This is a particular issue for young males in the general population with only 13 per cent of them accessing the mental health care they need (Slade et al. 2009). As is displayed in Table 4.4, those with diagnoses from previous waves are least likely to have seen a mental health professional in the last 6 months, while those with additional diagnoses are more likely to have seen a mental health professional. Even for this latter group, the level of accessing mental health professionals is low. This is particularly so given that the latter group have more than one diagnosis or episode of illness.

As noted earlier, there has been evidence in the literature that those who are homeless before they develop a mental illness have a different experience of homelessness from those who become homeless after developing a mental illness. In order to explore this in the Journeys Home cohort, the sample was divided into those who had never experienced a mental illness, those who were homeless before being diagnosed with a mental illness, those who had a mental illness before becoming homeless and those who became homeless concurrently with developing a mental illness (i.e., the age at first homelessness was the same as the age at first mental illness). The data related to this are presented in Table 4.5.

A number of differences are immediately apparent. First, the age at which the onset of mental illness occurs is very much older for those who are homeless before they develop a mental illness. Although the etiology of mental illness is a complex area, prolonged exposure to environmental stressors, social marginalisation and substance use are all known to be associated with mental illness. The experience of homelessness is likely to have provided all three of these elements to people over a prolonged period. On the other hand, the age of onset for those who become homeless after developing a mental illness is closer to the general population norm in which the majority of mental illness has its onset; between 12 and 25 years (Vos and Begg 2003).

Further, a young onset is consistent with models previously postulated in which homelessness in this group is a result of carer fatigue or absence (Chamberlain and Johnson 2013). There is an 8-year period between the average ages of onset of illness and homelessness in the group who develop illness first providing further support for this pathway into homelessness. Eight years is certainly a large enough time for some of the processes envisioned by Chamberlain and Johnson to occur.

For people developing mental illness after experiencing homeless there is also support for the environmental exposure to stress model as on average they have had 9 years between their first experience of homelessness and the onset of their illness. Although those 9 years may not necessarily involve chronic homelessness, they are more likely to have included above average exposure to stressors. It is also noteworthy that the group who experience homelessness first before ultimately developing an illness, experienced homelessness 4 years earlier than any of the other groups on average. This may also point to exposure to a number of environmental stressors in their childhood and teenage years that commonly predispose towards homelessness and also mental illness.

Interestingly, females are more likely to become homeless in the wake of a mental illness than males. Those who had been homeless before their mental illness were more likely to have obtained post-secondary qualifications. This may reflect the younger age of onset of mental illness in the other groups and the disruption this caused to vocational pursuits. It is well known that the onset of mental illness in the middle of the vocational development period of late adolescence and early adulthood can disrupt if not derail this development (Killackey et al. 2006). Interestingly this has had only a small impact on time spent in employment, unemployed or out of the labour force between the three groups with mental illness. Those who were homeless before the onset of illness have spent more time of the Journeys Home study homeless than the groups who developed mental illness prior to, or concurrent with, becoming homeless.

**Table 4.5: Characteristics of those diagnosed with mental illness prior to wave 1**

Characteristics	No diagnosis (N=562)	Homeless before mental illness diagnosis (N=330)	Homeless after mental illness diagnosis (N=330)	Homeless at time of mental illness diagnosis (N=94)	Overall (%)
Age at mental illness onset	-	27	19	23	23
Age at first homelessness	22	18	27	23	23
Male	62.5	67.5	45.7	34.4	58.3
Female	37.5	32.5	54.3	52.9	41.7
<i>Indigenous status</i>					
No	72.9	87.3	85.8	88.0	80.6
Yes	26.7	12.2	14.2	10.5	19.1
<i>Country of birth</i>					
Australia	85.8	84.7	87.4	80.8	86.3
Main English speaking country	5.4	6.3	5.1	4.6	5.5
Non-main English speaking country	8.8	9.1	7.5	2.5	8.2
<i>Age category</i>					
15-17	11.6	4.4	7.3	12.5	8.8
18-20	21.4	9.4	13.2	15.8	16.3
21-24	15.5	9.5	14.3	10.1	13.4
25-34	20.1	28.2	23.5	14.2	22.7
35-44	15.5	28.1	21.0	28.2	20.8
45-54	10.9	15.6	15.4	10.1	13.2
55+	5.4	4.7	5.4	1.3	4.9
<i>Highest education level</i>					
Less than year 10	19.1	19.1	16.0	16.3	18.2
Year 10 or 11	44.4	29.3	36.6	45.3	38.8
Year 12/equivalent	11.6	13.0	14.7	11.7	12.7
Certificate	16.4	27.2	20.1	20.2	20.2
Degree/diploma	8.0	10.9	11.8	2.8	9.3
Ever see mental health professional between wave 1 and 4	17.9	48.5	53.1	48.8	36.4
Proportion of time employed since leaving school at wave 1 <sup>1</sup>	0.39	0.44	0.46	0.38	0.42
Average homelessness duration between wave 1 and 4 (months)	8.02	7.43	6.58	6.61	7.44

Notes:

1. Those with missing values are excluded from the sample, 18 have missing in the 'none' group, 15 in 'homeless before mental illness onset', 6 where 'mental illness came before homelessness' and 2 where 'mental illness occurred at the same time as homelessness'.

## 4.5 Conclusion

There is a tight bond in the public imagination between homelessness and mental illness. One of the stereotypes of a homeless person is the older male, with obvious untreated severe mental illness, reacting agitatedly to stimuli both real and perceived. At the same time, a common belief is that without appropriate support, usually in some kind of facility, people with mental illness will inevitably end up living on the street. In some ways, both of these stereotypes allow the rest of society the comfort of positioning the homeless and the mentally ill as different 'other' groups. With the homeless who become mentally ill the narrative is often a moral one of lazy decline. For the mentally ill becoming homeless, it is a story of lack of competence to function in the world through employment and good management of resources and the need for a paternalistic institution to manage them.

As in most things, the truth is much more complicated. As stated earlier, discussions of which condition precipitated the other are unlikely to yield much, and yet considerable research in the mental health field has pursued this question. The homelessness literature in general has a more sophisticated understanding of the dynamic relationship between homelessness and mental illness. Both the homelessness and mental health literature acknowledge that large longitudinal studies are needed in order to be able to more fully explore the interplay of these two factors – homelessness and mental illness.

The Journeys Home study has found evidence to support earlier propositions in the literature that there are two pathways with respect to homelessness that involve mental illness. The first is one in which the mental illness is developed in adolescence and early adulthood. There is then a long period of time – 8 years on average – before the individual has their first experience of homelessness. The second path is one in which the first experience of homelessness occurs relatively early, followed by a relatively late onset of mental illness; some 9 years later on average. Drilling down further in the available data from the Journeys Home study may reveal other differences between these two groups that provide insight into potential interventions both for housing and for mental illness.

With respect to interventions around mental illness and homelessness there are two key areas of prevention to target. The first is to prevent people with mental illness from becoming homeless. The second is to prevent the onset of mental illness in those who are already experiencing homelessness.

In relation to the first, this goal was recognised as part of the former Australian Government's White Paper, *The Road Home*. One barrier to this is that in general the mental health system, both private and public, does a very poor job on functional recovery – that is getting people back to functioning well in life – and addressing non-health related outcomes such as housing, education and employment. Partially this is due to the historical fragmentation of responsibility for the co-ordination and provision of services that target these domains. Two Australian Government initiatives seek to overcome this fragmentation. Greater use of the Personal Helpers and Mentors Scheme (PHaMS) would likely assist a number of people with mental illness avoid entering homelessness. Specifically, through the Targeted Community Care (Mental Health) Program, a number of PHaMS services have a specific remit to work with people with mental illness (Department of Social Services 2013). Second, the Partners in Recovery program is specifically targeted at people with severe and persistent mental illness with complex needs, including accommodation (Department of Health, 2013). For those people with mental illness vulnerable to homelessness the Partners in Recovery program will be of great assistance. In addition, there are a number of positive demonstrations of

successful integration of the mental health system and the provision of functional recovery services from which to begin to model changes to address accommodation. Given that the evidence suggests that those who develop mental illness prior to homelessness often become homeless following family breakdown over time, one simple intervention, for which there is already much evidence as to its feasibility and benefits in other areas of functioning, would be more widespread family psycho-education and intervention.

Other reforms that would aid in the achievement of this first goal would be for the mental health system to either develop expertise around accommodation, or to partner closely with agencies that have this expertise. Anecdotally, despite the policy prescriptions of documents like *The Road Home*, people are still discharged into unstable accommodation. Recently the Community Visitors 2012-2013 Report of the Office of the Public Advocate in Victoria was tabled in the Victorian Parliament. This also notes that people with mental illness are discharged into unstable and unsuitable accommodation, often because of pressure on hospital resources from new admissions (Office of the Public Advocate 2013). Through reforms in this area one would hope that by visiting a mental health professional, people with mental illness would become significantly protected from entering into homelessness, and that in accessing care, not only are the symptomatic needs of the individual addressed, but also their broader functional needs, such as housing, that are likely to have been compromised through the onset of illness.

There is also a general need for improved access to mental health services. Only a third of those in Journeys Home who developed an illness accessed a mental health professional. There may be a number of reasons for this. First, in most states in Australia the adult public mental health system is overwhelmed with managing the acute crises of people with chronic (usually psychotic) illness (McGorry 2005). For those with depression and anxiety, the most common mental disorders, there is a very high bar set in order to access this system. Medicare funded mental health services through the Better Access scheme and headspace were designed to fill this gap. However, the out-of-pocket costs associated with seeking assistance from a private mental health practitioner can be prohibitive for people with limited income. For example, while Medicare will rebate approximately \$120 for a one-hour consultation with a clinical psychologist under the Better Access scheme, the Australian Psychological Society's recommended fee for a one-hour consultation is \$228 (Australian Psychological Society 2013) leaving a \$108 gap. In addition, the scheme requires a referral from a GP. Young people are less likely to access GP services (Britt et al. 2010) for a range of reasons, and this is particularly true of young people in unstable accommodation (Australian Medical Association 2013).

The most common age of onset of mental illness, both in the Journeys Home cohort and the general population, is adolescence and early adulthood. This is the age range that is catered to by headspace in Australia in terms of primary mental health care. The evidence suggests that headspace is filling a necessary gap in relation to the provision of mental health services to young people. Currently there are 55 headspace centres, with government commitments for that to increase to 100 by 2016. In addition, there is remote access to headspace services through e-headspace. Given that one of the areas that headspace is expected to provide services is accommodation, it is imperative that not only are these services provided in the context of immediate need, but that programs are developed in order to preserve the accommodation of young people developing mental illness who may not currently be at risk of homelessness, but who may, in years to come (e.g., because of family stress or the loss of parents). It is likely that these services will need to involve family and other carers. How

provision of services of this nature would fit into headspace's funding model would need to be determined.

In relation to the second issue – the prevention of mental illness within the group who experience homelessness first – there is much to be learned from the growing interest in the prevention of mental illness overall. Traditionally, prevention had not been a factor in the field of mental illness. Without a clear understanding of who would develop an illness, it was difficult to efficiently apply intervention strategies to prevent illness. More recently though, it has been shown that when an at-risk population can be identified, prevention approaches can actually stop or at least delay the onset of illness. This has most commonly been demonstrated in psychosis (Fusar-Poli et al. 2012) but there is also increasing evidence in depression and personality disorder (Chanen et al. 2008; Garber et al. 2009). People vulnerable to homelessness could be considered to be a similarly high at-risk group in whom preventative efforts are likely to be productive. In addressing the potential mental health issues of this group, issues to do with accommodation and other functional domains could also be addressed.

The data provided through the Journeys Home study would suggest that there is an urgent need to identify and remove the obstacles to access appropriate mental health care for the population who is at risk of homelessness. Further, there is a need to strengthen the requirement and resources for the mental health system to be able to respond both acutely and preventively to the homelessness risk in their clients. Given the difficulty people with mental illness have exiting homeless, prevention should be a priority. Similarly, people who experience homelessness while still in their teen years are at higher risk for later developing a mental illness. There is increasing focus on identifying groups of people who may benefit from a preventative approach to mental health care (Insel 2010). This group is one obvious example.

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## 5 Psychological distress and homelessness

### 5.1 Introduction

In chapter 4 the relationship between diagnosed mental illness and homelessness was examined. While rates of diagnosed mental illness are high among the homeless compared to the general population, mental illness is not as widespread as once believed (Cohen and Thompson 1992; Shlay and Rossi 1992; Sullivan, Burnam and Koegel 2000; AIHW 2007; Johnson and Chamberlain 2011). Psychological distress in the form of anxiety, stress or depression, however, is much more common (Wong and Piliavin 2002). This is of significant concern as distress has been found ‘to be an important predictor of suicidal thoughts and attempts, prolonged social isolation and intensified physical deprivation’ (Wong and Piliavin, 2001, p. 1038).

In this chapter we explore the relationship between psychological distress and homelessness using a non-specific measure of psychological distress. This provides an assessment of how a particular aspect of mental health varies with the experience of homelessness even if mental illness has not been diagnosed. A particular issue we are interested in examining is whether there is evidence of psychological distress levels varying with homeless and/or housed durations.

More specifically, we address the following questions:

- Do the homeless experience more psychological distress than the housed?
- Does this relationship depend on how long people have been homeless for? Is there any evidence to suggest that homelessness becomes less stressful as its duration increases?
- Does this relationship depend on how long people have been housed for? Is there any evidence that psychological distress dissipates the longer people have been in housing?

In examining the relationship between psychological distress and experiences of homelessness we are adding to quite a limited literature. Snow and Anderson (1987) advance a theory that homelessness becomes less stressful as its duration increases due to a process of adaptation and acculturation to the homeless experience. In addition, Tsemberis (1999) argues that the transition out of homelessness and into housing ‘can be one of the most stressful transitions a consumer can encounter’ (p.227). One may therefore expect to observe a similar process of adaptation on exiting homelessness and entering housing.

However, most of the prior studies examining these relationships empirically are cross sectional in design and focus on homeless persons who are on the streets, or users of homelessness support services such as shelters (for examples, see Geldberg and Linn 1989; La Gory et al. 1990; and Simons, Whitbeck and Bales 1989). As a result, they offer little insight into whether the symptoms of psychological distress are a ‘temporary reaction’ to homelessness or not (Wong 2002, p. 262).

Wong and Piliavin (2001) and Wong (2002) are exceptions in that they use longitudinal data. Wong and Piliavin (2001) find ‘evidence of a significant reduction in distress symptoms’ (p.1038) among those who exit homelessness and enter housing. In a follow-up study, Wong

(2002), on the other hand, finds that entering housing is not associated with a decline in distress levels among those with a serious mental illness or with a drug and alcohol problem. These findings are important reminders that re-integration into mainstream society is a difficult process and that even when housed, formerly homeless people may well remain prone to various symptoms of psychological distress stemming from ongoing social exclusion. There may, therefore, be reasons to expect that the magnitude of the reductions in distress levels associated with exits from homelessness may be smaller than the associated increases in distress associated with entries into homelessness.

While the Wong and Piliavin (2001) and Wong (2002) studies were a significant advance, they remain quite limited in that the survey data they utilise only includes homeless service users in one very specific and small geographic area (Alameda County in North California). Also, although response rates were very high, only one follow-up interview was conducted, which occurred 4 to 12 months after the first interview.

Thus, there remains a need for a more complete and general assessment of distress levels of those facing housing insecurity, and in particular, of how distress levels vary with the dynamics of the homeless-housed experience. We go part of the way in this analysis.

In the following section we provide a discussion of the method to be used for the analysis that follows. Then we present a brief summary of the data and definitions to be used, followed by the results of the analysis. The final section of the chapter summarises the key findings and highlights implications for policy makers and service providers working with the homeless.

## 5.2 *Method*

In this analysis we want to examine what factors are associated with psychological distress in a regression framework. Our outcome variable is each individual's psychological distress at each point in time, which is a function of a range of factors we expect to be associated with psychological distress (discussed further in the next section) and housing status. To capture housing status we differentiate between those homeless and those housed at the time they are interviewed, and then further differentiate people according to the length of time they have been either homeless or housed.

To estimate a simple linear regression model requires an assumption that the unobserved error term is independent and identically distributed across all observations. As we have observations for the same people over time, we however know that this does not hold. We account for the possibility that the error terms are correlated within individuals (but are independent between individuals) by using the clustered option when calculating standard errors.

Also, as our measure of psychological distress (described further in the next section) lies between the values of 0 and 24, we use a Tobit specification to estimate the model, rather than standard ordinary least squares, to account for both left and right censoring of values.

We need to emphasise that we are looking at what factors are associated with psychological distress, but as we do not account for potential reverse causality or possible endogeneity that may arise from unobserved heterogeneity we cannot determine what causes psychological distress. Investigating these issues is however the subject of further research.

### 5.3 *Data and definitions*

#### *Durations homeless or housed*

There is a long history of research interested in the psycho-social benefits of housing (Kearns et al. 2000; Hiscock et al. 2001; Padgett 2007). Yet, despite the potential and often assumed importance of housing in both addressing homelessness and improving psychological functioning, to our knowledge no studies in Australia directly investigate whether being housed ‘is associated with improved emotional well-being’ (Wong and Piliavin 2001: 1032) relative to homelessness. Only two studies that we are aware of, both from the US, directly investigate this issue. Although both suggest the ‘procurement of conventional housing ... has a salutary effect on the psychological state of homeless persons’ (Wong and Piliavin 2001: 1038), that effect was statistically significant only among individuals without a serious mental illness or substance use problem (Wong 2002).

While the evidence suggests a ‘limited’ link between housing and reduced distress symptomatology, other studies have observed that distress symptoms appear to be inversely related to the amount of time homeless (Simons et al. 1989; Snow and Anderson 1993; Johnson, Gronda and Coutts 2008). Two explanations are offered for this. First, among newly homeless persons the effects of events leading to the loss of their housing plus the social and psychological disruption of being cast into a new identity can generate profound psychological distress (Grigsby et al. 1990; La Gory et al. 1990: 91). Second, the long term homeless are often ‘accustomed or desensitised to life on the streets’ (Simons et al. 1989: 498) and in the process of adaptation to homelessness, psychological anxiety can actually decrease in severity.

Based on the available evidence our a priori expectation was that people who were housed, would exhibit lower levels of psychological distress, with people housed for longer periods of time exhibiting even lower distress levels than those recently housed. Further, if the adaptation thesis is correct, we expect to also see a reduction in distress symptoms the longer people remain homeless. We include measures of homeless and housed durations in our model to capture these. However, rather than specify a particular functional form for homeless/housed durations, we include indicator variables to reflect each person’s homeless or housed duration at that point in time (less than 6 months; greater than or equal to 6 months but less than a year; greater than or equal to 1 year but less than 2 years; greater than or equal to 2 years but less than 4 years; greater than or equal to 4 years but less than 6 years; 6 years plus).

#### *Psychological distress*

To capture respondents’ levels of psychological distress at each wave of the survey, we use the Kessler 6-item scale (K6), which has been tested for its precision and psychometric properties (Kessler et al. 2002). Respondents are asked to rate how much of the time over the last four weeks they felt: ‘so sad nothing could cheer you up’; ‘nervous’; ‘restless or fidgety’; ‘without hope’; ‘that everything was an effort’; and ‘worthless’. Each of the six items is rated from zero to four yielding a total score of 0 to 24, where higher values reflect higher levels of psychological distress. It is important to note that the K6 is intended to be used to identify whether there is a need for treatment, but does not necessarily diagnose a mental health problem.

### *Other variables*

The literature shows that persons with certain characteristics are more prone to higher levels of psychological distress than others, which we attempt to account for in our model.

Studies consistently find that women experience higher levels of distress than men (Almeida and Kessler, 1998; McDonough and Stroschein, 2003; Mirowsky and Ross, 1995). While some studies argue that this is because women are exposed to more stressors (e.g., Almeida and Kessler, 1998; McDonough and Walters, 2001), which could be controlled for in a single model, there are other studies, such as Ptacek, Smith, and Dodge (1994), that suggest women react to stressors differently to men. We, therefore, estimate the model separately for men and women to allow for the possibility that stressors affect men and women differently.

To account for possible age differences in experiences of distress we include indicator variables for those aged 15 to 24 years, 25 to 44 years and 45 years plus. Studies of the general population tend to find that age has a u-shaped relationship with psychological distress levels (e.g., Kessler et al. 1992), with those in their prime working years reporting lower levels of distress than either the young or the old. This relationship does not seem to hold in homeless populations (Geldberg and Linn 1989; Simons et al. 1989; Wong and Piliavin 2001). Therefore we are unsure a priori of what direction the relationship between age and psychological distress will take for such a disadvantaged cohort of people.

We also include other demographic indicators identifying: Aboriginal or Torres Strait Islanders; marital status; the presence of dependent children; and State of residence.

The ABS (2011) finds that the overall Aboriginal or Torres Strait Islander population has higher levels of psychological distress than the non-Indigenous population. However, as we are focusing on such a disadvantaged cohort of both Indigenous and non-Indigenous Australians, we are not sure if we should expect to see such large differences in our study.

A priori we expect that marriage or being in a de facto relationship will be associated with lower levels of distress, as is consistently found in the literature (e.g., Hope, Rodgers, B. and Power 1999). However, in relation to the presence of dependent children we are not sure what to expect. Studies such as Piccinelli and Wilkinson (2000) find that women with dependent children report higher levels of psychological distress than childless women, with less focus in the literature on whether there is a similar association for men. But we are unsure whether this finding will translate to a population facing housing instability (and we are unaware of any studies that examine whether there is an association within the homeless population).

Other variables that we expect to be associated with psychological distress that are included in our model are: indicators of adverse childhood experiences (including being placed into State care and child protection systems, experiences of violence or abuse as a child and general levels of family support during childhood); educational attainment; whether suffering from a severe or moderate long-term health condition or disability; a history in detention; a history of serious drug use (proxied by a measure of whether people have been injecting substances over their lifetimes; drinking at risky levels and smoking); and current labour market state.

Certain factors found to be associated with psychological distress amongst the general population, such as physical health problems (Katon and Sullivan 1990; Rodin and Voshart

1986; Turk et al. 1987) and unemployment (Ensminger and Celentano 1988; Linn, et al. 1985; Shamir 1986), are also consistently found to significantly increase psychological distress in studies of the homeless (Geldberg and Linn 1989; La Gory et al. 1990; Tausig 1986; Wong and Piliavin 2001). This is not however the case with factors such as incarceration, educational attainment, substance use and adverse childhood circumstances.

In the case of incarceration this is due to gaps in the literature. While there is an established literature on the psychological impact of incarceration in general (see for e.g. Haney 2001), there have been no comparable studies of the specific impact of incarceration among the homeless population.

Higher educational qualifications are generally found to be associated with lower levels of psychological distress (Grywacz et al. 2004; Phongsavan et al. 2006). However, findings from studies of the homeless are mixed; Wong and Piliavin (2001) find that education tends to protect the homeless from psychological distress whereas studies such as Geldberg and Linn (1989) and La Gory et al. (1990) find no evidence of a link.

Likewise, while studies of the overall population tend to find a link between substance use and psychological distress (Green et al. 2012; Reiger et al. 1990), particularly in relation to more prolonged drug use, the findings of studies of homeless populations are mixed. For instance, in a three-site study of homeless persons in British Columbia, Torchalla et al. (2013) find a positive association between post-traumatic stress disorder and substance abuse disorder. However, in a study of homeless people in Iowa, Simons et al. (1989) find that substance abuse is 'not associated with increased levels of psychological distress' (p.496). Similarly, while a number of studies of the overall population show links between childhood abuse and violence and psychological wellbeing later in life (Schaaf and McCanne 1998; Dube et al. 2001), findings from studies of the homeless are mixed. In a study of the homeless in shelters or on the streets, La Gory et al. (1990) find a positive association between adverse childhood experiences and psychological distress, while Schutt et al. (1994) and Wong and Piliavin (2001) find no evidence that childhood stressful events has an effect on psychological distress.

The homeless studies discussed above, however, do have their shortcomings as they tend to be small scale and use opportunistic sampling methods. It is therefore unclear whether the findings are representative of a broader homeless population, which may explain the inconsistent findings across studies. Our data suffer less from these limitations.

Consequently, although our main aim is to examine whether there is an association between the homeless-housed trajectories of people, we will also be able to shed light on the association between each of these and psychological distress levels for a population facing substantial housing instability.

#### *5.4 Results*

We begin in Table 5.1 by examining general patterns in psychological distress levels according to the length of time respondents' have been in their current homeless or housed spell. In Table 5.1 we therefore present average K6 scores of males and females, first by their overall housing status, and then further disaggregating by the length of time they had been homeless or housed

First we see that, as expected, distress levels are higher for females than they are for males. Interestingly, however, while there is a difference in the average K6 score between homeless

and housed females, with homeless females reporting higher levels of psychological distress (9.2 versus 8.2;  $p$ -value  $< 0.001$ ), this is not the case for males. It appears that both homeless and housed males in the JH sample have similar levels of psychological distress.

The average distress scores, however, hide the variation in reported levels of psychological distress according to the length of time individuals have been either homeless or housed. For males there does not appear to be a clear pattern with homeless duration. However, for females average K6 scores of those that have been homeless for less than 6 months are significantly higher than the scores of those homeless for longer periods of time or those housed for longer periods of time. Also, average K6 scores tend to be lower for individuals housed for longer periods of time than those housed for shorter periods of time, particularly for males.

**Table 5.1. Average Kessler scores by housing status and gender**

	Homeless		Housed	
	Males (n=1490)	Females (n=880)	Males (n=1661)	Females (n=1828)
All	7.5	9.2	7.4	8.2
Homeless/housed for:				
Less than 6 months	7.8	9.8	8.0	8.7
Greater than or equal to 6 months, less than 1 year	7.2	9.4	7.6	8.1
Greater than or equal to 1 year, less than 2 years	7.1	8.8	7.2	8.2
Greater than or equal to 2 years, less than 4 years	7.8	8.6	7.6	8.4
Greater than or equal to 4 years, less than 6 years	6.9	9.5	7.2	7.2
6 years or more	8.2	8.2	6.2	7.7

These patterns could be explained by the different characteristics of respondents in each of the categories. To explore this further, results of the Tobit model estimation of psychological distress are presented in Table 5.2. In the first two columns (Model 1), only age differences are controlled for in addition to homeless or housed spell length, for males and females respectively. Then in the final two columns we add the additional controls described in the previous section (Model 2). The coefficients presented show the marginal effect of a unit change in each respective variable on latent psychological distress. For example, model 1 results show that psychological distress levels of 25-44 year old males are 1.65 points higher than those of younger males and psychological distress levels of 25-44 year old females are 2.578 points higher than those of younger females. Standard errors of the coefficients are presented in brackets.

First we focus our attention on patterns of psychological distress across age groups. As noted earlier, studies of the general population generally find a u-shaped relationship between psychological distress and age. In contrast, we find an inverted u-relationship for males in this population cohort and a positive relationship for females. Thus, males aged 25 to 44 years report the highest K6 scores, with the younger and older respondents reporting similar lower K6 scores on average. For females, on the other hand, it appears that distress increases with age, with females aged 25-44 years reporting higher K6 scores than younger respondents, and females 45 years plus reporting the highest levels.

Other characteristics associated with age (most notably health related conditions) do however appear to underlie some of this relationship as once these are controlled for, as seen in columns 3 and 4 of Table 5.2, patterns of psychological distress by age change. The age effect for males now all but disappears, with those in the oldest age group now showing marginally lower levels of distress once these other factors are taken into account, whereas for females the relationship becomes an inverted u-shape one.

Other factors associated with psychological distress largely accord with our prior expectations, although there are some exceptions. Not surprisingly, the existence of long-term health conditions and psychological distress go hand in hand. It is important to remind readers that we are only examining associations between factors here, and cannot determine whether physical health conditions are causing psychological distress or whether indeed the reverse is true. All we can say is that respondents with long-term health conditions report significantly higher levels of psychological distress than those without similar conditions. The magnitude of the relationship is also quite large, with K6 scores that are 3.1 and 3.4 points higher for females and males with long-term health conditions respectively.

We find no real differences in reported distress levels between Aboriginal and Torres Strait Islanders and non-Indigenous respondents on average. Neither do we find any evidence to support Wong and Piliavin's (2001) finding that education acts to protect those facing housing insecurity from psychological distress. Rather we find no difference by education, a result consistent with Geldberg and Linn (1989) and La Gory et al. (1990). These findings are perhaps not that surprising given the nature of our respondents; even though we do observe people with higher levels of education we are selecting those who are the most disadvantaged of this overall population group. This is also true of our non-Indigenous respondents.

As expected, married / de facto respondents report significantly lower levels of distress than single respondents. Somewhat surprisingly, we find that females with dependent resident children report significantly lower levels of psychological distress.

The results also confirm our initial expectations that psychological distress is associated with adverse childhood circumstances. Both males and females raised in more supportive family environments report lower levels of psychological distress. In addition to this, males with a history of child abuse or violence are particularly susceptible to higher levels of psychological distress. In contrast, it appears that a history of child abuse or violence is not associated with distress for females nor is a history in State care for either males or females. However it is important to highlight that these variables and the general family support measure are highly correlated. Indeed, when the significance of each of these variables is examined in isolation (i.e., without including the other two measures) they are, with the exception of State care for males, all significantly associated with higher levels of psychological distress.



**Table 5.2. Factors associated with psychological distress: Tobit coefficients (standard errors)**

	Model 1		Model 2			Model 1		Model 2	
	Males	Females	Males	Females		Males	Females	Males	Females
<i>Age (ref=15-24 years)</i>							(0.674)	(0.740)	
25-44 yrs	1.650***	2.578***	0.483	2.028***	WA		-0.923	-0.636	
	(0.400)	(0.426)	(0.393)	(0.419)			(0.595)	(0.636)	
45 yrs plus	0.524	3.383***	-0.974*	1.349**	Tas		0.781	0.966	
	(0.496)	(0.601)	(0.529)	(0.600)			(0.711)	(0.780)	
ATSI			0.469	0.230	NT		-1.444*	0.315	
			(0.476)	(0.474)			(0.863)	(0.901)	
Married/defacto			-0.872**	-1.021***	ACT		0.169	-0.492	
			(0.389)	(0.352)			(0.912)	(0.970)	
Dependent children			-0.628	-1.269***	State care		-0.510	0.446	
			(0.500)	(0.389)			(0.408)	(0.410)	
<i>Educational attainment (ref=Tertiary)</i>					Child abuse/violence		1.360***	0.575	
Yr 12 or equivalent			0.0650	0.953			(0.420)	(0.515)	
			(0.560)	(0.596)	Opted out of violence questions		0.308	0.282	
Yr 10-11			-0.234	0.277			(0.938)	(0.733)	
			(0.390)	(0.440)	Ever injected drugs		0.629	0.137	
Yr 9 or below			-0.340	1.140*			(0.402)	(0.561)	
			(0.512)	(0.609)	History of incarceration		0.986***	1.259**	
Undefined			2.910*	0.732			(0.299)	(0.595)	
			(1.721)	(1.736)	Family support		-0.644***	-0.562***	
<i>State (ref=NSW)</i>							(0.181)	(0.180)	
Vic			0.492	1.822***	<i>Labour force state (ref=employed)</i>				
			(0.518)	(0.592)	Unemployed		1.748***	1.453***	
Qld			-0.690	0.291			(0.310)	(0.438)	
			(0.491)	(0.548)	NILF		1.958***	1.858***	
SA			0.347	1.754**			(0.359)	(0.439)	

	Model 1		Model 2	
	Males	Females	Males	Females
Risky drinker			-0.274 (0.323)	1.186*** (0.314)
Smoker			0.665* (0.373)	0.749** (0.376)
Long term health condition			3.356*** (0.307)	3.083*** (0.320)
<i>Housing state (ref= housed ≥6 years)</i>				
Housed <6mths	2.220*** (0.675)	2.000*** (0.715)	1.336** (0.650)	0.700 (0.731)
6mths ≤ housed <1 yr	1.761** (0.706)	1.031 (0.726)	0.807 (0.664)	-0.143 (0.742)
1 yr ≤ housed <2 yrs	1.269* (0.714)	0.820 (0.755)	0.318 (0.667)	-0.0862 (0.758)
2 yrs ≤ housed <4 yrs	1.840** (0.846)	1.086 (0.827)	1.012 (0.780)	0.438 (0.796)
4 yrs ≤ housed <6yrs	1.238 (1.568)	-0.199 (1.232)	1.194 (1.315)	-1.231 (1.300)
Homeless <6mths	2.170*** (0.685)	3.585*** (0.768)	1.004 (0.651)	1.713** (0.760)
6mths ≤ h'less <1 yr	1.400** (0.703)	2.945*** (0.792)	0.463 (0.684)	1.387* (0.788)
1 yr ≤ h'less <2 yrs	1.212* (0.714)	2.367*** (0.824)	0.494 (0.673)	1.366* (0.799)
2 yrs ≤ h'less <4 yrs	2.134** (0.875)	2.040** (1.005)	1.094 (0.810)	0.911 (0.932)
4 yrs ≤ h'less <6yrs	0.977 (1.219)	2.898** (1.382)	0.405 (1.134)	1.913 (1.455)

	Model 1		Model 2	
	Males	Females	Males	Females
Homeless ≥ 6 yrs	2.259** (1.132)	0.885 (1.344)	1.843* (1.030)	-0.705 (1.450)
Constant	4.699*** (0.666)	5.042*** (0.756)	5.001*** (1.273)	4.235*** (1.322)
Observations	3151	2708	3006	2586
Pseudo R <sup>2</sup>	0.00345	0.00892	0.0352	0.0411

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Consistent with Geldberg and Linn (1989) we find an association with the unhealthy behaviours of smoking and drinking at risky levels and higher levels of psychological distress, but only for females. However, we find no evidence of a relationship between psychological distress and serious drug use, which seems to support the findings of Geldberg and Linn 1989 and Simons et al. (1989).

Individuals that have been incarcerated in their lifetimes show significantly higher levels of psychological distress than those who have never been incarcerated. As expected, respondents not employed report significantly higher levels of distress than the employed.

Finally, we turn to a discussion of the relationship between psychological distress and housing status. The first two columns of Table 5.2 show that there is almost u-shaped relationship between homeless durations and psychological distress for both males and females, conditional on age. The K6 scores of those recently homeless appear to be the highest, are then somewhat lower for those homeless for longer periods of time compared to those newly homeless, and then are higher again for the very long-term homeless.

This pattern, however, changes once other characteristics of respondents are taken into account (see columns 3 and 4 for males and females respectively). There remains a strong association between psychological distress and homeless duration for females. Females recently homeless (i.e., homeless for less than 6 months) exhibit quite high levels of psychological distress compared to the stable housed. Distress levels are then significantly lower for females homeless for between 6 months to 2 years than those homeless for longer periods, although they remain marginally higher than the stable housed. Females that have been homeless for 2 years or more are then no more likely to report higher levels of psychological distress than the stable housed, at least on average. This is consistent with the adaptation thesis outlined previously.

This is not the case for homeless males. Homeless duration seems to matter little for males once other factors are controlled for. In fact, it appears that psychological distress among men is only associated with very long-term homelessness; that is, homelessness duration of 6 years or more, and even this relationship is only weakly significant.

Turning our attention to the housed, the first two columns of the table show a negative relationship between durations housed and psychological distress, particularly for males. For recently housed males K6 scores are significantly higher than the scores of those housed for long periods of time, with scores of males housed for between 6 months and 4 years at a level somewhat lower than those recently housed but higher than those housed for longer periods.

The evidence from column 2 indicates that females adapt to being housed much faster than males. While females recently housed (i.e., housed for less than 6 months) report higher levels of psychological distress than the most stable group, females housed for 6 months or more report statistically similar levels of psychological distress to the most stable group.

As with the homeless, in columns 3 and 4 we again see that the general patterns between durations housed and psychological distress change once we account for other differences in individual characteristics. Distress levels remain significantly higher for recently housed males (i.e. housed for less than 6 months), but for males housed for 6 months or more distress levels are relatively similar regardless of duration. For females, on the other hand, there is little evidence that distress levels vary by the length of time in housing, even for those recently housed, once their other observed individual characteristics are accounted for.

Another factor that may complicate the relationship between homeless durations and psychological distress is that the severity of homelessness may vary considerably within the group experiencing homelessness. Our homeless group includes those in a range of different accommodation situations, including persons sleeping rough, at one end of the spectrum, to long-term boarding house residents, at the other end. One might expect that particularly unstable arrangements are more likely to be associated with psychological distress than more stable arrangements. In particular, we suspect that the boarding house residents are counteracting observed patterns between the other categories of homelessness and psychological distress, particularly for men. Indeed we find (but do not present in the interests of brevity) that homelessness type does indeed matter; primary (sleeping rough) and secondary homelessness (staying temporarily with friends or family or staying in emergency accommodation) is associated with significantly higher levels of psychological distress, whereas distress levels of the tertiary homeless (mostly long-term boarding house residents) are no different to the housed.

To test whether the inclusion of boarding house residents in our homeless group is influencing our findings in any way, we therefore exclude spells in boarding houses from our measures of homeless duration. The exclusion of spells in boarding houses does change things marginally, but only for males. The association between very long-term homelessness and higher levels of psychological distress now becomes insignificant, whereas that between recent homelessness and psychological distress now becomes weakly positive. Also males recently housed no longer show higher average levels of psychological distress than their housed counterparts.

## 5.5 *Conclusion*

In this chapter we examined the association between psychological distress and housing status. For females we find that, by and large, the findings are consistent with established overseas evidence, which indicates that homeless individuals report higher levels of psychological distress than the housed. However, this does not appear to be the case for males. Also the extent of the differences between the two groups depends very much on the length of time individuals have been homeless or housed, and again this pattern varies considerably between males and females. For recently homeless men, levels of psychological distress are higher (although only marginally) than other housed or homeless males, but this pattern was evident only when boarding house residents were excluded from the homeless group. In contrast, psychological distress among newly homeless women is significantly higher than other homeless or housed women, and levels of psychological distress decrease as the amount of time homeless increases. Thus we have possible evidence that supports the adaptation thesis, but it is much stronger for women than it is for men.

When we examine levels of psychological distress among those housed we observe a different pattern altogether. It appears that men find re-entering housing a stressful experience, with men recently housed reporting significantly higher levels of psychological distress than men housed for longer periods of time. In contrast, it appears that females adapt to being in housing almost immediately, with lower levels of psychological distress for females in housing regardless of its duration. It is not entirely clear why we observe different patterns among males and females or why these patterns emerge at different times in the dynamics of the housed /homeless experience; clearly further research is warranted. Nevertheless, the findings provide tentative support for the view that men and women do react to stressors differently (Ptacek, Smith and Dodge 1994).

Our results also suggest that stable housing has a positive effect on individual levels of psychological distress. For services and workers assisting the homeless, attending to their housing needs is an obvious way to ameliorate levels of distress (among other things). However, the findings also suggest that individuals who have recently become homeless are likely to be experiencing heightened levels of psychological distress. When people are distressed, their capacity to do things and make sensible decisions can be compromised. Agencies need to be sensitive to this, particularly at the point of initial engagement. Finally, although women appear to adapt to housing very quickly, men do not. The implication is that men may well need higher levels of settlement support to ensure they retain their housing.

The findings reported in this chapter are a first for an Australian study. Although they are suggestive with respect to the salutary effect of housing on people's psychological wellbeing, it is still too early to say what the exact relationship between housing and psychological distress is. In future work we hope to look more closely at the relationship between psychological distress and various housing types and housing conditions, as well the influence of various characteristics on the level of psychological distress people report.

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## 6 Homelessness and Substance Use

### 6.1 Introduction

It is widely believed that there are very high levels of problem alcohol and/or drug use among homeless populations and those at heightened risk of homelessness. This is a serious cause for concern given evidence that substance use and homelessness may be self-reinforcing and given high-levels of life-threatening behaviour among homeless substance abusers (Neale 2001). It is crucial for policy makers and agencies to have high-quality and detailed information on the extent and nature of substance use among homeless and at-risk populations if they are to provide appropriate services to help with their housing and other needs. Yet the vast majority of the evidence on the extent and nature of substance use among homeless and at-risk of homelessness populations, whether in Australia or elsewhere, comes from small-scale, ad hoc, cross-section surveys (Scutella and Johnson 2012).

This matters for a number of reasons. First, existing studies tend to focus on a narrow group of the homeless; usually rough sleepers. We know much less about the extent and nature of substance use among people experiencing other forms of homelessness, such as those staying temporarily with friends or family, in emergency accommodation or in boarding houses. Appropriate interventions for people in these situations might take very different forms from those sleeping rough. Second, we know little about the dynamics of housing instability and substance use and the interplay between them for anything other than small-scale and very specific samples (e.g., Caslyn and Morse 1991; Phelan and Link 1999). People move in and out of homelessness and in and out of different types of homelessness. Substance use patterns also change over time. But are these dynamics related?

It is this issue which is at the centre of this chapter. Specifically, we address the following research questions:

- What is the extent and nature of substance use in the JH sample? How persistent is substance use? Can the types of use be categorised?
- What is the association between substance use and housing instability in the JH sample? To what extent are temporal patterns of substance use and housing instability related?

In answering these research questions we will build on the findings presented in previous research reports. Scutella et al. (2012) reported summary statistics for a handful of current substance use measures (the consumption of alcohol at risky levels, use of marijuana, use of other illicit drugs, use of both marijuana and other drugs) and one lifetime measure (has ever injected), as well as a measure of their association with lifetime homelessness (using a binary definition), at wave 1. Chigavazira et al. (2013) presented summary information on the same measures of substance use in waves 1 and 2 and examined their association with a simple four-way typology of homelessness dynamics. Johnson et al. (2014) developed a typology of housing instability and provided further analysis of its association with substance use.

In this chapter, we provide an in-depth analysis of the use of tobacco, alcohol, cannabis, and other illegal/street drugs among JH respondents, before and during the 2 years of the survey. This analysis provides detailed information on the prevalence of use, its intensity and its persistence. We also describe transition patterns between use and non-use as well as the extent to which use of the different substances is correlated. We also propose a typology of

substance use for each substance following the methodology that we previously used in Johnson et al. (2014) to build a typology of housing instability.

## 6.2 Substance Use in the JH Sample

This section describes the use of tobacco, alcohol, cannabis, and other illegal/street drugs among JH respondents. Patterns of usage across time are of particular interest, so the analysis is restricted to respondents who have participated in all four waves of the survey (the balanced panel).

Table 6.1 presents the prevalence of use for the different substances within the JH sample, measured both over time and at single points in time. In addition, comparative data for the general Australian population (measured at a particular point in time – 2010) are also provided. These descriptive statistics confirm that JH respondents’ substance use is much higher than in the general population.

**Table 6.1: Prevalence of use (%)**

	Tobacco: daily use	Alcohol: risky drinking <sup>3</sup>	Cannabis	Illegal / street drugs	Injecting illegal / street drugs
Ever tried	-	-	79.6	52.2	23.4
Ever used on a regular basis <sup>1</sup>	84.1	-	49.4	22.8	-
Ever used over survey period (2 yrs)	76.6	31.5	52.4	25.3	8.6
Always used over survey period (2 yrs)	54.8	4.9	18.3	2.5	3.2
Used during wave 1	68.2	17.3	38.7	14.2	-
Used during wave 2	67.4	16.5	34.9	9.9	-
Used during wave 3	67.8	15.7	37.4	14.5	6.4
Used during wave 4	66.8	16.1	32.7	10.2	5.4
Australian population <sup>2</sup>	15.1	20.1	14.7		0.4
N	1325	1325	1325	1325	1325

Notes:

(1) Regular use is considered to be daily use for cannabis, and weekly use for street drugs.

(2) These figures are from the Australian Institute of Health and Welfare (AIHW) (2011b) 2010 National Drug Strategy Household Survey. The AIHW (2011b) defines risk levels of alcohol consumption according to the recently revised Australian Alcohol Guidelines. Here persons consuming no more than 2 standard drinks per day are defined as ‘low risk’, whereas those consuming more than 2 drinks are considered to be drinking at ‘risky’ levels.

(3) In the JH sample, respondents are considered to be risky drinking if they drink more than 2 standard drinks at least 3 days a week.

Smoking is very prevalent among JH sample members. While only 15 per cent of the Australian population smokes on a daily basis, at each wave over two thirds of JH respondents (67-68 per cent) identify as daily smokers. At the same time, there appear to be some transitions in and out of smoking, with 77 per cent of respondents smoking at some point in the last two years but only 55 per cent smoking throughout the survey period.

In terms of alcohol, 20 per cent of the Australian population reports drinking more than 2 standard drinks a day, the level considered as risky drinking according to the current Australian Alcohol Guidelines. In the JH sample, between 6 and 7 per cent of respondents drink more than two standard drinks every day and between 55 and 57 per cent of

respondents drink more than two standard drinks at any given frequency. To better distinguish problematic drinking habits within our sample, we constructed a definition that also takes into account the frequency with which people drink alcohol. Specifically, we define risky drinking as drinking more than 2 drinks a day more than twice a week. Between 15 per cent and 17 per cent of JH respondents at each wave reported drinking at this level. Over the two years of the survey, nearly 1 out of 3 respondents drank at that level at some point (31.5 per cent) but only 4.9 per cent drank at that level over the whole period. This suggests that heavy alcohol drinking may be an important, but largely transitory, problem in the JH sample.

Drug use is also much more prevalent in the JH sample than in the Australian population, with more than 30 per cent having used cannabis, and more than 5 per cent having injected illegal/street drugs in the past 6 months (at each wave), compared to 14.7 per cent and 0.4 per cent, respectively, in the Australian population in the past 12 months. Again, transitions in and out of use seem to be relatively frequent. In particular, the majority of respondents have tried cannabis (80 per cent) and illegal/street drugs (52 per cent) at some point in their life. Fewer respondents have been using those substances at some stage during the course of the survey (52 per cent and 25 per cent respectively) and again fewer respondents have been using in all waves of the survey (18 per cent and 2.5 per cent respectively). Most respondents who have used at some stage over the course of the survey have done so on a regular basis: 49 per cent (out of the 52 per cent) of respondents have used cannabis daily sometime in the past two years and 23 per cent (out of the 25 per cent) have used street drugs on a weekly basis.

### *Intensity of use*

A large proportion of JH respondents use some sort of substance at some point during the survey period. But how much do they use? To capture intensity of use, we present figures showing the distribution of average monthly consumption by substance over the survey period.

With respect to smoking, 228 respondents out of 1325 have never smoked daily over the last 24 months. Among those who have smoked daily at some point (Figure 6.1), 4 out of 10 have smoked up to 10 cigarettes a day, 4 out of 10 have smoked between 10 and 20 cigarettes a day, and 2 out of 10 have smoked more than 20 cigarettes a day.

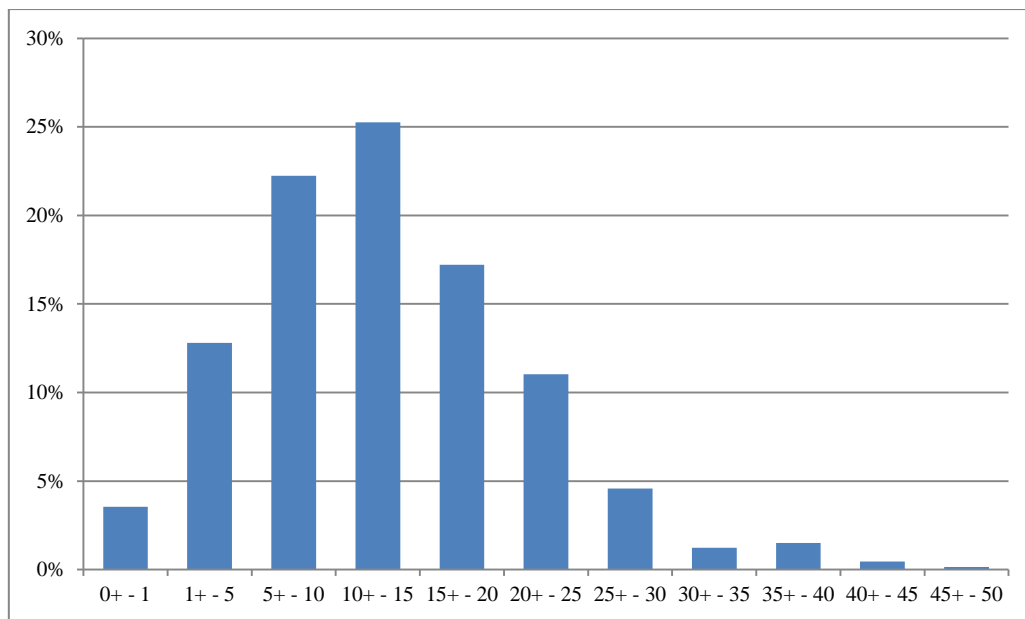
To determine the intensity of risky drinking, we use the additional information provided in the survey about binge drinking, defined as drinking 5 or more standard drinks on one occasion. Figure 6.2 presents data on the average number of occasions on which respondents report binge drinking in the month preceding the interviews. 334 respondents never report binge drinking in the month preceding the interview (not shown on figure). Most respondents who report binge drinking over the survey period have done so only a few times on average: 31 per cent once, 17 per cent twice and 10 per cent three times. This includes more or less regular binge drinkers over the survey period: those who had a few bouts of binge drinking regularly before each wave or those binge drinking more heavily but before fewer waves. Overall, 50 per cent of binge drinkers report having done so on 2.25 days or less in the month preceding the interview on average.

Figure 6.3 suggests that cannabis users tend to divide into one of two types: light users (about 30 per cent of users use cannabis 2 days per month maximum over the four waves) and heavy users (6 per cent of users use every day at every wave). There are also respondents who have

used every day during 1, 2 or three waves but not the other wave(s). They each represent about 1.5 per cent of the JH sample. Overall, 50 per cent of cannabis users have used cannabis on average at least 5.38 days per month.

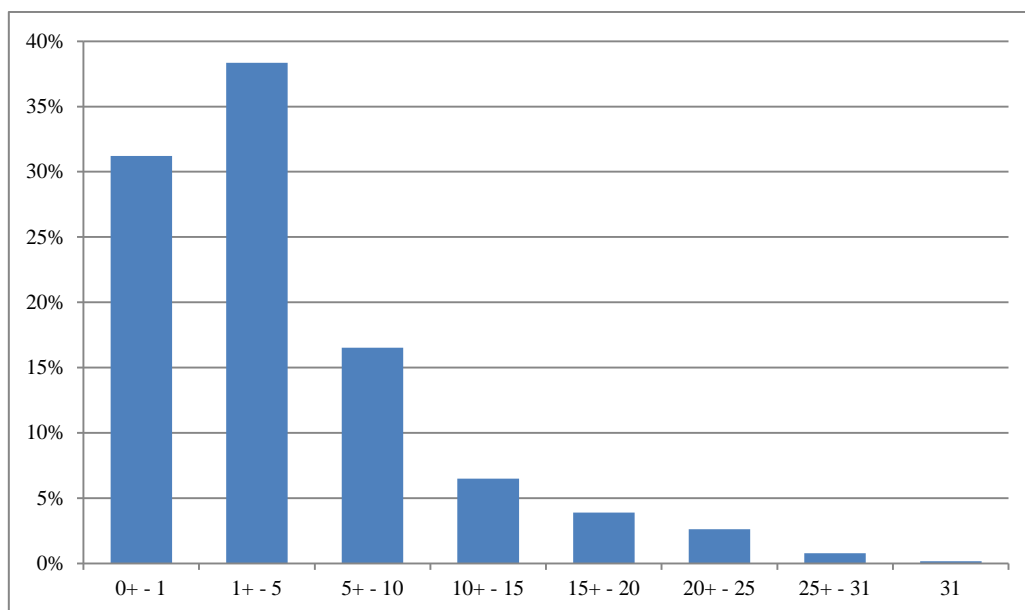
Almost three quarters (73 per cent) of the sample report no use of illegal/street drugs over the past two years. Furthermore, among users, Figure 6.4 shows that no one reported having used every day over the four waves and few reported having used every day in one or two waves (0.3 per cent and 0.2 per cent of respondents respectively). Most users have only used on a few days on average: 50 per cent used 0.5 days per month or less.

**Figure 6.1: Number of cigarettes smoked per day (average over four waves)**



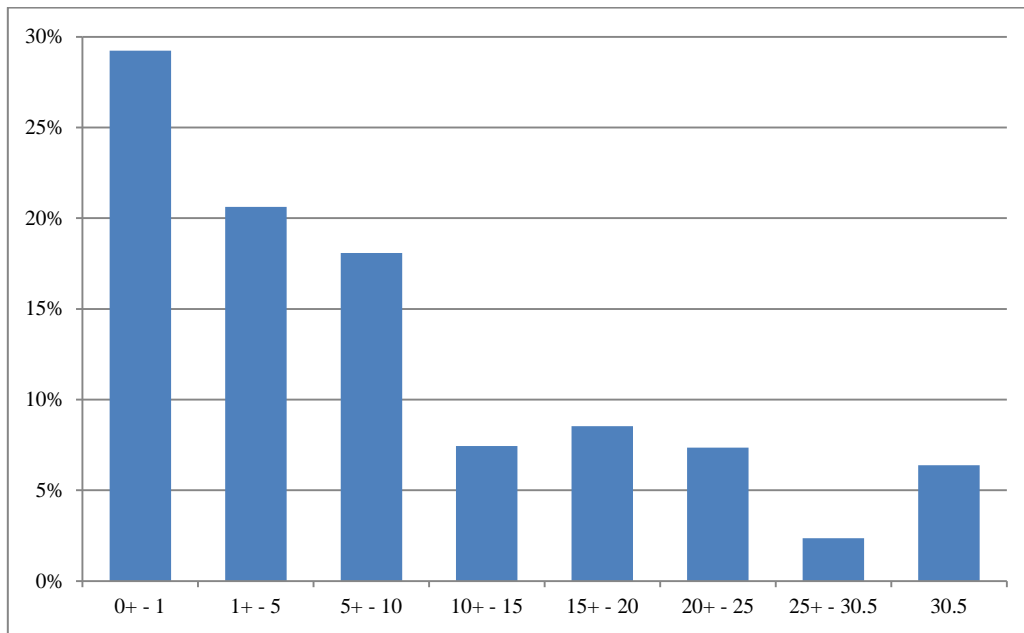
Sample: respondents who reported smoking daily in 1 wave at least.

**Figure 6.2: Number of occasions consumed 5+ standard drinks in the month preceding the interviews (average over four waves)**



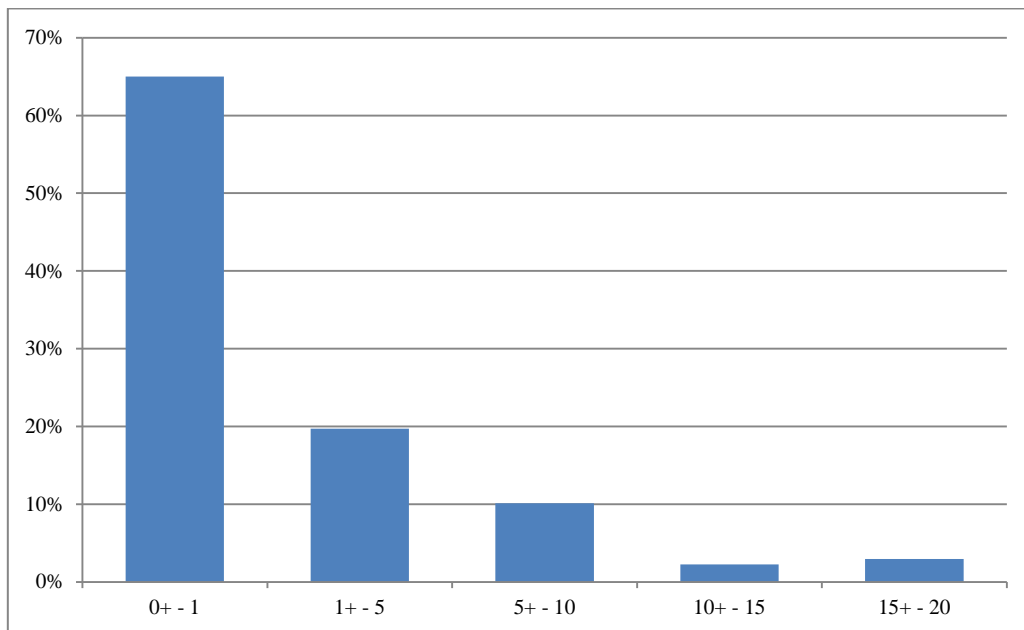
Sample: respondents who reported consuming 5+ drinks in the month preceding the interview in 1 wave at least.

**Figure 6.3: Number of days per month used cannabis (average over four waves)**



Sample: respondents who reported using cannabis in 1 wave at least.

**Figure 6.4: Number of days per month used illegal/street drugs (average over four waves)**



Sample: respondents who reported using illegal / street drugs in 1 wave at least.

These four-wave averages, however, conceal significant variations in use over time. In the following section we analyse this issue further by looking both at the number of waves in which respondents used and transitions into and out of use over the last two years.

*Persistence of use*

Table 6.2 shows clearly that while a majority of daily smokers were recorded as smoking on a daily basis at all four survey waves, the use of other substances is much more transitory.

More precisely, 54.8 per cent of respondents reported smoking daily in all four survey interviews compared to 20.5 per cent who reported being daily smokers at at least one of the four interview points, but not all four. More than half of this latter group reported smoking daily in three of the four interviews. By comparison, 4.9 per cent reported risky drinking in all four waves, while 23.2 per cent reported risky drinking at some point (but not all four). Further, nearly half of those 23.2 per cent reported heavy drinking at only one wave while about a quarter reported heavy drinking for two or three waves each.

**Table 6.2: Distribution of the number of waves in which respondents used (%)**

	Tobacco - daily use	Alcohol – 3+ standard drinks at least 3 days/wk	Cannabis	Illegal / street drugs	Injecting illegal / street drugs
0 wave	23.2	63.3	47.1	73.4	90.2
1 wave	3.8	11.4	10.6	11.8	5.2
2 waves	6.0	6.5	9.7	5.4	3.2
3 waves	10.7	5.3	12.4	5.1	-
4 waves	54.8	4.9	18.3	2.5	-
N	1325	1325	1325	1325	1325

Note: For injection, data are only available for waves 3 and 4. The columns do not sum up to 100 per cent because some respondents have missing information for some substances.

More than half of JH respondents report having used cannabis at some point during the course of the survey. Compared to risky drinking, this is a more persistent behaviour with more than a third of those having used cannabis reporting use in each of the four waves. But there are also significant transitions in and out of cannabis use, with the other two-thirds of users quite evenly distributed between usage for one, two and three waves.

Similar to alcohol abuse, use of illegal/street drugs seems to be largely transitory. Here there is a core population of 2.5 per cent of respondents who have used regularly in the past two years. But there are also more than 20 per cent of respondents who have used illegal/street drugs at some point during the survey, including half of them for one wave only and a quarter of them for two to three waves.

#### *Transitions in/out of use across waves*

JH respondents appear to be transiting in and out of use, with transitions being relatively more common for heavy drinking and illegal/street drug. Transitions in and out of use by wave are now analysed further.

Table 6.3 presents figures on the frequency of different types of transitions experienced by respondents for each type of substance. In the first row the proportion of respondents using each substance throughout all four waves is presented (corresponding to the last row of Table 6.2). In the final row the proportion of respondents not using at any of the four waves is presented (corresponding to the first row in Table 6.2). All other possible combinations of transitions are then presented in between. As expected, transitions in and out of use are frequent for all types of substances. Further, all types of transition have occurred for all substances.

**Table 6.3: Distribution of substance usage transitions across waves (%)**

	Tobacco: daily use	Alcohol: 3+ standard drinks at least 3 days/wk	Cannabis	Illegal / street drugs	Injecting illegal / street drugs
Yes-Yes-Yes-Yes	54.8	4.9	18.3	2.5	3.2
No-Yes-Yes-Yes	2.8	1.2	2.9	0.9	-
Yes-No-Yes-Yes	2.2	1.2	3.1	1.6	-
Yes-Yes-No-Yes	2.2	1.4	2.2	0.9	2.2
Yes-Yes-Yes-No	3.6	1.5	4.1	1.7	3.0
No-No-Yes-Yes	1.8	0.9	2.7	1.4	-
No-Yes-No-Yes	0.4	1.1	0.6	0.4	-
Yes-No-No-Yes	1.0	1.3	0.5	0.6	-
No-Yes-Yes-No	0.6	1.2	1.4	0.7	-
Yes-No-Yes-No	0.9	1.3	1.6	0.9	-
Yes-Yes-No-No	1.3	0.7	3.1	1.4	-
No-No-No-Yes	0.9	2.6	1.8	2.0	-
No-No-Yes-No	0.6	1.9	2.8	4.5	-
No-Yes-No-No	1.0	3.4	1.4	1.3	-
Yes-No-No-No	1.3	3.6	4.7	4.0	-
No-No-No-No	23.2	63.3	47.1	73.4	90.2
N	1325	1325	1325	1325	1325

Note: For injection, data are only available for waves 3 and 4. The columns do not sum up to 100 per cent because some respondents have missing information for some substances.

Consistent with our previous observations that smokers and cannabis users are more likely to persistently use throughout the survey, they are also less likely to cycle between using and not using than drinkers or other illicit drug users. Specifically, smokers and cannabis users tend to experience those patterns that include only one transition: No-No-No-Yes, Yes-No-No-No, No-No-Yes-Yes, Yes-Yes-No-No, No-Yes-Yes-Yes or Yes-Yes-Yes-No. For example for one-wave users, 2.4 per cent of respondents experienced one smoking transition versus 1.6 per cent who experienced two. For cannabis, the comparable numbers are 6.5 per cent against 4.2 per cent. In contrast, for risky alcohol drinking and the use of illegal/street drugs, patterns involving several transitions are as common as those involving only one. In the case of alcohol, 6.2 per cent of one-wave abusers experience single transitions versus 5.3 per cent for multiple transitions, 1.6 per cent of two-wave abusers experience single transitions versus 4.9 per cent for multiple transitions, and 2.7 per cent of three-wave abusers experience single transitions versus 2.6 per cent for multiple transitions. Comparable numbers for drug use are: 6 per cent versus 5.8 per cent, 2.8 per cent versus 2.6 per cent, and 2.6 per cent versus 2.5 per cent.

#### *Correlations between the different substances*

Table 6.4 examines the extent to which use of different substances go hand in hand by reporting correlation coefficients between the use of the different substances at any point during the survey period.

**Table 6.4: Coefficient of correlation between the use of different substances over the survey period**

	Tobacco: daily use	Alcohol: 3+ standard drinks at least 3 days/wk	Cannabis	Illegal / Street drugs	Injecting illegal / street drugs
Tobacco	1.00	-	-	-	-
Alcohol	0.12***	1.00	-	-	-
Cannabis	0.32***	0.26***	1.00	-	-
Illegal drugs	0.16***	0.22***	0.39***	1.00	-
Injecting	0.11***	0.16***	0.20***	0.53***	1.00

Notes: For injection, data are only available for waves 3 and 4. \*\*\*, \*\* and \* denotes statistical significance at the 99%, 95% and 90% levels respectively

Some behaviours are unsurprisingly associated, such as using illegal street drugs and injecting. Cannabis use is also strongly associated with smoking, use of illegal street drugs and injecting (although less so). Risky drinking is more strongly associated with cannabis use than illegal street drugs and injecting. Smoking is associated with the use of other substances to a lesser extent. In contrast, there is a relatively low degree of association between smoking and alcohol use.

More generally, in each case these correlations, although mostly quite large, are still far from perfect. In other words, use of one substance is not a particularly strong predictor of use of another substance. As a result, in building a typology of substance use, we construct separate typologies by type of substance.

### 6.3 *Typology of substance use: a cluster analysis*

In the third JH research report, we proposed a typology of the homeless that explicitly recognised homelessness as a dynamic condition; i.e., that people often transition in and out of the homeless population (Johnson et al. 2014). The descriptive evidence above has shown that substance use is widespread in the JH sample and that transitions in and out of substance use are also very common. We now construct a typology of substance use. Specifically, we use the information that we collect on substance use over the entire survey period to build a typology for each type of substance: tobacco, alcohol, cannabis and illegal street drugs. More precisely, we use cluster analysis to group individuals according to specified characteristics.

The variables, or rather dimensions, used in the clustering should reflect the different types of substance use experiences respondents have had (since the clustering method forms categories that are meant to be homogenous on these dimensions). Similar to the homeless typology, we use two dimensions to characterise substance use experiences: the average intensity of use over the survey period (number of cigarettes smoked per day; number of occasions consumed 5+ standard drinks in the month preceding the interviews; number of days per month used cannabis; number of days per month used illegal/street drugs) and the persistence of use (number of waves the respondent used a specific substance). As described above, the intensity variables provide a measure over the two years of the survey period. It does not distinguish between respondents who have used a substance for the whole 2-year period with a low intensity from others who have used for a shorter time period but at higher rates. The inclusion of the number of waves the respondent used in the typology corrects for that aspect.



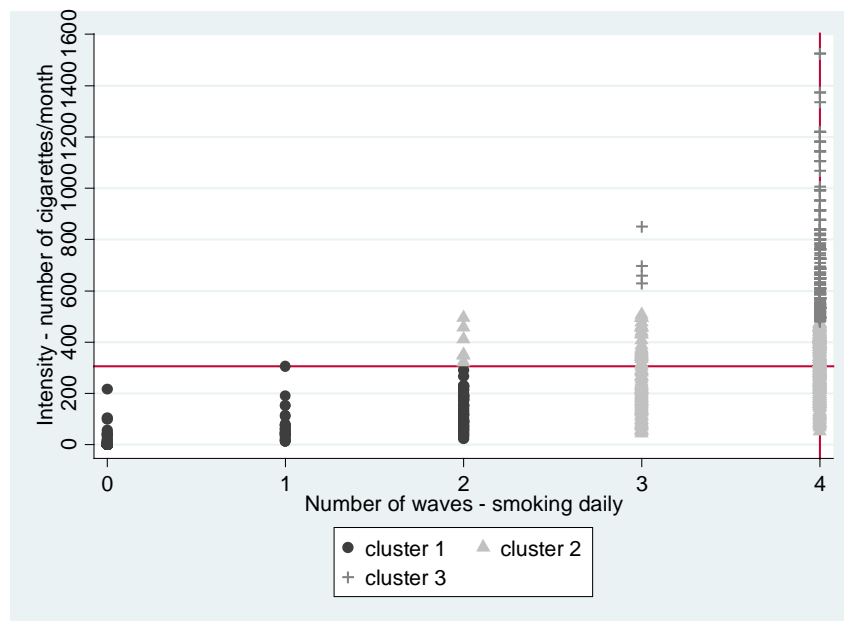
The number of resulting groups is not known a priori, but rather is decided on a case-by-case basis. The number of groups has to maximise the homogeneity within groups but at the same time has to contain a sufficient number of observations to permit sufficiently disaggregated statistical analysis. Appendix 1 provides further details on the cluster analysis methodology.

Figures 6.5 to 6.8 provide a visual representation of the characteristics of the groups identified by the cluster analysis, by showing where they lie on a two-way scatter plot of the two dimensions (i.e., intensity and persistence of use). On each scatter plot the horizontal line represents the median for intensity and the vertical line represents the median for the number of waves.

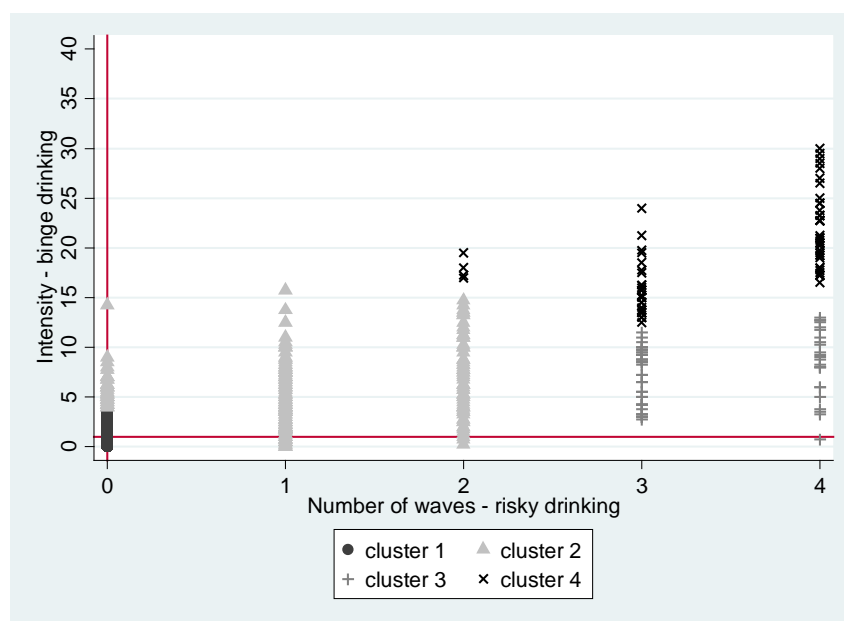
The cluster analysis for smoking yields three groups of respondents (Figure 6.5) which could be described as:

1. Intermittent, light smokers and non-smokers (n=355): 0 wave of daily smoking and 27 cigarettes per month on average;
2. Regular, light to medium smokers (n=495): 4 waves of daily smoking and 298 cigarettes per month on average;
3. Regular, heavy smokers (n=325): 4 waves of daily smoking and 690 cigarettes per month on average.

**Figure 6.5: Intensity and persistence of smoking (in the last two years)**



**Figure 6.6: Intensity of binge drinking and persistence of risky drinking (in the last two years)**



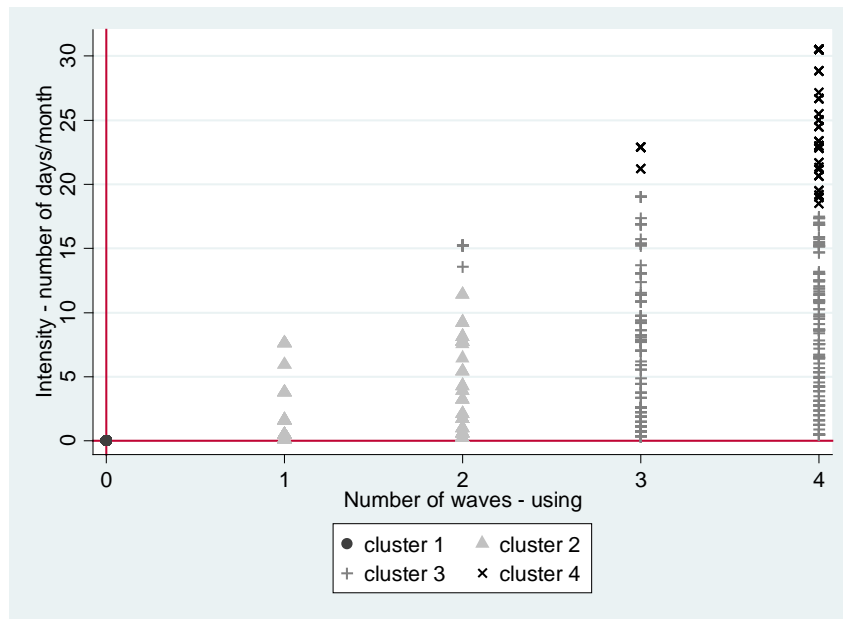
The cluster analysis for drinking yields four groups of respondents (Figure 6.6) which could be described as:

1. No risky drinking, no to rare binge drinking (n=783): 0 wave of risky drinking over the survey and 0.7 binge drinking sessions in the month preceding the interview on average;
2. Intermittent risky drinking and/or chronic binge drinking (n=253): 1 wave of risky drinking over the survey and 5 binge drinking sessions in the month preceding the interview on average;
3. Regular risky drinking, chronic binge drinking (n=62): 3 waves of risky drinking over the survey and 8 binge drinking sessions in the month preceding the interview on average;
4. Regular risky drinking, extreme binge drinking (n=66): 3 waves of risky drinking over the survey and 19 binge drinking sessions in the month preceding the interview on average.

The cluster analysis for cannabis use yields four groups of respondents (Figure 6.7) which could be described as:

1. Non cannabis users (n=658): 0 wave of cannabis using and 0 days per month on average in the last 2 years;
2. Intermittent, moderate cannabis users (n=253): 1 wave of cannabis using and 2 days per month on average in the last 2 years;
3. Regular, moderate cannabis users (n=272): 3 waves of cannabis using and 8 days per month on average in the last 2 years;
4. Regular, chronic cannabis users (n=112): 4 waves of cannabis using and 25 days per month on average in the last 2 years.

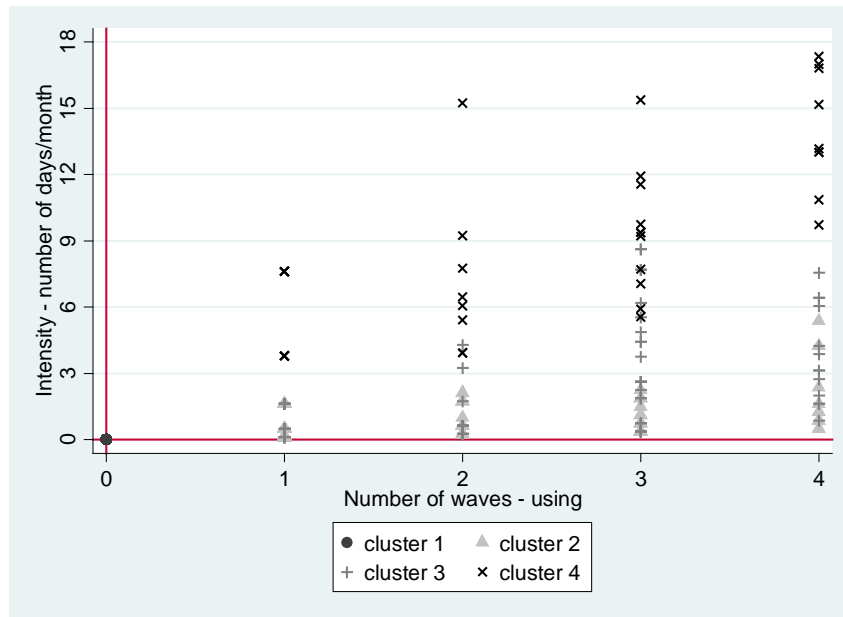
**Figure 6.7: Intensity and persistence of cannabis use (in the last two years)**



As for the other cluster analysis, the cluster analysis for illegal/street drug uses intensity and persistence variables for the use of illegal/street drug. In addition, we use the number of waves the respondent has injected. This cluster analysis yields four groups of respondents (Figure 6.8) which could be described as:

1. Non drug users (n=998): 0 wave of use, 0 day per month on average in last 2 years and 0 wave of injection in the last year;
2. Moderate drug users, no injection (n=189): 2 waves of use, 0.5 days per month on average in last 2 years and 0 wave of injection in the last year;
3. Moderate drug user, injection (n=77): 2 waves of use, 2 days per month on average in last 2 years and 1 wave of injection in the last year;
4. Chronic drug user (n=36): 3 waves of use, 9 days per month on average in last 2 years and 1 wave of injection in the last year.

**Figure 6.8: Intensity and persistence of illegal/street drugs and injection (in the last two years)**



#### 6.4 Substance use and housing instability

In this section, we describe the relationship between substance use and housing instability experiences. We use the information given about histories prior to wave 1 and calendar information over the survey period to analyse homelessness dynamics and its links with substance use. Specifically, we will examine the substance use experiences of respondents with different types of housing instability histories.

##### *Lifetime association between substance use and homelessness*

In this section, we analyse whether having ever used some substance is associated with having ever been homeless up until wave 4. To describe homeless experiences we first define whether respondents had ever been primary, secondary or tertiary homeless before the survey using the historical information. Precisely, those respondents who have ever slept rough or squatted in abandoned buildings because they had nowhere else to live are considered as having had some experience of primary homelessness. Secondary homelessness is defined as experiences of having stayed with relatives or friends temporarily with no alternative. Tertiary homelessness is defined as experiences of having stayed in a caravan, boarding house, hotel or crisis accommodation<sup>2</sup>. Then we use the calendar information about all the types of accommodation respondents lived in to build a similar variable since the start of JH. We then combine the two to define whether respondents have ever in their life experienced primary, secondary or tertiary homelessness (note that these categories are not mutually exclusive).

<sup>2</sup> We define categories of homelessness using historical and calendar information only based on accommodation type. That differs from the point-in-time definition (see JH report for wave 1) because information on tenure and whether the arrangement is temporary is not available for homelessness experiences prior to wave 1. We classified each accommodation type in the homeless type that is the most likely. For example, it appears that those currently staying with friends and relatives mostly enter in the second category while those currently staying in a caravan, boarding house, hotel or crisis accommodation mostly enter the third category. We follow this classification rule throughout this chapter.

For substance use, we analyse whether respondents have ever in their life smoked daily, tried cannabis, used cannabis daily, tried illegal street drugs, used illegal street drugs weekly, and have ever injected illegal street drugs. Note that we do not consider alcohol drinking behaviours here given we do not have retrospective information about drinking.

Table 6.5 provides evidence of a strong relationship between all types of homelessness and all types of drugs use. The percentage of respondents that have used a particular substance is always higher among those who have experienced secondary or tertiary homelessness (but not primary) compared to respondents who have never been homeless in their life. Specifically, among those who experienced secondary or tertiary homelessness, 69 per cent have tried cannabis, 33 per cent have tried illegal street drugs and 10 per cent have injected. This compares to 48 per cent, 22 per cent and 5 per cent for those who have never experienced homelessness.

**Table 6.5: Percentage of respondents using substances by homeless experience (%)**

	Tobacco: daily use	Cannabis	Cannabis daily	Illegal / street drugs	Illegal / street drugs weekly	Injecting illegal / street drugs	N
Never homeless	62.0	47.6	12.4	21.9	0.0	4.7	19
Ever secondary or tertiary	73.6	68.9	32.1	32.6	9.4	9.6	500
Ever primary	91.2	87.1	61.0	65.2	31.7	32.4	806

Differences appear even larger when looking at respondents who have experienced primary homelessness: 87 per cent have tried cannabis, 65 per cent illegal street drugs and 32 per cent have injected. Regular use is also substantially more common within this population: 61 per cent have used cannabis daily and 32 per cent have used illegal street drugs weekly at some point in their life.

*Transitory association between substance use and homelessness over the survey period*

Table 6.6 reports the percentage of respondents who use a particular substance cross-classified by broad homelessness status at each survey wave. As in Table 6.5, homelessness is defined using the calendar and thus exploits the in-between wave information. Respondents are defined as homeless if they spent any time in the primary, secondary or tertiary homelessness categories since their last interview (in the past 6 months for wave 1). For example, 16.7 per cent of respondents who were homeless at wave 1 drank more than 2 standard drinks at least 3 days a week in that wave, while 18.5 per cent of respondents who were homeless at wave 2 drank at risky levels at wave 1.

This table also provides the number of homeless and substance users at each wave. Interestingly, it appears that homelessness has decreased by about 150 respondents (11 per cent) between waves 1 and 2 and then by about 50 respondents at each wave (4 per cent). Cannabis and illegal street drug use seem more seasonal with higher levels of use in spring (waves 1 and 3) than in autumn (waves 2 and 4). Higher levels of drug use in spring are not unheard of in the literature, with some evidence that drug use is higher in the last quarter of the school year; i.e., spring (Grfoerer, Wu & Penne2002).

**Table 6.6: Transitions between homelessness and substance use across waves**

Alcohol: 3+ standard drinks at least 3 days/wk	Wave1	Wave2	Wave3	Wave4	N
Homeless W1	16.7	16.6	15.1	15.0	892
Homeless W2	18.5	18.7	16.8	16.1	751
Homeless W3	18.0	18.8	16.9	15.6	706
Homeless W4	18.4	18.6	16.4	17.6	650
N	230	219	208	213	1325
<b>Cannabis</b>					
Homeless W1	41.0	37.5	39.4	36.1	892
Homeless W2	43.3	39.2	39.8	37.6	751
Homeless W3	43.7	40.5	40.8	38.3	706
Homeless W4	42.7	39.2	41.1	38.2	650
N	513	462	496	434	1325
<b>Illegal/Street drugs</b>					
Homeless W1	15.0	10.6	15.2	10.8	892
Homeless W2	16.9	11.1	14.6	10.9	751
Homeless W3	15.7	11.7	16.0	12.3	706
Homeless W4	14.4	10.3	15.8	12.3	650
N	187	131	192	135	1325

Among the homeless at each wave, drinking seems to occur mostly before and during the homeless episodes: risky drinking drops just after a homeless episode. For example, for respondents who were homeless in wave 3, the proportion who were drinking at risky levels was 16.9 per cent in wave 3 and 15.6 per cent in wave 4. It could be that drinking leads to homelessness (possibly together with other circumstances like a separation for example). It could also be that quitting drinking helps exits of homelessness or that exits of homelessness helps respondents to stop drinking at risky levels.

Cannabis use appears especially high at the wave when people are homeless and the wave before, controlling for the seasonality of cannabis use (waves 1 and 3) and the very high use of cannabis among the group that were homeless at wave 3. For example, cannabis use in wave 4 is high among the homeless at wave 4 with 38.2 per cent having used cannabis compared to 36.1 per cent and 37.6 per cent for homeless in waves 1 and 2. These associations seem small in magnitude and could reflect the influence of other life events.

Interestingly, homelessness and the use of illegal/street drugs are often concomitant. That is especially the case in waves 3 and 4 where drug use is the highest among the respondents who were homeless at wave 3 and 4 respectively with 16 per cent and 12.3 per cent of users (compared with homeless at other waves). Plus, among homeless respondents at a specific wave, drug use is particularly high at the time when they are homeless (for homeless at wave 3, 16 per cent is the highest; for homeless at wave 4, 12.3 per cent is higher than drug use in wave 2, the other autumn interview).

The timing of smoking appears to be uncorrelated with the timing of homelessness experience, perhaps because the prevalence of smoking is very high in our sample and transitions not as frequent as for other substances (not reported).

### *Association between our typologies of substance use and homelessness*

In research report 3 (Johnson et al. 2014), we built a typology of homelessness using the wave 4 data. This typology was constructed using the proportion of time that respondents spent homeless and the number of places they lived in since the start of JH to describe homeless experiences. We obtained five groups which can be labelled as: stable housed; stable homeless, with friends or family; stable homeless, other; moderate instability, homeless; chronic instability, homeless (see Appendix 2 for a description of the cluster analysis and the groups).

To further describe the relationship between substance use and homelessness, we analyse whether types of substance users (as defined earlier) are related to particular types of homeless experiences. Table 6.7 reports the percentage of respondents from a specific homelessness category in each substance use category. Some clear associations appear between substance user types and the different types of homelessness experience.

Looking at the drinking typology, it appears that the respondents who are in the “stable homeless” categories — i.e. who spent 77 per cent of the time homeless and lived in two different places on average in the last 2 years; respectively 88 per cent of time homeless and three places — are often seen in the “regular risky drinking, extreme binge drinking” category. More precisely, these homeless categories represent 19% each of the risky drinking category, compared to respectively 15 and 11 per cent of the whole sample. Then the “chronic instability, homeless” respondents (62 per cent of the time homeless and 9 places) tend to be overrepresented in the “regular risky drinking, chronic binge drinking” category and, although less, in the “intermittent risky drinking and / or chronic binge drinking” category. This homeless category represents respectively 20 per cent and 19 per cent of these risky drinking categories compared to 15 per cent of the total sample. The “moderate instability, homeless” (35 per cent of time homeless and 6 places) also often appear as “intermittent risky drinking and / or chronic binge drinking” and “no risky drinking, no to rare binge drinking” category. Finally, the “stable, housed” (10 per cent of time homeless and 2 places) are overrepresented in the “no risky drinking, no to rare binge drinking” category. There is a clear correlation between stable homelessness and excessive drinking with the risky drinking (both regular and binge drinking) decreasing with the duration of homelessness and number of moves.

With respect to cannabis use, the “chronic instability, homeless” respondents tend to be overrepresented in the cannabis user categories, whether that use is intermittent and moderate or regular and moderate or regular and chronic. These types of homeless respondents represent between 19 and 21 per cent of these cannabis user categories compared to only 15 per cent of the total sample. The “moderate instability, homeless” often appears as “regular cannabis user” moderate or chronic: 23 per cent of this category compared to 19 per cent of the sample. The “stable homeless, other” category is also overrepresented in the “regular cannabis user” categories. Finally, the “stable with friends and family” and the “stable, housed” are mostly in the “no cannabis user” category.

**Table 6.7: Distribution of the substance use typology groups by homelessness typology group**

<i>Substance use typology groups</i>	Homelessness typology groups					
	1	2	3	4	5	6
<i>Tobacco</i>						
Intermittent, light smokers & no smokers	37.6	19.3	9.4	19.6	8.4	5.8
Regular, light-medium smokers	32.1	14.4	9.5	20.5	17.1	6.4
Regular, heavy smokers	33.2	12.4	14.8	17.9	16.1	5.7
Undetermined	32.1	12.9	11.0	13.1	16.5	14.5
<i>Alcohol</i>						
No risky drinking	35.8	15.9	11.3	19.7	11.3	6.0
No to intermittent risky d., no to chronic binge d.	31.4	15.8	10.9	19.5	18.6	3.8
Regular risky d., no to chronic binge d.	32.7	11.9	8.2	18.4	20.1	8.6
Regular risky d., extreme binge d.	27.5	18.6	18.6	16.3	9.2	9.7
Undetermined	30.9	9.0	7.2	14.3	23.7	14.9
<i>Cannabis</i>						
Non cannabis users	39.3	19.3	11.0	16.1	7.6	6.9
Intermittent, moderate cannabis users	31.4	11.9	8.4	20.5	19.2	8.6
Regular, moderate cannabis users	26.6	12.5	12.7	22.7	21.1	4.4
Regular, chronic cannabis users	27.8	9.5	12.5	22.6	19.6	8.1
Undetermined	35.1	0.0	9.3	8.7	31.2	15.8
<i>Illegal/street drugs</i>						
Non drug users	36.2	16.9	11.4	18.1	11.0	6.4
Moderate drug users, no injection	26.9	13.8	11.4	25.4	16.1	6.5
Moderate drug user, injection	29.5	8.4	9.1	19.7	29.3	4.1
Chronic drug user	11.9	2.2	9.9	14.9	45.9	15.2
Undetermined	42.6	0.0	0.0	1.9	31.3	24.2
<i>Total (%)</i>	33.8	15.0	11.0	18.8	14.5	7.0

Note: Homelessness typology groups: 1) stable housed; 2) stable homeless, with friends or family; 3) stable homeless, other; 4) moderate instability, homeless; 5) chronic instability, homeless; and 6) undetermined. Rows sum up to 100%.

With respect to illegal/street drug use, the “chronic instability, homeless” respondents tend to be overrepresented in the “chronic drug user” category and the “moderate drug user, injection” category. These types of homeless respondents represent 46 per cent and 29 per cent of these drug user categories compared to only 15 per cent of the total sample. The “moderate instability, homeless” often appear as “moderate drug user, no injection”: 25 per cent of this category compared to 19 per cent of the sample. The “stable homeless, other” category is also overrepresented in this drug use category as well as the “no drug user” category. Finally, the “stable with friends and family” and the “stable, housed” are mostly in the “no drug user” category.

Overall, it appears that homelessness is strongly associated with substance use. Specifically, risky drinking is more often associated with stable homelessness while illegal/street drugs are more often so with instable homelessness. More precisely, stable homeless (with friends or family) is characterised by regular risky drinking and extreme binge drinking; stable homeless (other) is also characterised by regular risky drinking and extreme binge drinking but also by heavy regular smoking and regular cannabis use (moderate or chronic).



Respondents who experience homelessness with moderate instability in their living arrangements are also cannabis drug users and sometimes use illegal/street drugs as well. Finally homeless respondents experiencing chronic instability are relatively often regular smokers and use cannabis regularly but mostly they are characterised by moderate to chronic use of illegal street drugs with injection.

## 6.5 Conclusion

The analyses reported in this chapter give rise to four key findings.

First, the JH sample smokes, drinks alcohol at a risky level and uses drugs much more often than the general population.

Second, they use these substances at relatively high levels. On average, they smoke 324 cigarettes per month, binge drink on 3 occasions every month, use cannabis 4 days a month, and use illegal drugs about once every two months.

Third, smoking and cannabis use are much more persistent than risky drinking and use of illegal/street drugs, with 55 per cent smoking and 18 per cent using cannabis during all four waves. This compares to only 5 per cent who were identified as risky drinkers and 2.5 per cent using illegal street drugs at all four survey waves. Transitions in and out of use are common for all substances, but relatively more common for risky drinking and the use of illegal/street drugs (with 23.2 per cent and 22.3 per cent of respondents having used in the past 2 years, but not all of the time). Consistently, transition patterns in and out of smoking and cannabis use tend to involve only one transition, whereas transition patterns in and out of risky drinking and use of illegal/ street drugs commonly involve more than one transition.

Fourth, our findings indicate strong relationships between all types of homelessness and the use of all types of substances: the percentage of respondents having used a particular substance in their life is always higher among those who have experienced homelessness, whatever the type of homelessness. Over the survey period, clear relationships also appear between homelessness and risky drinking, cannabis use and illegal/street drug use. Homelessness and substance use typologies also suggest that homelessness with stable accommodation is more often associated with risky drinking, while homelessness with chronic housing instability is more often associated with the use of illegal/street drugs.

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### *Appendix A.1: Cluster analysis of substance use*

The typologies of substance use have been constructed using Ward's hierarchical clustering method. This method is based on agglomerative linkage — i.e., each individual observation starts as its own cluster and then pairs of clusters are merged progressively.

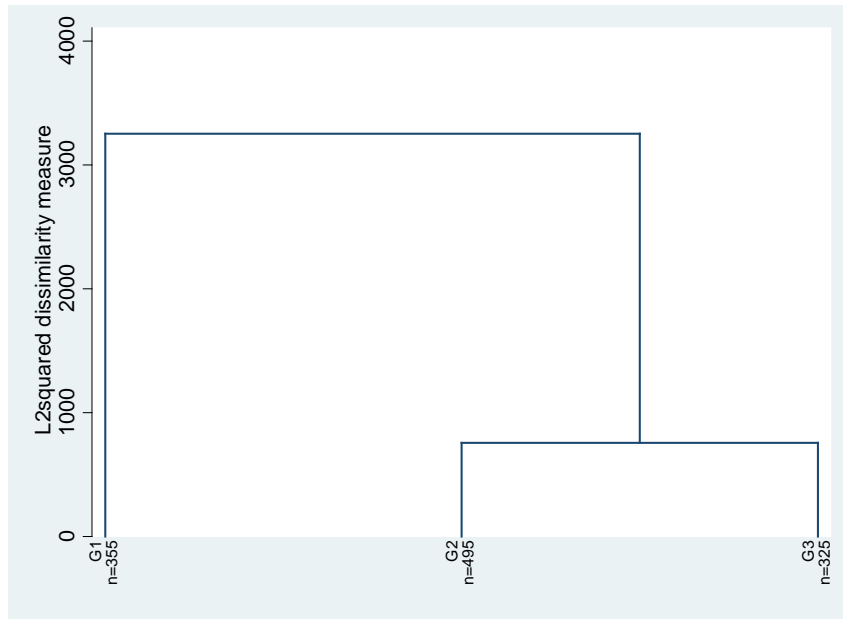
The number of resulting groups to be formed by the cluster analysis should be chosen to maximise the homogeneity within groups but at the same time contain a sufficient number of observations to permit sufficiently disaggregated statistical analysis. The number of resulting groups is not known a priori, but rather is decided by comparing the resulting cluster groups as you move up the hierarchy. This is typically examined by the use of a dendrogram, which is simply a tree diagram that shows the arrangement of the clusters produced by hierarchical clustering at each level.

To build the typology, we rescale the variables to have a mean of zero and a standard deviation of one to ensure that each variable has the same degree of influence on the resulting clusters. Finally, we group all individuals who have missing information for at least one of the two dimensions into a separate 'missing' category.

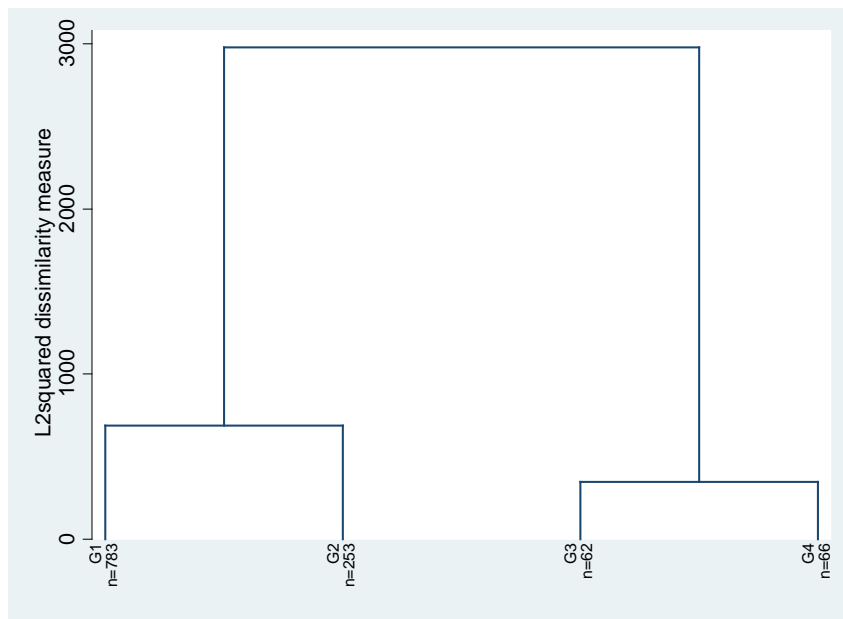
Figures A.1.1 to A.1.5 present the resulting dendrogram from our analysis if creating three groups. The dissimilarity measure presented on the y-axis is determined by the Euclidean distance between observations within each cluster, thus the lower the dissimilarity measure is, the more homogeneous the groups are. This level of clustering yields groups of a reasonable size — the smallest has 325 respondents. At the same time, respondents within groups are quite homogenous with considerable homogeneity lost with higher levels of clustering.

Figures A.1.1 to A.1.5 present the dendrograms for the number of groups chosen for each of the substance use behaviours analysed. For alcohol use, we have a typology in 4 clusters with the smallest group containing 62 respondents. Respectively for tobacco, cannabis and illegal street drugs, we have 3, 4 and 4 groups with a minimum of 325, 112 and 36 respondents in each group.

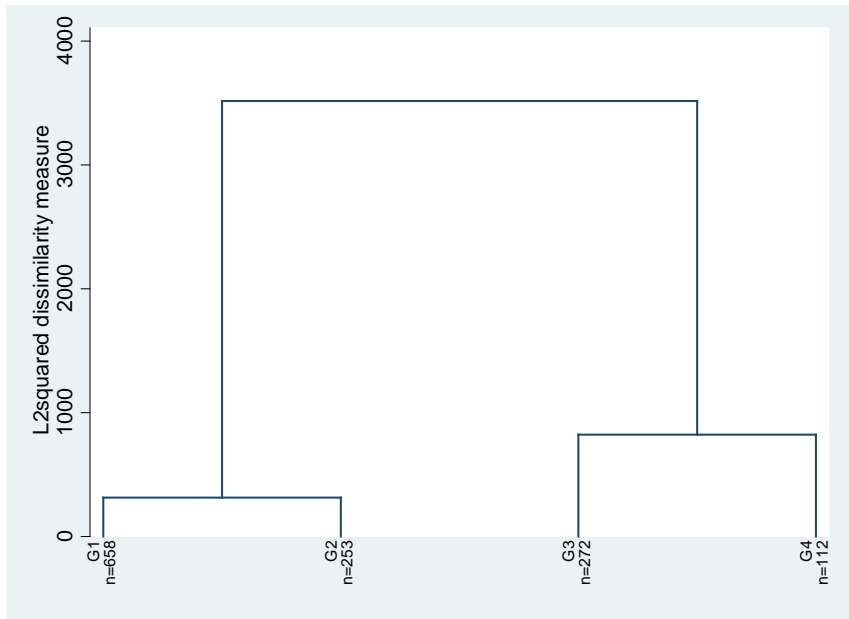
**Figure A.1.1 - Tobacco**



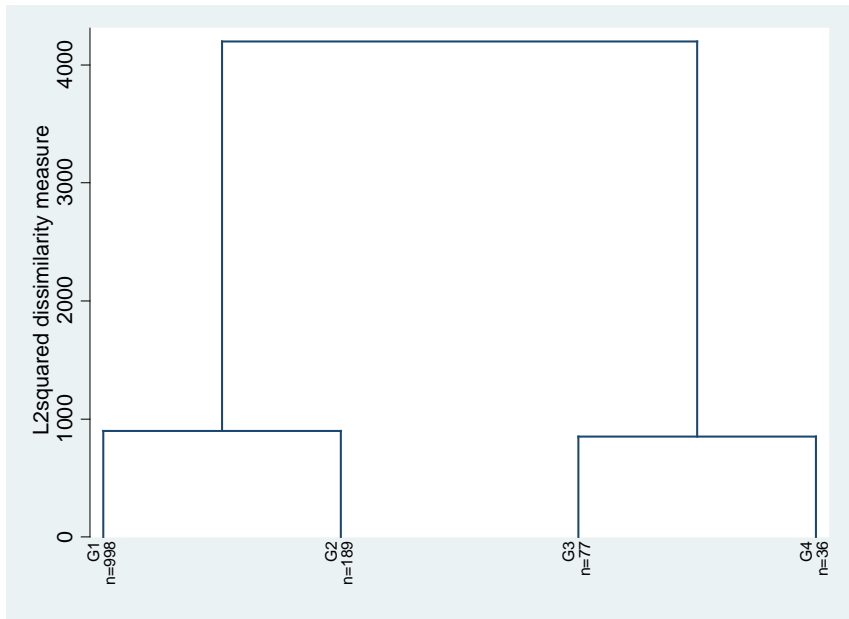
**Figure A.1.2 - Alcohol**



**Figure A.1.3 - Cannabis**



**Figure A.1.4 - Illegal/street drug use (use and injection)**



## *Appendix A2: Cluster analysis of homelessness*

In the research report 3 (Johnson et al. 2014), we established that while ‘point-in-time’ statistics provide some indication of the dynamics of homelessness they hide all the transitions that occur in the periods between interviews. In the wave 3 report, we therefore used the accommodation calendar from the survey, which is designed to capture all changes in housing status since the previous interview, to build a typology of homelessness.

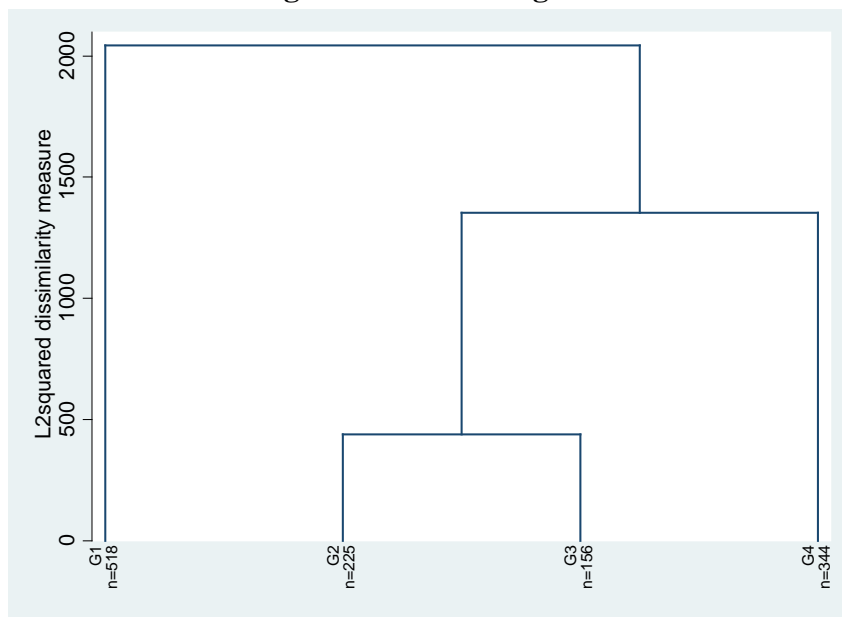
Specifically, the information contained in the calendar allows us to estimate the length of time people spent at each type of accommodation over approximately an 24-month period (i.e., from the 6 months prior to their wave 1 interview up to their wave 4 interview). In particular, the cluster analysis is based on the proportion of time that respondents spent homeless and the number of places they lived in in the past 2 years. In common with the earlier literature, this approach uses a measure of frequency and a measure of duration. In particular, it incorporates information that captures stability/instability in housing.

To construct the variable capturing the proportion of time homeless, we define homelessness as any spell of accommodation that respondents spent in their parent’s home, in the homes of other relatives, in the homes of friends, in a caravan, cabin or mobile home, in a boarding house or hostel, in a hotel or motel, squatting in an abandoned building, sleeping rough or in emergency or crisis accommodation. We also rescale both variables to have a mean of zero and a standard deviation of one to ensure that each variable has the same degree of influence on the resulting clusters. Finally, we group all individuals who have missing information for at least one of the two dimensions into a separate ‘missing’ category.

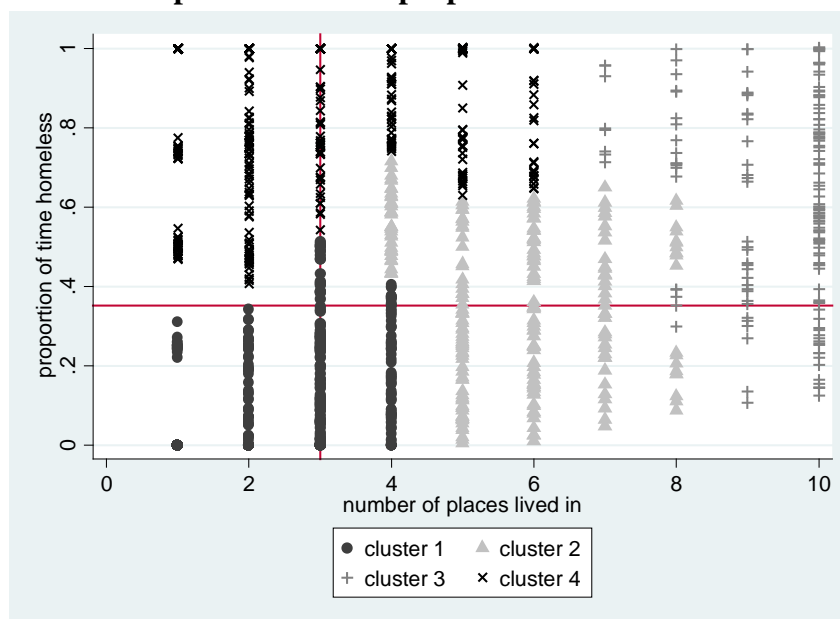
Figure A.2.1 reports the dendrogram for the clustering analysis using the number of places lived (top-coded at 10) and the proportion of time homeless in the last 24 months. As in report 3, we choose 4 clusters. This yields a typology which is very similar to the one we had at wave 3. Figure A.2.2 gives us a visual representation of the characteristics of the four groups identified by the cluster analysis, by showing where they lie on a two-way scatter plot of the two dimensions (i.e., number of places lived and proportion of time homeless). Clearly, the four groups differ on these two dimensions.

While cluster 4 looks relatively stable (having lived in three places on average over the 24 month period), they have spent a considerable amount of time homeless on average (82 per cent of the 24 month period). On closer examination of this cluster, however, we discovered that it is made up of two very distinct sub-groups: (i) persons staying with friends and/or family for substantial amounts of time; and (ii) persons either sleeping rough over long periods of time or, and to a much greater extent, staying in boarding houses. As the circumstances of these two groups are very different, and, as in wave 3 research report, we split this cluster into two groups for our typology – referred to as group 2 (respondents whose homeless experience in the past 2 years has only been in the secondary homeless category) and group 3 below (respondents with any experience of primary or tertiary homelessness in the past 2 years).

**Figure A.2.1: Dendrogram**



**Figure A.2.2: Number of places lived and proportion of time homeless in the last 2 years**



We end up with five distinct groups, which we label as the following:

1. Stable housed (n=518): 10 per cent of time homeless and lived in 2 places on average in the last 2 years;
2. Stable homeless, with friends or family (n=195): 77 per cent of the time homeless and lived in 2 places on average in the last 2 years;
3. Stable homeless, other (n=149): 88 per cent of time homeless and lived in 3 places on average in the last 2 years;
4. Moderate instability, homeless (n=225): 35 per cent of time homeless and lived in 6 places on average in the last 2 years;
5. Chronic instability, homeless (n=156): 62 per cent of time homeless and lived in 9 places on average in the last 2 years.

## **7 Violence during Journeys Home: examining the link with childhood trauma**

### *7.1 Introduction*

While there has been long standing interest in the relationship between traumatic events and homelessness in the international literature, in Australia it has largely been neglected in housing and homelessness research and policy. This has started to change as researchers, policy makers and services providers have come to recognise the impact of traumatic events, such as physical and sexual violence, as both a precursor to homelessness and a factor that can undermine a person's ability to successfully resolve homelessness.

Australian studies suggest that traumatic experiences are widespread among the homeless compared to the general population. Both Buhrich, Hodder and Teeson (2000) and Taylor and Sharpe (2008) found that over 90 per cent of people experiencing homelessness have had at least one traumatic experience in their lives. In comparison, 57 per cent of the general Australian population report one traumatic experience in their lives (Rosenman 2002). However, both of these studies employ sampling methods that over-represent the long-term homeless, which is likely to bias the results. We know this because a number of studies report a link between trauma and the duration of homelessness. People who have experienced traumatic events are more likely to have longer experiences of homelessness (Calsyn and Morse 1991; Scutella et al. 2013).

Along with studies that examine the prevalence of trauma among the homeless, researchers have also examined to what extent is trauma a risk factor for homelessness. Although risk factors typically overlap, two distinct lines of enquiry have emerged. The first examines childhood trauma. There is strong evidence to show that early developmental trauma, including physical abuse and a lack of parental care, are 'powerful risk factors for adult homelessness' (Herman et al. 1997). However, and perhaps surprisingly, the findings on childhood sexual abuse are more ambiguous – Herman et al. (1997) found that childhood sexual abuse was not a significant risk factor for adult homelessness, but both Wagner and Perrine (1994) and Koegel, Melamid and Burnam (1995) found that women who had experienced childhood sexual abuse were at greater risk of adult homelessness than women who had not experienced this kind of trauma.

Other studies consider the traumatic experiences of adults, with abuse such as domestic violence a common focus (Tually et al. 2008). Studies interested in adults suggest the risk of becoming homeless among victims of trauma is mediated through a range of factors including, the availability of social or community support (Bassuk and Rosenberg 1988; Browne 1993) and the presence of mental health problems and/or substance abuse issues (Bassuk et al. 1997).

While it is clear that traumatic events are deeply implicated as a precursor to homelessness, and that homeless people are often exposed to further trauma (Goodman, Saxe and Harvey 1991), what is missing from the literature in Australia is an assessment of the link between traumatic events in childhood and adulthood among people who are experiencing housing instability and homelessness. While a number of international studies are suggestive, highlighting for instance that homeless mothers are more likely to have been 'abused as children and battered as adults' (Bassuk and Rosenberg 1988), no studies to our knowledge have examined the association between childhood trauma and experiences of trauma as an



adult among a large sample of vulnerable and homeless individuals. A better understanding of the link between childhood and adult trauma has the potential to assist policy makers develop more targeted interventions that can be directed towards preventing victimisation among adults, reducing the damaging physical and emotional consequences of childhood and adult trauma, as well as building the resilience of survivors of childhood trauma.

This chapter begins to address this. Specifically, we examine whether respondents who report childhood trauma are more likely to be exposed to traumatic experiences during the first four waves of the Journeys Home study. We are aware, however, that the effects of different types of trauma vary, so we also examine the association between neglect, physical abuse and sexual abuse in childhood and subsequent physical and sexual abuse as an adult (that is, during the period covered by Journeys Home). In the following section we define how we measure trauma as well as summarising earlier findings presented in Journeys Home reports (Chigavazira et al. 2013; Scutella et al. 2012). This is followed by presentation of the results of the analysis. In the final section we discuss the findings, drawing attention to the implications for policy makers and service providers.

## 7.2 *Defining and measuring 'traumatic events'*

While debate about what constitutes trauma and how to assess it is ongoing, it is important to be clear that this article is examining 'traumatic events' rather than trauma per se. Common traumatic events include violent assault, incest, domestic violence, sexual and emotional abuse, rape, and kidnapping. Traumatic events can be both random (as is often the case with violent assault) or they can be repeated, as is often the case with child abuse or other adverse childhood experiences. All of these events can have long lasting and often adverse health consequences such as post-traumatic stress disorder and chronic substance misuse. However, the short and long term effect(s) of traumatic events vary considerably and this has much to do with the frequency, timing and type of traumatic events people experience. Hence the focus of this chapter is to examine the relationship between traumatic events in childhood and adulthood rather than the impact of these events on people's health or their capacity to cope.

In Journeys Home we do not use a standardised measure of trauma but use information on a range of adverse experiences as proxies instead. In childhood these include experiences of physical violence, sexual abuse, emotional abuse and neglect, as well as time in the child protection system. During adulthood we are limited to two measures – sexual and physical violence. Journeys Home collected retrospective information on childhood and adult experiences of violence, abuse and neglect in the baseline interview. This information provides us with lifetime measures of childhood and adult violence. In addition, respondents were also asked about their recent experiences of violence (i.e., their experiences in the six months preceding their interview) in all waves. When we discuss recent experiences of violence or recent 'traumatic events', we are referring to people who said they had experienced physical or sexual violence at any stage between waves 1 and 4, as such we restrict analysis of these measures to only include individuals who have continued to participate in the study throughout the four waves. Our proxies do not cover the full range of traumatic experiences, but we believe that they capture experiences identified in the literature as having significant effects nonetheless.

One point worth stressing relates to the issue of domestic violence. In the literature violence committed against women by intimate partners, or domestic violence, is identified as a common precursor to homelessness, as well as a common experience among women who are homeless. In this article we do not look at the perpetrator of violence. As such we cannot

distinguish between physical and sexual violence and domestic violence. In future reports we intend to look more closely at the perpetrators of physical and sexual violence against women and men to see whether the experience of physical and/or sexual assault by different perpetrators is associated with different patterns and rates of homelessness and housing instability.

### 7.3 *Revisiting the link between lifetime experiences of violence and lifetime homelessness*

Previous Journeys Home reports examined trauma and adverse childhood experiences and it is worth summarising the key findings from those reports. While not a direct measure of trauma, local and international studies show that young people who end up in the child protection system commonly grow up in homes where parental substance abuse and family violence are common, both of which have been linked to neglect and abuse (Barber and Delfabbro 2004; Stein 2006). Just over one quarter of the Journeys Home participants (25.1 per cent) had been placed in foster, residential or kin care at some time in their lives.

There appears to be an association between lifetime duration of homelessness and time in State out-of-home care. Table 7.1 shows that the proportion of respondents who had been in State care increases as lifetime durations of homelessness increase – while 11.6 per cent of those who had never been homeless reported they had been in State care, the proportion of people who had been in State care rises to over one third (39.0 per cent) among those who had been homeless for four years or more.

**Table 7.1: State care by lifetime duration of homelessness (%)<sup>1</sup>**

	Never homeless	Less than 6 months	6 months to 3 years	4 years or more	Total
Ever in State care	11.6	18.3	23.6	39.0	25.1
Never in State care	88.4	79.6	75.1	59.3	73.2
Total (N)	104	456	697	382	1,681

1. Estimates differ from those presented in Scutella et al. (2012) in that they are weighted to account for non-random response.

Table 7.2 below shows that a substantial majority (65.9 per cent) of Journeys Home respondents had experienced some form of neglect or abuse as a child. Just over half (55.7 per cent) experienced neglect or emotional abuse and just over half again (57.3 per cent) reported they had experienced physical abuse. In both cases the rates reported by Journeys Home respondents are well above those reported in studies of the wider Australian community (James 2000). Just under one quarter (24.4 per cent) of the sample reported they had been sexually assaulted as children, and this is also well above what has been reported in studies examining the prevalence of sexual abuse in the Australian community (James 2000; ABS 2006).

While childhood abuse and neglect is common in the Journeys Home sample, our previous results indicate that the proportion of people who had experienced childhood neglect, physical and/or sexual abuse increases the longer an individual’s cumulative experience of homelessness (Table 7.2). Thus, we found that while 8.1 per cent of those who had never been homeless had been sexually assaulted as children, among those who had been homeless for four years or more, nearly one third (31.5 per cent) reported they had been sexually

assaulted during childhood. Similarly, among those who had never been homeless about one quarter had experienced emotional or physical abuse during their childhood (24.1 per cent and 26.3 per cent respectively), but among those who had been homeless for four years or more just under two thirds had been either emotionally or physically abused as children (63.2 per cent and 64.0 per cent respectively).

**Table 7.2: Childhood abuse or neglect, by lifetime duration of homelessness (%)<sup>1</sup>**

As a child experienced ...	Never homeless	Less than 6 months	6 months to 3 years	4 years or more	Total
Neglect or emotional abuse	24.1	54.8	56.9	63.2	55.7
Physical violence or force	26.3	54.7	60.3	64.0	57.3
Sexual assault	8.1	19.4	26.6	31.5	24.4
Some form of neglect or abuse as a child	33.2	64.1	68.8	71.6	65.9
Total (N)	104	456	697	382	1,681

1. Estimates differ from those presented in Scutella et al. (2012) in that they are weighted to account for non-random response.

Turning our attention to the respondents' experiences as adults, we see that a substantial majority of the sample (62.4 per cent) have been either physically or sexually assaulted at some stage in their lives (Table 7.3). Physical violence is much more common, but the proportion of people who have experienced either form of violence increases the longer an individual's cumulative experience of homelessness is. In comparison to those who have never been homeless, individuals who have been homeless for four years or more are over three times more likely to have experienced sexual violence as adults. Likewise, individuals who have been homeless are much more likely to have experienced physical violence as an adult, although the relationship to the amount of time homeless is not as strong.

**Table 7.3: Adult violence, by lifetime duration of homelessness (%)<sup>1</sup>**

As an adult experienced ...	Never homeless	Less than 6 months	6 months to 3 years	4 years or more	Total
Physical violence	39.1	56.8	63.1	68.6	61.4
Sexual violence	4.2	10.3	14.3	14.0	12.9
Either physical or sexual violence	39.1	57.3	64.5	69.5	62.4
Total (N)	73	346	586	367	1,407

1. Estimates differ from those presented in Scutella et al. 2012 in that they are weighted to account for non-random response.

In summary, our earlier findings suggest that a substantial number of people in the Journeys Home sample were victims of some form of childhood trauma, and many had traumatic experiences during adulthood as well. And while there appears to be a connection between traumatic experiences and the amount of time people remain homeless, we do not have any information on the relationship between childhood and adult trauma or various other factors that may in some way mediate the relationship between trauma, housing instability and homelessness.

#### 7.4 *Recent experiences of physical violence*

In this section we examine the relationship between traumatic childhood experiences and whether people report traumatic experiences at some stage over the four waves. We examine the difference between men and women, and differences by age. Based on existing studies our expectation was that men would be more likely to experience physical violence and women sexual violence. To account for possible age differences in experiences of sexual and physical violence during Journeys Home, we include indicator variables for those aged 15-24 years, 25-44 years and 45 years plus. Our expectation was that younger people might be more likely to experience violence during Journeys Home, as has been reported elsewhere (ABS 2006). Although it is often thought the prevalence is higher among young people because they engage in 'riskier' behaviour, we note, as others have that the social context which shapes this behaviour is often the most significant factor (DuRant et al. 1994). Finally, we need to emphasise that we are looking at the association between childhood trauma and experiences of trauma during Journeys Home. The analysis presented here is not attempting to demonstrate a causal association between traumatic events in childhood and experiences of trauma as an adult.

When we examine recent experiences of physical violence a number of findings stand out. First, over a third of respondents (39 per cent) reported being a victim of physical violence at some stage over the four waves.

Second, the proportion of respondents who experienced physical violence during Journeys Home is always higher among those who have experienced some form of childhood trauma (Table 7.4). For instance, 45 per cent who experienced emotional abuse or neglect as a child were also victims of violence during Journeys Home. In contrast, just over a quarter (28 per cent) of the individuals who had not experienced abuse or neglect in their childhood reported they had been a victim of physical violence during Journeys Home.

The pattern remains relatively constant when we examine individuals who had experienced physical violence as a child. Here we found that among individuals who were victims of physical violence as children, the proportion who experienced physical violence during Journeys Home was twice that of those that had not experienced physical violence in their childhood (47.3 per cent and 23.3 per cent respectively). While the pattern was slightly less striking when we examined the association between experience of physical violence during Journeys Home and sexual violence as a child, individuals who had been sexually assaulted as a child were still much more likely to report they had experienced physical violence during Journeys Home than those who did not experience sexual violence as children (47.5 per cent and 34.7 per cent). Finally, when we examine respondents who had been exposed to any form of abuse or neglect during their childhood, just under half (44 per cent) reported they had been a victim of physical violence during Journeys Home. This was nearly double the proportion of respondents whose childhood was free of violence, neglect and abuse but who had experienced violence at some stage during Journeys Home (25.1 per cent).

We were also interested in whether the association between physical violence during Journeys Home and adverse experiences during childhood varied by gender. Overall, the general pattern remains the same in that adverse childhood experiences are associated with higher rates of physical violence reported during Journeys Homes irrespective of gender. Table 7.5 shows that men and women who reported childhood trauma were 1.5 to 2 times more likely to experience physical violence during Journeys Home than men and women whose childhood was free of violence, neglect and abuse.

There are three additional points worth commenting on. First, the proportion of men who report being a victim of physical violence during Journeys Home is always higher than the proportion of women, irrespective of whether they experienced emotional abuse, physical or sexual violence during childhood or not. Second, the difference is not great. Third, we do not examine who perpetrated the violence. We suspect that perpetrators will vary, with women more likely to experience violent assault from a partner and men more likely to experience assault by a stranger (ABS 2006). This important issue will be the subject of future work.

Turning our attention to age, Table 7.6 shows that as age increases there is a steady decline in both the proportion of people reporting adverse childhood experiences and also experiences of physical violence during Journeys Home. However, across the three age groups the experience of physical violence is always higher among those who experienced childhood trauma. Two results in particular stand out. First, among 15-24 year olds who had been victims of physical and sexual violence as children over half (54.6 per cent) have been a victim of violence during the four waves of data collection. Second, compared to those that had not experienced physical violence in their childhood, individuals who had experienced physical violence as a child were nearly three times more likely to have been a victim of violence during Journeys Home.

In summary, three points about the association between childhood trauma and physical violence stand out. First, a significant minority of Journeys Home respondents report being a victim of physical violence during the four waves. Second, people who report childhood trauma are more likely to experience physical violence during Journeys Home than those who did not. Third, gender and age matter. While the prevalence of physical violence among the Journeys Home sample and subgroups such as those who experienced childhood trauma is high, the findings need to be considered in terms of the social, emotional and physical consequences for individuals. People who have been physically assaulted or attacked can withdraw from social contact and develop serious long-term mental health issues such as post-traumatic stress disorder, anxiety and depression. These consequences can have direct and indirect effects on the capacity of individuals to maintain social relationships, maintain housing and engage in the labour market.

**Table 7.4: Victim of physical violence during Journeys Home by childhood trauma (%)**

Childhood trauma or not	Victim of physical violence during Journeys Home (n=1325) <sup>1</sup>
Emotional abuse/neglect as a child	45.2
No emotional abuse/neglect as a child	28.7
Physical violence as a child	47.3
No physical violence as a child	23.3
Sexual violence as a child	47.5
No sexual violence as a child	34.7
Exposed to any of the above as a child	44.0
Not exposed to any of the above as a child	25.1

1. Estimates based on sample responding in all four waves of Journeys Home and weighted to account for non-random response.

**Table 7.5: Victim of physical violence during Journeys Home by childhood trauma and gender (%)**

Childhood trauma or not	Male (n=701) <sup>1</sup>	Female (n=624) <sup>1</sup>
Emotional abuse/neglect as a child	48.0	41.3
No emotional abuse/neglect as a child	31.6	24.7
Physical violence as a child	49.1	44.5
No physical violence as a child	26.1	20.1
Sexual violence as a child	48.9	46.6
No sexual violence as a child	39.5	24.4
Exposed to any of the above as a child	46.4	40.5
Not exposed to any of the above as a child	28.7	19.9

1.Estimates based on sample responding in all four waves of Journeys Home and weighted to account for non-random response.

**Table 7.6: Victim of physical violence during Journeys Home by childhood trauma and current age (%)**

Childhood trauma or not	15-24 years (n=483) <sup>1</sup>	25-44 years (n=542) <sup>1</sup>	45+ years (n=300) <sup>1</sup>
Emotional abuse/neglect as a child	49.0	46.5	33.3
No emotional abuse/neglect as a child	30.1	31.7	22.1
Physical violence as a child	54.6	45.9	35.8
No physical violence as a child	18.8	30.1	16.8
Sexual violence as a child	54.6	51.0	32.0
No sexual violence as a child	38.5	35.4	25.3
Exposed to any of the above as a child	49.8	43.6	33.5
Not exposed to any of the above as a child	22.0	32.0	15.9

1.Estimates based on sample responding in all four waves of Journeys Home and weighted to account for non-random response.

### 7.5 Recent experiences of sexual violence

It is well documented that women are more likely to experience sexual abuse as children and sexual assault as adults than men (ABS 1996; 2006). In a study of the long-term homeless in Sydney, Buhrich et al. (2000: 964) found that half the women and 10 per cent of the men reported they had been raped. As noted earlier, rates of sexual assault during childhood and adulthood are high in the Journeys home sample.

When we examine recent exposure to sexual violence we find that 5.5 per cent had been a victim of sexual violence at some stage over the four waves of the study. Among those who had been abused or neglected or had experienced physical violence as a child, the proportion who had been a recent victim of sexual violence was approximately double that of those who had not experienced childhood trauma (Table 7.7). Individuals who were sexually abused as children were more than six times more likely than those who had not been abused to have experienced sexual violence during the Journeys Home study period (12.8 per cent and 1.7

per cent respectively). Overall, exposure to any form of childhood trauma increased the likelihood of experiencing sexual violence during Journeys Home by over three times.

**Table 7.7: Victim of sexual violence during Journeys Home by childhood trauma (%)**

Childhood trauma or not	Victim of sexual violence during Journeys Home (n=1325) <sup>1</sup>
Emotional abuse/neglect as a child	6.9
No emotional abuse/neglect as a child	3.1
Physical violence as a child	6.4
No physical violence as a child	3.7
Sexual violence as a child	12.8
No sexual violence as a child	1.7
Exposed to any of the above as a child	6.8
Not exposed to any of the above as a child	1.7

1. Estimates based on sample responding in all four waves of Journeys Home and weighted to account for non-random response.

As expected, when we examine the data by gender (Table 7.8) we find that women were much more vulnerable to sexual assault during Journeys Home than men, and that women who were sexually abused in their childhood were even more vulnerable. Table 8 shows that compared to women who were not neglected or abused in their childhood, women who had experienced neglect and abuse and violence as children were nearly four times more likely to have been a victim of sexual assault during Journeys Home. Women who had been sexually abused in their childhood were nearly six times more likely to have been a recent victim of sexual violence than women who had not been exposed to this type of traumatic event in their childhood. In fact, nearly one fifth (17.2 per cent) of the women who had been sexually abused as children had been sexually assaulted during Journeys Home. Rates of recent sexual violence are also high amongst women exposed to any of the measured forms of childhood violence (13.1 per cent), almost ten times the rate experienced by women not exposed to any of these measures of childhood trauma (1.5 per cent).

Men are different in two ways. First, fewer men report they have been victims of sexual assault during Journeys Home. Second, the relationship with early childhood experiences is more ambiguous. In the case of abuse/neglect and physical violence the pattern is different – based on the absolute proportions of men in each category, men who report no childhood experiences of emotional abuse or physical violence are more likely to have experienced sexual assault during Journeys Home. However, these differences are negligible given the small samples of men we are dealing with here. There does seem to be a stronger association between sexual violence in childhood and recent experiences of sexual violence.

**Table 7.8: Victim of sexual violence during Journeys Home by childhood trauma, by gender (%)**

Childhood trauma or not	Male (n=701) <sup>1</sup>	Female (n=624) <sup>1</sup>
Emotional abuse/neglect as a child	1.9	14.2
No emotional abuse/neglect as a child	2.9	3.6
Physical violence as a child	1.6	14.2
No physical violence as a child	3.6	3.9
Sexual violence as a child	5.9	17.2
No sexual violence as a child	1.3	2.8
Exposed to any of the above as a child	2.4	13.1
Not exposed to any of the above as a child	1.9	1.5

1.Estimates based on sample responding in all four waves of Journeys Home and weighted to account for non-random response.

As was the case with physical violence, the experience of sexual violence during Journeys Home is both higher among the youngest cohort (15-24) and higher again among those who had experienced childhood trauma (Table 7.9). Again, we see the strongest association with sexual violence during Journeys Home is among those who had been a victim of sexual violence during their childhood, and the association is strongest among 15-24 year olds. Individuals who experience sexual violence during their childhood appear to be at much greater risk of being a victim of sexual violence when they are adults. Young people who have experienced any form of childhood trauma are at the greater risk of experiencing sexual violence during Journeys Home than their peers who have not experienced trauma in their childhood, but also in comparison to older people.

**Table 7.9: Victim of sexual violence during Journeys Home, by current age (%)**

Childhoods trauma or not	15-24 years (n=483) <sup>1</sup>	25-44 years (n=542) <sup>1</sup>	45+ years (n=300) <sup>1</sup>
Emotional abuse neglect as a child	8.4	6.2	5.2
No emotional abuse/neglect as a child	2.9	2.6	4.4
Physical violence as a child	8.7	5.2	4.8
No physical violence as a child	2.7	3.8	4.8
Sexual violence as a child	18.1	12.0	7.8
No sexual violence as a child	2.3	1.1	2.1
Exposed to any of the above as a child	8.3	5.6	6.4
Not exposed to any of the above as a child	1.0	2.3	1.3

1.Estimates based on sample responding in all four waves of Journeys Home and weighted to account for non-random response.

## 7.6 Conclusion

The findings presented in this chapter suggest there is a link between traumatic events in childhood and the likelihood of experiencing traumatic events such as physical and sexual assault in adulthood. Individuals who report neglect, physical abuse and sexual abuse report higher rates of physical violence and also sexual assault over the four waves of the Journeys



Home study. The analysis confirms the picture reported in numerous studies elsewhere – namely that the relationship between childhood and adult trauma has a gendered dimension, with women being much more vulnerable to sexual assault in both childhood and adulthood than men.

The high prevalence of childhood and adult trauma in the Journeys Home sample, and the strong empirical link between childhood trauma and a person’s vulnerability to long-term homelessness as has been identified in the literature (Koegel et al. 1995; Bassuk et al. 1997; Herman et al. 1997), mark this out as an area that warrants sustained research and policy interest. Yet despite the evidence from Journeys Home and other studies that the lives of the homeless and those experiencing housing instability are marked by extreme and often ongoing traumatic experiences (Buhrich et al. 2000), trauma remains conspicuous by its absence from the policy literature. In recent times there have been calls for greater reflection on the need for Trauma Informed Care approaches, yet there has been little policy interest in the idea (Hopper, Bassuk and Olivet 2010). As a result, Trauma Informed Care continues to be confined to small pockets in youth homelessness and child welfare sectors. While Trauma Informed Care is not necessarily relevant to all homeless and housing providers, its potential to enrich service design in the broader homelessness and housing areas remains unrealised.

The findings presented are both sobering and telling; they highlight the elevated risk levels of individuals who had traumatic experiences when they were young, and the extreme vulnerability of certain groups such as young women and young men to sexual and physical violence as adults. The literature makes it clear that the consequences of sexual and physical violence in childhood and adulthood can be severe and have long lasting consequences. Both clinical and empirical literature suggests that traumatised children are more likely to experience adverse mental health outcomes later in life. One study found that sexual abuse is ‘an important early stressor predisposing adult onset depression’ and also that ‘the greater the abuse the greater the risk’ (Buhrich et al. 2000). Other studies have identified a link between childhood trauma and increased rates of substance abuse in later life (Herman et al. 1997; McFarlane 2000). Exposure to traumatic events often makes it hard for a person to form and maintain relationships. Childhood trauma makes substance use more likely and may also be an important factor that predisposes some people to mental health problems as adults (Clark 2001; Read and Ross 2003).

It is also the case that the long-term negative consequences of childhood trauma, including the heightened risk of re-victimisation in adulthood, are significantly lower among traumatised young people who have strong, stable peer networks and positive parent relationships (Cashmore and Shackel 2013). In short, there are policy opportunities around early identification of childhood trauma combined with assistance to build up and strengthen support networks, that can help mitigate some of the long-term adverse consequences of childhood trauma.

In future work we intend to examine in greater depth the association between childhood and adult trauma and its link to health and housing among the Journeys Home sample. Presently, what is clear to us is that there is a link between traumatic experiences in childhood and adulthood, and that traumatic events among those experiencing housing instability and homelessness are much more widespread than among the general population.

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## 8 Concluding comments

Unlike previous Journeys Home research reports, this report, the fourth in the series, has examined a range of issues relevant to people facing homelessness or housing insecurity in greater depth. This approach will continue to be taken with future reports.

The issues examined in this report include the duration of homelessness, mental illness and homelessness, psychological distress and homelessness, substance use and homelessness, and links between child and adult abuse and violence. From these articles a number of findings have emerged, some of which corroborate, and some of which add important new evidence to our understanding of the dynamics of homelessness and housing insecurity.

First, it does appear that homelessness is quite persistent amongst many Journeys Home respondents, with individuals with certain characteristics experiencing longer homeless spells than others. Therefore, while on the face of it, it looks like people are less likely to exit homelessness the longer they remain homeless, it may actually be that this is driven by differences in individual characteristics, which may be observed or they may not. Disentangling these effects is the subject of further research.

The featured articles also indicate links between homelessness and diagnosed mental illness, psychological distress and substance use. Importantly we are reminded in the analysis of each of these issues that the dynamics between various outcomes and individual behaviour is complex and that causality cannot be implied by simply examining the overlap in each of these factors. Also, as was seen in the analysis of psychological distress and homelessness, it is likely that people's reaction to their housing situation changes the longer they are in that particular situation. This is not only important to consider in the context of symptoms of psychological distress, but also as to how this relates to diagnosed mental illness and behaviours such as substance use. Finally, it is clear that there is interplay between the experience of traumatic events in childhood and further experiences of violence in adulthood. The potential overlaps between violence and trauma, housing and health outcomes are important issues to explore in greater depth in future research.

Such is the richness of the Journeys Home data that many equally important issues which were overlooked in this report will be the subject of detailed examination in future – the role of social networks in shaping housing/homelessness trajectories; differences between rural, remote and urban homelessness, the relationship between housing, health and homelessness, and the influence of biographical circumstances are just a few possible areas future research may consider.

Journeys Home is indeed a hugely valuable resource for policy makers, service providers as well as researchers. We hope that this report provides a glimpse of Journeys Home capacity to illuminate distinct patterns in the dynamics of homelessness, as well as identify important nuances that shape individual housing/homelessness trajectories. While Journeys Home can clearly add important empirical findings to the Australian, and for that matter international, evidence base, our hope is that Journeys Home material will ultimately be translated into better program design and more effective service interventions.