THE UNIVERSITY OF MELBOURNE

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Journeys Home Research Report No. 5

Findings from Waves 1 to 5: Special Topics

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September 2014

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Journeys Home

The Journeys Home Survey is funded by the Australian Government Department of Social Services

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RESEARCH REPORT No. 5
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Report prepared for the Australian Government Department of Social Services

By Abraham Chigavazira, Guy Johnson, Julie Moschion, Rosanna Scutella, Yi-Ping Tseng 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. The analyses in chapters 1-3 and chapters 6-7 of this report use data version 201405.1. Chapters 4 and 5 use data version 201405.2.

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Executive Summary

This research report, the fifth in our series, presents important findings from the first five waves of the Journeys Home (JH) study, which were conducted over a 2-year period between September 2011 and November 2013. JH is tracking a national sample of individuals exposed to high levels of housing insecurity. It employs much more rigorous sampling methods than ever previously used.

In this report, after initially presenting an overview of fieldwork outcomes and housing transitions over the first five waves of the study, we investigate a selection of special topics in greater depth that are particularly pertinent to our population of interest. The five topics examined are: homelessness and employment; physical health and homelessness; social support and networks; first experiences of homelessness and initiation to substance use; and diet and food insecurity.

In defining homelessness we continue with the approach taken in our earlier research reports and adopt the cultural definition of homelessness put forward by Chamberlain and Mackenzie (1992) to demarcate the homeless from the housed, making an assessment of whether people's accommodation meets the minimum community standard that people expect in contemporary Australian society.

Primary homelessness includes all people without conventional accommodation (sleeping rough, living in squats, etc.). Secondary homelessness includes people who move frequently from one form of temporary shelter to another, and includes 'couch surfing' and use of emergency accommodation (refuges, shelters, etc). Tertiary homelessness refers to people staying in boarding houses on a medium- to long-term basis, defined as 13 weeks or longer. They are homeless because their accommodation does not have the characteristics identified in the minimum community standard.

With respect to persons who were housed, we differentiate between those that are marginally housed and those that have more stable housing arrangements. The marginally housed are those persons who are in housing that meets the minimum community standard but face a degree of uncertainty about their future housing arrangements. We identify two groups in this category: i) persons residing with other households over a medium to longer term period; and ii) persons in a formal rental arrangement that have been in their accommodation for three months or less and are not able to, or do not know whether they can, stay there for the next three months. Those classified as stably housed include home owners and longer-term renters.

An overview of the first 5 waves

Re-interview rates in wave 5 continued to be quite high, with attrition uncharacteristically low for such a disadvantaged population. Thus by the fifth wave, 2 years later, we were still interviewing more than 84 per cent of our initial responding sample.

We also continue to see that the vast majority of JH respondents were housed at each point in time, with the proportion homeless declining from 27 per cent in wave 1 to 19 per cent in wave 5. Around three quarters of those housed were in stable housing, with the proportion of those in stable housing rising from 47 per cent in wave 1 to 57.9 per cent by wave 5.

Of those homeless at each point in time, the largest group was those experiencing what we consider to be tertiary homelessness. Primary homelessness is relatively uncommon and experienced by less than 4 per cent of respondents at any point in time. However, whereas secondary and tertiary homelessness tended to become less common in later waves, rates of primary homelessness actually rose slightly in the first three waves to peak at 4.3 per cent in wave 3; but subsequently declining to a rate of 2.6 per cent in wave 5.

Males are more likely to experience homelessness throughout the survey period than are females. They are also more likely to experience homelessness more often than females; 22.4 per cent of males experienced homelessness for 3 waves or more compared to 8.3 per cent of females.

Experiences of homelessness also vary for respondents of different ages. The young (15-24 years) were the least likely to experience homelessness throughout the survey period, and when they did experience homelessness it was most often a transitory experience. In comparison, over 60 per cent of those aged 45 years or older experienced homelessness in at least one wave, with almost half of these people (or 29 per cent of all people 45 years plus) homeless in at least 3 waves. Thus, although the young tend to be more vulnerable to homelessness (and thus more likely to be in the JH study), older persons that are vulnerable are much more likely to experience homelessness and to be homeless more often throughout the survey period than the younger respondents.

Homelessness and employment

This chapter examines whether there are links between homelessness and employment and reports little evidence of relationships between changes in housing and changes in employment status. While panel regression analysis uncovered evidence of negative contemporaneous relationships between homelessness and employment, the size of these relationships were quite small. Importantly, there was little evidence to suggest this relationship might be causal.

Once attention was devoted to a measure of the proportion of time spent in employment during the previous 6 months, evidence of a statistically significant association between employment and changes in housing status was uncovered, but only among men. Further, while it is difficult to identify the direction in which causation runs, it is concluded that the path from changes in homelessness to employment is strongest. This thus might be seen as providing support for the 'housing first' policy approach. It is however an interesting question as to why this relationship was found to be restricted to men. Are women better supported (e.g., by service providers) when their housing circumstances change?

Finally, the question of whether or not voluntary work might provide an avenue to assist JH sample members into paid employment was considered. It was found that the incidence of voluntary work is relatively low. Moreover, among those that do undertake voluntary work there was no evidence that future employment chances were enhanced. Indeed, for those that undertake voluntary work on a frequent basis (at least weekly) the likelihood of paid employment was reduced.

Health and homelessness

Poor health is commonly reported among the homeless, but as this chapter and a number of previous JH reports have shown, it is not just the health of homeless JH participants that is

poor – the overall health of the JH sample is considerably worse than the general population. There is also some variation in the health of the homeless, with the primary homeless appearing to be in the poorer health than either the secondary/tertiary homeless or the housed.

This chapter then goes on to present how the health of respondents changes in the periods prior to becoming homeless, subsequent to becoming homeless, and subsequent to exiting homelessness. This enables us to observe whether changes in health outcomes are consistent with the hypothesis that poor health causes homelessness; or rather that it is more likely that homelessness leads to poor health.

From the analysis there is little evidence to suggest that poor physical health is a direct cause of homelessness. The findings are however consistent with a view that poor health is more likely to be a consequence of homelessness; poor health was more prevalent among people who have been homeless for longer periods of time. These differences, however, are not significant for more severe and chronic conditions, which is not surprising given long-term health problems may take longer to develop.

Finally, there is some evidence of improvements in the participants' health since exiting homelessness but the improvement is not statistically significant until 12 months after exiting homelessness. This provides further evidence that poor health is a consequence of homelessness.

Social networks and social support

The importance of supportive families and a network of trusting, reliable friends can often be taken for granted. Supportive social networks do matter – they provide emotional and material assistance that can be a crucial factor that prevents households from losing their housing. However, not all social networks are protective – indeed, some social networks can be extremely damaging to individuals and in the context of homelessness, can lead to deeper entrenchment.

This chapter therefore examines the relationship between individuals' social ties and the onset and duration of homelessness. It also examines the role social networks play in exiting homelessness.

First, it confirms that ties with family and friends are more limited for the primary homeless than for other homeless or housed individuals. The social ties of the secondary/tertiary homeless are, however, very similar to low-income individuals who are housed.

There is also some evidence to suggest a lack of social ties contributes to homelessness. As homelessness approaches more individuals lose contact with their family, the availability of social support declines and there is an increase in the proportion reporting their social networks include many people who use drugs. As homeless duration increases however further observed declines in social supports and family ties are not statistically significant.

People also tend to report increased family contact and more friends immediately prior to exiting homelessness. Subjective assessments of the extent of social support however doesn't seem to vary until after exiting homelessness, which continues to improve with longer housed durations. There is also evidence of a reduction in negative social capital (i.e. the number of bad peer influences) the longer people are housed.

These patterns are most consistent with a story that family breakdown and bad peers are key causes of homelessness and improvements in relationships with family and friends help people exit homelessness. On the flipside there is only weak support of the hypothesis that homelessness leads to a deterioration in the size and quality of social networks on average.

Initiation to substance use

This chapter builds on the previous analysis of the relationship between homelessness and substance use provided in Research Report 4. Specifically, the focus here is on the association between first experiences of homelessness and the onset of substance use. The analysis initially reminds us of the high rates of homelessness and substance use experienced by JH respondents over their lifetimes. For most, the first experiences of homelessness and substance use occur during their teenage years. Interestingly, while those who experienced primary homelessness are more likely to have used substances over their lifetimes, they have a similar pattern of onset to other respondents: they did not start using earlier.

The extent to which the onset of substance use and the onset of homelessness are associated is crucial for understanding how the cycle of substance use and housing instability starts. This can help policy makers identify those at risk of entering a vicious circle of substance use and housing instability. Unfortunately, the descriptive evidence provided in this report does not provide a clear-cut answer to that question. First experiences of homelessness happen both before and after the onset of substance use for all substances. Homelessness and substance use probably contribute to one another such that the exact effect of each is not quantifiable in a descriptive framework. Further research is necessary to estimate how much first experiences of homelessness lead to substance use and vice versa.

Respondents who experienced adverse childhood circumstances experienced homelessness, smoked daily and used illegal substance more often than those respondents who did not experience such circumstances. Respondents who experienced conflicts with their parents, parents' death or separation, abuse and violence and caregivers' substance abuse, mental health issues and unemployment have higher rates of homelessness and substance use experiences. These experiences, especially conflicts with parents, also tend to be related with experiencing homelessness and substance use at a younger age.

Diet and food security

Access to nutritious food options seems to be an issue for JH respondents; they eat fewer fruits and vegetables and there is evidence that they are much more at risk of food insecurity than the general population. Males tend to have poorer diets than females, and the homeless more than the housed. However these differences are quite small.

The relationship between food insecurity and homelessness, although more pronounced than with overall diet, is still not huge. As our sample are overwhelmingly on low-incomes, it is possible that high housing costs in most Australian capital cities and major regional centres are contributing to the observed problems experienced by the housed.

It is unclear to what extent our results are driven by a lack of affordable healthy food options, or are due to other factors. What is clear is that while only a small proportion of JH respondents go without food on a regular basis, many more report being constrained in their food choices due to a lack of money. Further research is required to examine how these limitations impact on overall diets and, eventually, on health outcomes.

1 Introduction

This research report, the fifth in our series, presents important findings from the first five waves of the Journeys Home (JH) study, which were conducted over a 2-year period between September 2011 and November 2013. JH is tracking a national sample of individuals exposed to high levels of housing insecurity. It employs much more rigorous sampling methods than ever previously used.

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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, 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.

Primary homelessness includes all people without conventional accommodation (sleeping rough, living in squats, etc.). Secondary homelessness includes people who move frequently from one form of temporary shelter to another, and includes 'couch surfing' and use of emergency accommodation (refuges, shelters, etc). Tertiary homelessness refers to people staying in boarding houses on a medium- to long-term basis, defined as 13 weeks or longer. They are homeless because their accommodation does not have the characteristics identified in the minimum community standard.

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Before turning to our special topics, chapter 2 provides a summary of outcomes from the first five waves of the survey.[1] This includes details of response outcomes over the first five waves of the survey and a brief analysis of the prevalence and persistence of homelessness over the five waves. We then begin in Chapter 3 with the first of our in-depth analyses, examining the relationship between homelessness and employment. In Chapter 4 the complex relationship

[1] For further details of the JH survey design and wave 1 sample characteristics, see previous research reports available at: http://melbourneinstitute.com/journeys_home/research/reports.html.

between health and both entries to, and exits from, homelessness are investigated. This is followed by an examination of social supports and networks in Chapter 5. Chapter 6 extends prior analyses of links between substance use and homelessness by exploring the relationship between the onset of homelessness and the use of substances. The final feature article (Chapter 7) looks at the dietary patterns of JH respondents and whether there is evidence of food insecurity among respondents.

1.1 References

Chamberlain, C. & Mackenzie, D. (1992), 'Understanding contemporary homelessness: issues of definition and meaning', *Australian Journal of Social Issues*, 27(4), 274-97.

Chamberlain, C. & Mackenzie, D. (2003), *Counting the Homeless 2001*, Australian Bureau of Statistics, Canberra.

Chamberlain, C. & Mackenzie, D. (2008), *Counting the Homeless 2006*, Australian Bureau of Statistics, Canberra.

Scutella, R. Johnson, G., Moschion, J., Tseng, Y. & Wooden, M. (2012), *Journeys Home: Wave 1 Findings* (Journeys Home Research Report No. 1, Prepared for the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs), Melbourne Institute of Applied Economic and Social Research, Melbourne.

2 Journeys Home: the first five waves

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[a]	*Income support population*[b] *(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 27th May 2011.
b Those who were on income support at any time between 30th April 2011 and 27th 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 waves

Attempts were made to reapproach all 1682 JH participants in the follow-up waves of the study. A summary of response outcomes from waves 2 through 5 is provided in Table 2.2. As shown, re-interview rates are quite high and have been falling only slowly. Thus by the fifth wave, 2 years later, we were still interviewing more than 84 per cent of our initial responding sample.

Table 2.2: Response outcomes, waves 2 to 5

Outcome	*Wave 2*		*Wave 3*		*Wave 4*		*Wave 5*	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Completed interview	1529	90.9	1473	87.6	1454	86.4	1421	84.5
Out of scope[a]	22	1.3	47	2.8	52	3.1	51	3.0
Non-contact	68	4.0	70	4.2	85	5.1	78	4.6
Other non-response[b]	63	3.7	92	5.5	91	5.4	132	7.8
TOTAL SAMPLE (W1 respondents)	1682	100.0	1682	100.0	1682	100.0	1682	100.0

Notes: a Out of scope includes persons who: have died; are overseas; are in prison; or are in some other institution.

b 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 Household Income and Labour Dynamics in Australia (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 were not able to be

approached due to death, imprisonment or being overseas. In wave 5, a total of 51 out of the initial 1682 wave 1 respondents were identified as out-of-scope. This includes: 21 persons known to have died; 21 persons that were in prison or some other institution; and 9 persons reported to be overseas.

As we have pointed out in prior research reports, although response rates are high and attrition is low, response has not been random. Firstly, of the initial sample selected the characteristics of those deciding to participate in the study do differ from those not participating. Secondly, those not participating in follow up interviews have slightly different characteristics to those that remain in the study. Thus, in the analysis that follows we apply weights to account for potential non-response bias (see Melbourne Institute 2014 for a discussion of attrition and details of the construction of weights for the wave survey 5 data).

2.4 Prevalence of homelessness

Table 2.3 presents statistics describing the housing status of JH respondents at each wave. Here we see that the proportion of JH respondents who were homeless had declined at each interview – 27 per cent of JH respondents were homeless at their first interview, initially declining to 23 per cent at wave 2 and subsequently further gradually declining in each wave to end up at rate of 19 per cent in wave 5. The vast majority of JH respondents were housed at each point in time and the proportion increased at each interview. Around three quarters of those housed were in stable housing, with an overall 47 per cent in stable housing in wave 1 increasing to a rate of 57.9 per cent by wave 5.

Of those homeless at each point in time, the largest group was those experiencing what we consider to be tertiary homelessness, with primary homelessness relatively uncommon and experienced by less than 4 per cent of respondents at any point in time. However, whereas secondary and tertiary homelessness tended to become less common in later waves, rates of primary homelessness actually rose slightly in the first three waves to peak at 4.3 per cent in wave 3; subsequently declining to a rate of 2.6 per cent in wave 5.

Table 2.3: Housing status at each wave (%)

	Wave 1	*Wave 2*	*Wave 3*	*Wave 4*	*Wave 5*
Primary homeless	3.1	4.0	4.3	3.3	2.6
Secondary homeless	12.1	8.3	6.9	8.0	6.6
Tertiary homeless	12.3	10.5	11.1	9.3	10.2
Total homeless	*27.4*	*22.9*	*22.2*	*20.7*	*19.4*
Marginally housed	25.6	22.9	21.4	22.1	22.7
In stable housing	47.0	54.2	56.4	57.2	57.9
Total housed	*72.6*	*77.2*	*77.8*	*79.3*	*80.6*
Total (%)	100.0	100.0	100.0	100.0	100.0
Total (valid N)	1674	1512	1460	1439	1407

Note: Estimates weighted for non-random response in each wave.

Male respondents are more likely to be homeless than female respondents at all waves (Table 2.4. Likewise older respondents are more likely to be homeless than younger respondents at all waves, as are those who identify as Aboriginal or Torres Strait Islander (ATSI) relative to non-ATSI respondents. The table also shows that the declining trend in the prevalence of homelessness between waves 1 and 5 is of a similar magnitude for males and females. However, there are clear differences by age. Not only are young respondents (aged 15-24 years) the least likely to be homeless at each wave, they also show the greatest reduction in their prevalence of homelessness across the 5 waves: by wave 5 only 10 per cent of those aged 15-24 years were homelessness, which is almost half their wave 1 homeless rate of 18.8 per cent. This compares with a 25 to 30 per cent reduction in the homeless rate of those aged 25-44 years and years and 45 years and over respectively between wave 1 and wave 5. Aboriginals and Torres Strait Islanders also show a smaller reduction in their prevalence of homelessness between waves 1 and 5 than those not identifying as Aboriginal or Torres Strait Islander.

Table 2.4: Prevalence of homelessness by gender, age and ATSI (%)

	Wave 1	*Wave 2*	*Wave 3*	*Wave 4*	*Wave 5*
Males	33.4	26.9	27.4	27.0	24.1
Females	18.7	17.0	14.9	11.9	12.9
15 to 24 years	18.8	15.6	14.1	12.5	10.0
25 to 44 years	28.1	23.5	22.7	22.3	21.3
45 years plus	43.4	34.9	35.9	30.9	30.4
ATSI	33.1	28.1	25.2	24.2	25.3
Don't identify as ATSI	25.9	21.5	21.3	19.6	17.9

Notes: Gender, age and ATSI determined at wave 1 baseline interview. Estimates weighted for non-random response in each wave.

2.5 The persistence of homelessness

The homelessness prevalence rates presented in the previous subsection hide important information about those people moving into and out of homelessness in each wave. For instance we can't tell if the 24 per cent of homeless males at wave 5 are a subset of the 33.4 per cent homeless at wave 1 or whether they are entirely different people who entered homelessness at some other stage between waves 1 and wave 5. In this subsection we therefore present information that better utilises the longitudinal nature of the Journeys Home survey.

In Table 2.5 we present a summary of the total number of waves people are homeless, in total, and also by gender, age and indigenous (ATSI) status. Just over half of all respondents were not homeless in any wave (i.e., they were housed at all five waves). For the remaining half that did experience homelessness in at least one wave it is obvious that for many, homelessness is a short lived experience: 21.8 per cent were only homeless in one wave and a further 10.5 per cent in two waves. A sizeable 16.5 per cent however were homeless in 3 waves or more.

Table 2.5: Total number of waves homeless[a] (%)

	Total	*Males*	*Females*	*15-24 years*	*25-44 years*	*45+ years*	*ATSI*	*Non-ATSI*
Not homeless in any wave	51.2	46.3	58.1	59.2	49.1	39.2	42.0	53.4
1 wave	21.8	18.8	26.0	25.4	19.6	19.5	21.6	21.9
2 waves	10.5	12.6	7.6	8.3	11.7	12.3	17.0	9.0
3 waves	6.4	7.7	4.7	4.9	7.3	7.4	6.9	6.3
4 waves	4.1	5.9	1.5	1.5	5.3	6.9	7.8	3.2
All 5 waves	6.0	8.8	2.1	0.8	7.0	14.7	4.8	6.3
Total (valid N)	1243	656	587	485	501	257	211	1031

Note: a Estimates presented only for those who respond in all five waves and are weighted for non-random attrition.

Consistent with the findings on homelessness prevalence above, males are more likely to experience homelessness in at least one wave than are females. They are also more likely to experience homelessness more regularly than females; 22.4 per cent of males experienced homelessness for 3 waves or more compared to 8.3 per cent of females.

The table also shows that the total number of waves homeless tends to rise with age. Those aged 15-24 years were the least likely to experience homelessness in any wave, and when they did experience homelessness it was most often just for 1 wave. In comparison, over 60 per cent of those 45 years plus experienced homelessness in at least one wave, with almost half of these people (or 29 per cent of all people 45 years plus) homeless in at least 3 waves. This does not necessarily mean that older persons are more prone to homelessness in general. Remember that we are looking at a population that have been selected because they are particularly vulnerable to homelessness, and this population has quite a young age profile overall. Within this vulnerable population however, older respondents are much more likely to be homeless than the younger respondents and to be homeless for more of the survey period.

To get a better understanding of how persistent homelessness is, it is also important to examine whether those homeless at any particular point in time remain homeless in consecutive waves or not. This is the focus in Table 2.6. Here we present, for those persons homeless in each wave, what proportion were also homeless in follow up waves (which occur at roughly six monthly intervals). For instance we see that over half (57.3 per cent) of those homeless at wave 1 were also homeless six months later at wave 2; 45.9 per cent were homeless twelve months later at wave 3; 41 per cent were homeless eighteen months later at wave 4 and just over one third (35.6 per cent) were homeless two years later at wave 5.[2] Likewise 51.8 per cent of those homeless in wave 2 were also homeless 6 months later at wave 3, and so on.

The first thing to note about the estimates in this table is that between 40 and 48 per cent of those homeless at each wave are no longer homeless six months later. It is also evident that, of those initially homeless, fewer and fewer persons remain homeless the more time passes

[2] Note that this does not necessarily imply that respondents are continuously homeless throughout the entire period examined.

regardless of what wave they were initially homeless in. As we noted earlier of those homeless at wave 1 57.3 per cent remained homeless six months later, 45.9 per cent twelve months later, and by wave 5 two years later only 36 per cent were still homeless.

Table 2.6: Homelessness persistence (%)

	Persons homeless in:			
Also homeless:	*Wave 1*	*Wave 2*	*Wave 3*	*Wave 4*
6 months later	57.3	51.8	56.0	59.5
12 months later	45.9	49.8	51.9	.
18 months later	41.0	43.9	.	.
2 years later	35.6	.	.	.
Total	26.6	22.9	20.4	20.6

Note: a Estimates presented only for those who respond in all five waves and are weighted for non-random attrition. Therefore homeless rates overall may vary slightly from those presented in Table 2.3.

By Rosanna Scutella

2.6 References

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3 Homelessness and employment

Housing insecurity and instability is widely assumed to be a major risk factor when it comes to both securing new employment and maintaining existing employment. Conversely, job loss can be a trigger that results in increased housing instability. Nevertheless, data to support these propositions and to estimate the magnitude of such associations are sorely lacking in Australia. The Journeys Home (JH) survey, however, collects data each wave about not only the type of accommodation sample members reside in over the survey reference period, but also their experiences of employment and unemployment. It thus has the potential to help us identify and quantify such associations and, given its longitudinal nature, even provide some clues about which direction of causation is strongest.

In this chapter, we present summary data describing changes in the labour force and employment status of JH sample members. Particular focus is placed on associations with housing status and changes in housing status. We also examine the data collected on unpaid voluntary work, and test whether exposure to such activity may improve the prospects of subsequently securing paid employment.

3.1 Defining employment and labour force status

The approach used in JH to define employment, and labour force status more generally, is based on the labour force framework recommended by the International Labour Organization, and used by central statistical agencies throughout the world, including by the Australian Bureau of Statistics (see ABS 2001). In this framework the population is divided into two groups based on current activity: (i) the economically active population, or labour force; and (ii) the economically inactive. Within the former, the distinction is then made between persons who are employed and those who are unemployed. Embedded within this framework are a large number of rules for sorting populations into these different groups. Operationalising all of these rules within a survey, however, is both complicated and time intensive, and ultimately deemed not possible for JH. Instead JH employed only a subset of the questions used by the ABS in its Labour Force Survey (LFS). The subset chosen ensures that the definitions of employment and unemployment used here are based on the same key concepts as those used in the LFS, but nevertheless the measures constructed are not strictly comparable.

Employment

A person is classified as employed if that person either did any work in a job, business or farm in the 7 days prior to interview, or had a job business or farm but did not work in the preceding 7 days because of holidays, sickness or other reason (such as maternity leave or workers compensation).

While very similar to the LFS definition, but there are a number of differences. Most importantly, whether persons who did not actually work in the survey reference week would be considered employed would, in the LFS, also depend on how long they were away from work, whether they expected to return to work, and whether they were paid while not at work.

Note that anyone who reports that their employment arrangements involved no remuneration (that is, that they were an unpaid volunteer)[3] or that their job was a Mutual Obligation job or part of the Work for the Dole program is not classified as employed.

Unemployment

Following the ABS, and in line with International Labour Organization definitions, a person is classified as unemployed if they: (i) were without work in the 7 days prior to interview; (ii) had actively looked for work at any time during the four weeks preceding interview; and (iii) were available to start work in the week preceding interview. Active job search includes, among other things, applying for a job, answering an advertisement, being registered with Centrelink as a job seeker, checking or registering with an employment agency, and contacting friends or relatives to find a job.

The main difference from the definition used by the ABS in the LFS is that no information is collected in JH about persons who are waiting to start a job. These would be classified in the LFS as unemployed if they could have started in the survey reference week had that job been available then.

Persons not in the labour force

All persons not classified as either employed or unemployed make up the group of persons classified as not in the labour force.

Note that many persons in this 'not in the labour force' group may share similarities with the unemployed in that not only are they without work, but they would also like a job, and indeed if a suitable job were available, may well be in employment. However, since they did not take any active steps to find employment in the previous four weeks they are not classified as unemployed. Many of these people are often referred to as discouraged job seekers (or the hidden unemployed).

Very differently, there will be others within this group who are not looking for work because they are involved in other activities which may preclude employment, such as child care or education.

Full-time vs part-time employment

Among employed persons it is common to distinguish between those in full-time employment and those in part-time employment. This is potentially very important when analysing low-income groups in receipt of income support. All government income support payments permit recipients to earn very modest amounts of additional income without affecting the amount of income receipt, and thereafter the amount of benefit or pension paid is withdrawn gradually at some rate less than 100 per cent (the rate of which varies with the type of payment and recipient). We thus might expect many income support recipients to be classified as employed, but only in relatively short-hours jobs which do not affect benefit eligibility. A single adult without dependents in receipt of the Newstart Allowance, for example, would usually only be able to work about 2 hours per week in a minimum wage job

[3] Remuneration is not restricted to pay, and can include payment in kind.

before benefits began to be reduced, but as much as 28 hours per week before entitlement to any payment was foregone.[4]

Internationally, there is no consistency in the definition of part-time work. Here we follow the ABS convention and use a cut-off of 35 hours per week to distinguish full-time workers from part-time workers. However, unlike the LFS, this is based entirely on the number of hours a worker reports usually working in a week. [5] Thus a part-time worker is any employed person who reports usual weekly hours (in all jobs) to be less than 35, while a full-time worker is any employed person who reports their usual working hours per week to be 35 or more.

3.2 Labour force status: a static view

We begin our examination by presenting, in Table 3.1, a summary of the distribution of the JH sample by both labour force status and housing status at the time of each survey interview (as well as by gender). In line with the practice adopted throughout this Report, descriptive statistics have been adjusted using weights that attempt to correct for the effect of differential probability of response at each survey wave (see Bevitt et al. 2013).

As we know from previous reports (Scutella et al. 2012), only a minority of the JH sample was in any form of paid employment when the Journeys Home study commenced, with only 23 per cent of men and 20 per cent of women employed at wave 1. By wave 2 this fraction had risen noticeably, especially among men – 32 per cent of men and 23 per cent of women were in employment. After wave 2 the employment rate within the JH sample changed little, and at wave 5 stood at about 30 per cent for men and 22 per cent for women. Such employment rates are very low compared to population-wide estimates from the LFS. For example, over the period covered by the first fives waves of JH (September 2011 to November 2013) the employment-population ratio for all Australian men aged 15 to 64 averaged 78.0 per cent (seasonally adjusted), while for women it averaged 66.6 per cent.[6]

As would be expected, employment rates are higher among the housed than among the homeless. In wave 1 just under 17 per cent of homeless men were employed compared with 26 per cent of housed men. For women the comparable figures are 13 per cent and 21 per cent. By wave 5, however, the gap in these proportions had widened considerably; now only 15 per cent of homeless men and just 8 per cent of homeless women were in employment, compared with 34 per cent of housed men and 24 per cent of housed women. Such trends suggest that stable housing and employment may be linked. That said, the fact that employment rates remain so low among the housed also suggests that securing stable housing is, on its own, no guarantee of employment.

Not only are employment rates very low within the JH sample, so too are labour force participation rates (the proportion of persons either in employment or actively seeking employment). In wave 1 the labour force participation rate for male sample members stood at 57 per cent while for females it was just 45 per cent. By wave 5 the male rate had increased slightly, to 59 per cent, while the female rate fell, to 42 per cent. By comparison, labour force

[4] The exception to this is persons who because of persistently low income have accumulated Working Credits which enable them to earn more for a short time before their income support payment is reduced.
[5] In the LFS, meeting the definition of part-time requires both usual and actual hours worked in the survey reference week to be less than 35.
[6] The source for this figure is ABS, *Labour Force Australia* (cat. no. 6202.0), Time series spreadsheet Table 18 (available from: www.abs.gov.au).

Table 3.1: Labour force status, wave 1 to wave 5 (%)

Labour force status	*Wave 1*	*Wave 2*	*Wave 3*	*Wave 4*	*Wave 5*
Males: Homeless					
Employed	16.7	19.3	19.1	19.1	15.4
Full-time	9.0	8.4	7.9	10.1	6.8
Part-time	7.7	10.2	10.8	9.0	8.2
Unemployed	31.0	25.7	26.2	28.6	31.4
Not in the labour force	51.9	55.0	54.7	52.3	52.6
Sub-total	100.0	100.0	100.0	100.0	100.0
Males: Housed					
Employed	25.8	35.8	35.6	33.4	34.2
Full-time	13.0	17.2	17.7	16.3	19.2
Part-time	12.3	17.5	17.3	17.1	14.7
Unemployed	35.3	30.1	29.4	30.5	28.8
Not in the labour force	38.9	34.1	35.0	36.2	37.0
Sub-total	100.0	100.0	100.0	100.0	100.0
All males					
Employed	22.8	31.5	31.1	29.5	29.7
Full-time	11.7	14.9	15.0	14.6	16.3
Part-time	10.8	15.6	15.5	14.9	13.1
Unemployed	33.9	29.0	28.5	30.0	29.4
Not in the labour force	43.2	39.6	40.4	40.5	40.7
Total	100.0	100.0	100.0	100.0	100.0
Females: Homeless					
Employed	13.0	13.9	17.4	9.1	8.1
Full-time	7.1	5.6	4.3	4.7	0.0
Part-time	5.9	8.3	13.1	4.4	8.1
Unemployed	19.5	22.3	18.2	24.8	18.6
Not in the labour force	67.5	63.9	64.5	66.1	73.3
Sub-total	100.0	100.0	100.0	100.0	100.0
Females: Housed					
Employed	21.2	22.6	27.5	25.2	24.2
Full-time	6.3	7.0	11.0	8.9	9.1
Part-time	14.3	15.4	16.3	15.9	14.6
Unemployed	26.0	18.8	17.5	16.8	20.3
Not in the labour force	52.7	58.7	54.8	58.0	55.4
Sub-total	100.0	100.0	100.0	100.0	100.0
All females					
Employed	19.7	21.1	26.1	23.4	22.1
Full-time	6.5	6.8	10.1	8.4	8.0
Part-time	12.7	14.2	15.8	14.5	13.8
Unemployed	24.8	19.4	17.6	17.7	20.1
Not in the labour force	55.5	59.6	56.2	58.9	57.7
Total	100.0	100.0	100.0	100.0	100.0

Notes: Proportions have been weighted to account for non-random survey response and attrition.
Columns do not always sum to 100 due to cases where labour force status cannot be derived from the information collected.

participation rates within the wider Australian population (aged 15 to 64) averaged 82.5 per cent and 70.5 per cent for men and women, respectively, over the relevant survey period.

And again there are sizeable differences between the homeless and housed sub-samples. Among males, participation rates have, over all five survey waves, averaged 46 per cent for the homeless compared with 64 per cent among the housed. Among females the comparable proportions are 33 per cent and 43 per cent.

Education and labour force participation

Non-participation in the labour force is not necessarily an undesirable outcome, especially if time is being spent on some other productive activity such as education. Among male non-participants, however, relatively few are studying – just 5 per cent in wave 5. Among female non-participants the proportion studying is larger – 17 per cent. This gender difference is largely driven by the different age profiles of our male and females samples, with relatively more of our female sample being under 21 years compared to our male sample (at the time of the wave 5 survey, 24 per cent of female respondents were under 21 years of age compared with just 11 per cent of the male sample).[7] Further, the education participation rate declines to just 12 per cent if we exclude persons in part-time study. And regardless, for both sexes the proportion of homeless respondents involved in educational study is trivial.

Other reasons for non-participation in the labour force

The main reason given for non-participation in the labour force, by both housed and homeless respondents, and especially by men, is illness, injury or disability. In wave 5, for example, this was cited by around 65 per cent of all male non-participants and 40 per cent of all females. Women were also relatively likely to cite child care responsibilities. Another 40 per cent of all female non-participants cited either a preference to care for children or some other child-care related reason as the main reason for not seeking active employment.

3.3 Entries into and exits out of employment: a dynamic view

Transitions in labour force status

JH is a longitudinal study and thus its comparative advantage lies not in the presentation of data about the situation of survey respondents at a single point in time, but in assessing changes over time. Tables 3.2 and 3.3, therefore, report transitions in labour force status for men and women, respectively, over the course of the JH study. To interpret the figures presented, consider the first panel in Table 3.2. This reports rates of transition between wave 1 and wave 2 for the men in the sample. Thus almost 60 per cent of those men in full-time employment in wave 1 were still in full-time employment at wave 2. Another 13 per cent were now working part-time, almost 19 per cent were unemployed and just under 9 per cent were neither working nor looking for work. The panels that follow report similar wave-on-wave transition rates between waves 2 and 3, 3 and 4, and 4 and 5.

[7] While men outnumber females in the JH sample, this is not the case among young people (persons under 21), and is a direct reflection of young women being much more likely to be have been flagged by Centrelink staff as homeless or at risk of homelessness at the time the sample was drawn.

Table 3.2: Transitions in labour force status, males (%)

	Full-time employed	*Part-time employed*	*Un-employed*	*Not in the labour force*	*Total*
Wave 1 to Wave 2					
Full-time	59.6	12.9	18.9	8.5	100.0
Part-time	22.1	48.6	14.1	15.3	100.0
Unemployed	10.6	15.6	52.2	21.6	100.0
Not in the labour force	4.1	7.5	17.4	71.1	100.0
Total	15.0	15.5	28.9	40.6	100.0
Wave 2 to Wave 3					
Full-time	61.8	12.3	18.0	8.0	100.0
Part-time	15.5	46.3	19.9	18.3	100.0
Unemployed	7.3	13.7	53.9	25.1	100.0
Not in the labour force	3.6	7.5	15.7	73.2	100.0
Total	15.5	16.1	27.6	40.8	100.0
Wave 3 to Wave 4					
Full-time	61.3	13.6	14.3	10.8	100.0
Part-time	11.2	44.6	25.9	18.3	100.0
Unemployed	8.5	15.8	56.6	19.1	100.0
Not in the labour force	4.2	4.0	15.9	75.9	100.0
Total	14.9	15.3	28.6	41.2	100.0
Wave 4 to Wave 5					
Full-time	65.9	11.4	14.3	8.4	100.0
Part-time	15.8	53.1	19.1	11.9	100.0
Unemployed	12.1	7.0	58.7	22.3	100.0
Not in the labour force	2.0	2.0	20.4	75.6	100.0
Total	16.4	12.8	30.1	40.7	100.0
Average 6-monthly transition rate					
Full-time	62.2	12.6	16.4	9.0	100.0
Part-time	15.8	48.0	20.1	16.1	100.0
Unemployed	9.7	13.2	55.1	22.0	100.0
Not in the labour force	3.5	5.4	17.3	73.8	100.0
Total	15.4	15.0	28.8	40.8	100.0
Wave 1 to Wave 5					
Full-time	39.9	17.9	20.3	22.0	100.0
Part-time	19.7	29.8	32.1	18.4	100.0
Unemployed	19.8	12.4	42.1	25.7	100.0
Not in the labour force	6.0	7.6	20.9	65.6	100.0
Total	16.2	13.0	29.4	41.4	100.0

Note: Proportions have been weighted to account for non-random survey response and attrition.

Table 3.3: Transitions in labour force status, females (%)

	Full-time employed	*Part-time employed*	*Un-employed*	*Not in the labour force*	*Total*
Wave 1 to Wave 2					
Full-time	42.5	21.5	15.0	21.0	100.0
Part-time	9.9	55.4	14.0	20.8	100.0
Unemployed	7.0	15.5	43.0	34.5	100.0
Not in the labour force	1.9	3.2	11.2	83.7	100.0
Total	6.8	13.9	19.5	59.8	100.0
Wave 2 to Wave 3					
Full-time	65.6	23.9	5.2	5.4	100.0
Part-time	14.4	54.4	14.9	16.3	100.0
Unemployed	9.6	17.1	39.7	33.7	100.0
Not in the labour force	1.6	4.5	11.7	82.1	100.0
Total	9.6	16.0	17.2	57.2	100.0
Wave 3 to Wave 4					
Full-time	60.0	13.4	18.1	8.5	100.0
Part-time	8.4	54.1	16.6	20.9	100.0
Unemployed	5.2	14.0	45.9	34.9	100.0
Not in the labour force	1.6	3.8	10.2	84.4	100.0
Total	8.6	14.6	18.0	58.8	100.0
Wave 4 to Wave 5					
Full-time	57.5	28.4	8.6	5.5	100.0
Part-time	8.9	49.3	20.4	21.3	100.0
Unemployed	6.7	11.5	49.8	32.0	100.0
Not in the labour force	0.0	4.3	12.3	83.4	100.0
Total	7.6	14.1	20.3	58.0	100.0
Average 6-monthly transition rate					
Full-time	56.6	21.6	12.0	9.8	100.0
Part-time	10.4	53.4	16.4	19.8	100.0
Unemployed	7.2	14.7	44.4	33.8	100.0
Not in the labour force	1.3	3.9	11.4	83.4	100.0
Total	8.1	14.6	18.8	58.5	100.0
Wave 1 to Wave 5					
Full-time	32.3	28.1	14.8	24.8	100.0
Part-time	14.9	33.5	19.6	31.9	100.0
Unemployed	8.6	15.6	33.0	42.8	100.0
Not in the labour force	2.9	5.8	14.5	76.8	100.0
Total	8.1	13.6	19.9	58.4	100.0

Note: Proportions have been weighted to account for non-random survey response and attrition.

An average of these 6-monthly transition rates is presented in the penultimate panel. Perhaps unsurprisingly, given the relatively short 6-month window between survey waves, the labour force status of most men is unchanged between successive survey waves. Nevertheless, it is the rates of mobility among this group that are most striking. Thus we can see that around 25

per cent of all full-time workers, and around 36 per cent of part-time workers, will be out of employment six months later. Similarly, around 23 per cent of unemployed men will be in a job six months later. There is, however, an obvious difference between the unemployed and other jobless people. As we would expect, persons that have ceased job search at one point in time are much less likely to be employed six months later; only around 9 per cent of men not in the labour force were employed six months on.

The relatively high rates of job turnover among employed persons within this sample should not be a surprise given their average characteristics, and especially relatively low levels of education and job-related skills. Further, and relatedly, many in this group when they do find employment only obtain casual employment; on average, almost 57 per cent of sample members are in casual jobs when in paid employment.

Finally, we present transition rates between wave 1 and wave 5. As we would expect, mobility rates are much higher when measured over a longer interval; in this case two years. Thus we can see that around 41 to 42 per cent of employed men are jobless two years later, while 32 per cent of unemployed men will have transitioned into work. Again, rates of transition into employment from outside the labour force are relatively low – just under 14 per cent will be working two years later.

This exercise is then repeated for women in Table 3.3. A comparison of Tables 3.2 and 3.3 reveals that the women in the JH sample are more likely than men to leave the labour force, and perhaps more significantly, a labour force exit is much more likely to be a longer lasting (and possibly permanent) state for women (presumably reflecting differences in child care responsibilities). Thus just 5 per cent of women outside the labour force will be in paid work six months later, and another 11 per cent will be seeking work.

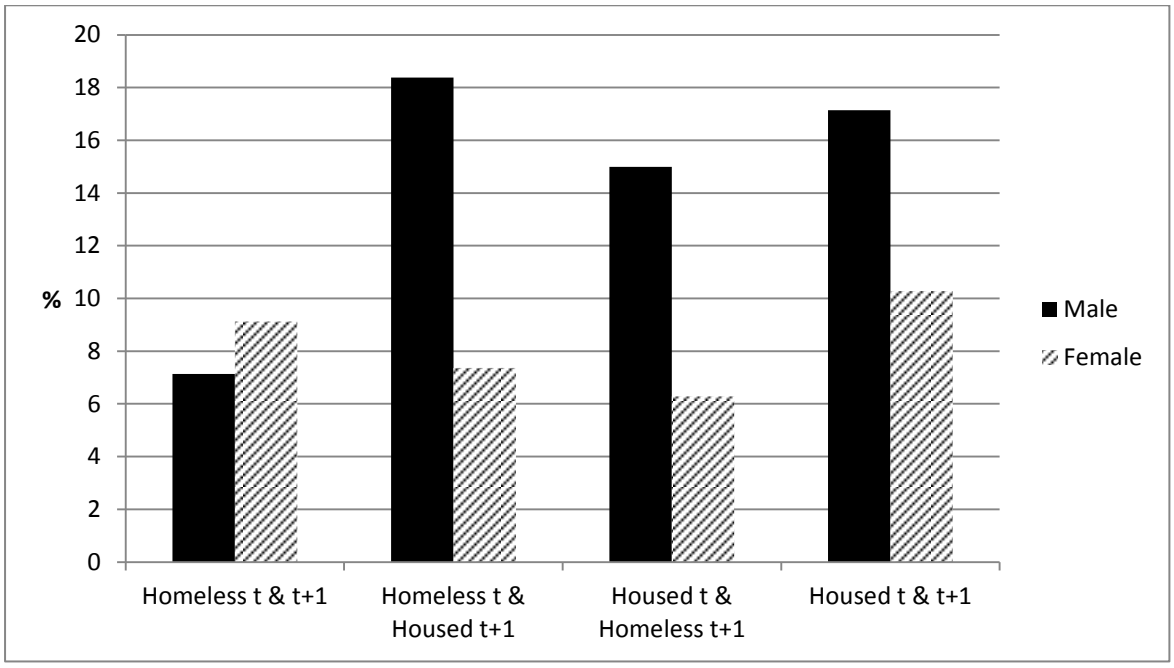
Transitions in labour force status and changes in housing status

But are labour force transitions related in any way to housing status? In Figure 3.1 we consider all persons not in employment at one wave (wave t) and report the proportion that transitioned into employment by the next wave (wave t+1), cross-tabulated by their housing status at both of these waves. We further distinguish between men and women.

Obvious associations are not apparent. Our expectation was that movements out of homelessness into housing would be associated with increased transitions into employment. Among men homelessness at both time periods is associated with relatively low rates of transition into employment – around 7 per cent. However, there is no convincing evidence to suggest that movements in and out of homelessness are associated with either improved or reduced chances of employment. While it is true that the rate of transition into employment is highest for men who became housed, this level is not markedly different from the rate for men who became homeless between waves (18 per cent vs 15 per cent).

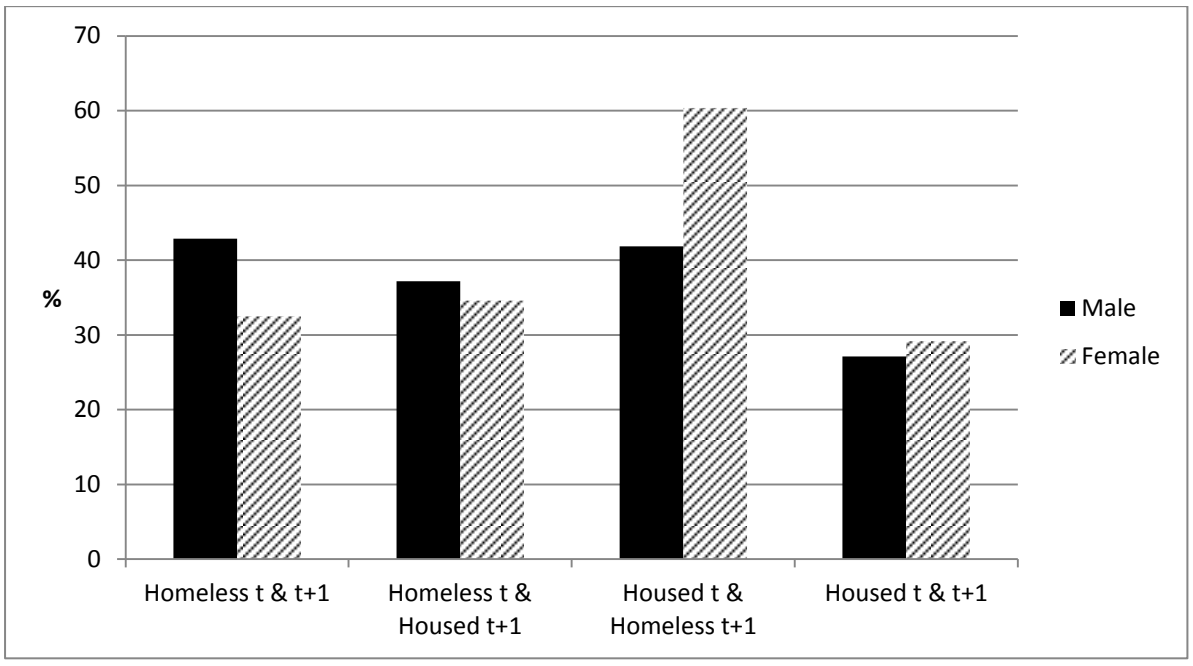
Among women the absence of associations is even more obvious. The variation in average transition rates into employment by housing status is both relatively small (varying between 6 per cent and 10 per cent) and far from anything approaching statistical significance.

Figure 3.1: Average 6-monthly transition into employment by housing status and sex (% of persons not in employment at time t)



Note: Proportions have been weighted to account for non-random survey response and attrition.

Figure 3.2: Average 6-monthly transition out of employment by housing status and sex (% of persons in employment at time t)



Note: Proportions have been weighted to account for non-random survey response and attrition.

We next consider the sub-samples of persons in employment and calculate average 6-monthly rates of transition rates out of employment.[8] These are presented, again cross-tabulated by housing status, in Figure 3.2. For women we see a markedly higher rate of transition out of employment for persons who became homeless between survey waves, suggesting that homelessness is associated with employment in some systematic fashion, though in which way the causation might run is not obvious. In this case, however, we do not observe any such association for men.

Dynamic regression analyses

We next estimated dynamic linear fixed effects regression models of indicators of both homelessness and employment.[9] The aim of these models is to: (i) identify associations between homelessness and employment after conditioning out other influences on these outcomes including some time-varying characteristics and, most importantly, all individual traits that are fixed; and (ii) through the inclusion of a lagged term, draw inferences about causality. The approach used is similar to that used by McVicar et al. (2014) in their analysis of the association between substance use and homelessness within the JH sample.

We consider two binary indicators of homelessness: one based on the broad (cultural) definition of homelessness, and one which distinguishes primary homelessness. We also consider two alternative definitions of employment: any employment and full-time employment. The control variables included are: age, total household debt, whether divorced or separated since the previous interview, whether most of the respondent's friends are homeless, whether the respondent has at least monthly contact with members of their family, whether the victim of any sexual or physical violence during the 6 months prior to interview, a measure of risky drinking (three drinks or more on average every day) measured at the time of the previous interview, whether had used illegal (street) drug use (also measured at the time of the previous interview), and survey wave dummies.

A summary of the key parameter estimates are presented in Table 3.4. The outcome variable for the specification in column (1) is homelessness, broadly defined, which is regressed against current employment status and employment status lagged one period (as well as the

[8] We also examined exits out of the labour force. Rates of exit out of the labour force are much lower, but the pattern of associations with changes in housing status are similar to those reported here for transitions out of employment.

[9] The fixed effects estimator is a commonly used method, especially in economics, for estimating relationships between variables in data sets with multiple observations on the same decision unit (individuals in this case). It begins with a regression model of the form:

$$Y_{it} = \mu_i + X_{it}\beta + \varepsilon_{it}.$$

where Y is some outcome of interest that varies both across individuals (i) and over time (t), X is a vector of time-varying explanatory variables, and ε is the standard normally-distributed error term.

Its key defining feature is the inclusion of an individual-specific constant (μ_i). It is equivalent to a conventional least squares regression model but with the addition of a dummy variable for every individual in the data set. All estimates are thus identified by within-person differences in variables and not differences across persons. The effect of this is to hold constant all features of the individual that are fixed or at least do not vary much over the period observed. Good examples here include natural endowments and abilities, and even education attainment.

The model we estimate also includes lagged values of the critical employment and housing status variables, and hence why we describe it as a dynamic model. Note, however, that in none of our specifications do we include a lagged dependent variable, which gives rise to additional estimation complications because of the correlation between this variable and the error term.

For a good text book exposition of econometric panel data models, see Wooldridge (2010; especially Chapter 10).

control variables, the results of which are not reported). Both of the employment coefficients are small in magnitude and neither are statistically significant. In column (2) primary homelessness is used as the outcome variable. Contemporaneous employment is now negatively and statistically significant, but the estimated magnitude remains very small. More importantly, the lagged term remains completely unimportant – it is effectively zero. There is thus no support at all here for the notion that changes in employment status 'cause' changes in homelessness status.

The specifications in columns (3) and (4) reverse the relationship between employment and homelessness, making employment the outcome variable. Contemporaneous relationships are again negative, and when homelessness is restricted to its primary forms the estimate is both moderately large and statistically significant. But again the insignificant coefficients on the lagged values suggest that changes in employment are not preceded by changes in homelessness status.

In the bottom half of the tables (columns 5 to 8) we repeat the estimation in columns (1) to (4) after replacing the employment indicator with a binary measure indicating whether employed full-time or not. The results are similar to those presented in columns (1) to (4). Contemporaneous relationships between homelessness and full-time employment are negative but modest in magnitude (and statistically significant only when attention is restricted to primary homelessness), but again there is little evidence to suggest this relationship might be causal (in either direction).

We also tested whether results differ between men and women. These results (not reported in any detail here) indicate that the observed negative contemporaneous relationship is restricted to men. Among women the coefficients are always statistically insignificant, and this is not simply the result of increased imprecision of estimates; the coefficients are mostly much smaller for women than for men. Nevertheless, it remains the case that among men there is no evidence of large negative effects of the lagged term.

3.4 Duration of employment

The preceding analysis focused on changes in employment status measured at discrete points in time. While this is superior to analysis based on observations drawn at a single point in time, it still suffers from the weakness that it does not take into account transitions in employment status (and housing) that occur between survey interview dates. While it is obviously impossible to collect survey data on a continuous time basis, the JH survey instrument does includes questions which ask respondents to recall all of their paid jobs held between survey interviews (roughly a 6-month gap) and to estimate (albeit very approximately) how many months, weeks or days they spent in paid employment over this period.[10] It is this measure of time spent in paid employment that is the focus of this section. More precisely, we convert this estimate into a proportion by taking the estimated time spent in employment (converted into an estimate of days) and dividing by the amount of time elapsed between survey interviews.

[10] The survey instrument only accepted answers in either months, weeks or days, and not combinations of these. Further, an answer in days was capped at 20 and an answer in weeks at 26. Thus larger values will be less precise than smaller values.

Table 3.4: Employment and homelessness -- dynamic linear fixed effects regression results (coefficients, standard errors in parentheses, and probabilities of significance)

Explanatory variables	*Outcome variable*			
	Homeless at t	*Primary homeless at t*	*Employed at t*	*Employed at t*
	(1)	*(2)*	*(3)*	*(4)*
Employed at t	-.021 (.016) P=.190	-.014 (.007) P=.035		
Employed at t-1	.003 (.017) P=.866	-.002 (.005) P=.625		
Homeless at t			-.026 (.018) P=.159	
Homeless at t-1			-.009 (.018) P=.296	
Primary homeless at t				-.105 (.048) P=.027
Primary homeless at t				.054 (.040) P=.173
	Homeless at t	*Primary homeless at t*	*Full-time employed at t*	*Full-time employed at t*
	(5)	*(6)*	*(7)*	*(8)*
Full-time employed at t	-.036 (.020) P=.078	-.020 (.009) P=.019		
Full-time employed at t-1	-.001 (.024) P=.968	.001 (.007) P=.896		
Homeless at t			-.020 (.012) P=.106	
Homeless at t-1			.013 (.013) P=.296	
Primary homeless at t				-.080 (.032) P=.012
Primary homeless at t				.026 (.033) P=.422

Summary statistics describing this measure, for the balanced panel of respondents (persons observed at all five survey waves), are reported in Table 3.5.11 Consider men. The average proportion of time between survey intervals spent in paid employment by men in our sample is just 36 per cent. In large part, this low proportion is a direct consequence of the relatively large fraction of men (28 per cent) who are never in paid work. When we condition on reporting at least one episode of paid employment, the mean fraction of time in employment jumps up to 79 per cent. The distribution of these proportions is also quite skewed, with more than half the male sample reporting some employment also reporting continuous employment.

Table 3.5: Proportion of time in paid employment between interview waves – summary statistics by housing status and sex

	Homeless at t and t+1	*Homeless at t, housed at t+1*	*Housed at t, homeless at t+1*	*Housed at t and t+1*	*Total*
Males					
Mean % of time employed	16.8	29.5	28.8	41.0	35.8
% never employed	44.2	29.6	31.5	24.1	28.0
Mean % of time employed, conditional on employment	80.0	59.1	66.9	82.9	79.4
Percentile distribution (conditional)					
10th	29.6	12.5	9.9	32.0	29.6
25th	63.1	41.5	40.0	67.4	57.1
50th (median)	100.0	52.2	83.2	100.0	100.0
75th	100.0	92.2	96.0	100.0	100.0
90th	100.0	100.0	100.0	100.0	100.0
Females					
Mean % of time employed	12.8	16.4	12.8	27.8	25.3
% never employed	63.9	45.7	44.1	43.3	44.6
Mean % of time employed, conditional on employment	59.0	61.1	42.6	84.3	81.0
Percentile distribution (conditional)					
10th	10.2	7.8	6.3	42.6	28.8
25th	11.5	51.9	6.3	69.4	64.8
50th (median)	66.0	55.0	24.4	100.0	100.0
75th	100.0	100.0	77.1	100.0	100.0
90th	100.0	100.0	100.0	100.0	100.0

Note: Sample restricted to balanced panel (that is, persons observed at all five survey waves).

[11] We use the balanced panel so as to ensure that the gap between interviews is roughly of the same order of magnitude for all respondents (that is, around 6 months).

However, it is again difficult to identify marked associations with changes in housing status. Men that are homeless at two successive interview waves are more likely to be continuously out of employment, but there are no marked differences between the other three sub-groups reported in this table. And when we condition on experiencing any employment, those men who are homeless at both periods are actually less likely to spend periods out of employment than those men that change their housing status.

Similar to men, women that are homeless at two successive interview waves are also more likely to be continuously out of employment, while the means for the other three sub-groups are much the same. However, somewhat differently to men, conditional on experiencing any employment, those women that move into homelessness between survey waves report the lowest average proportions of time in employment.

Again we attempt to identify evidence of causal associations by estimating dynamic fixed effects regressions. A summary of key parameter estimates are provided in Table 3.6. Estimates from four specifications are reported. In column (1) we report the key main coefficient estimate from simply regressing homelessness against the proportion of time employed since the previous interview. The coefficient is negative, indicating in line with a priori expectations that homelessness and employment are inversely related, but the estimate

Table 3.6: Employment duration and homelessness – Dynamic linear fixed effects regression results (coefficients, standard errors in parentheses, and probabilities of significance)

Explanatory variables	*Outcome variable*			
	Homeless at t	*Primary homeless at t*	*Proportion of time employed since t-1*	*Proportion of time employed since t-1*
	(1)	*(2)*	*(3)*	*(4)*
Proportion of time employed since t-1	-.030 (.020) P=.137	-.017 (.008) P=.027		
Homeless at t			-.022 (.013) P=.097	
Homeless at t-1			-.035 (.015) P=.023	
Primary homeless at t				-.080 (.034) P=.034
Primary homeless at t-1				-.025 (.076) P=.371

is weakly significant at best (not significant in a two-tailed test, but weakly significant, at the 90 per cent confidence level, in a one-tailed test). In column 2 we use primary homelessness as the outcome variable. The estimated coefficient is also negative but quite small (and about half the magnitude of the coefficient reported in column 1). However, it is now statistically significant at conventional levels. We thus have evidence that employment reduces the likelihood of remaining homeless.

In columns (3) and (4) we make the employment duration variable the outcome, and regress against it homelessness at both time t and time t-1. All coefficients are negative and moreover, in the case of homelessness at least, the coefficient is statistically significant at conventional levels. How large is the size of the effect? The estimated coefficients in column (3) suggest that a homeless person will experience a lesser employment rate (defined here as the percentage of time) equivalent to about 3.5 percentage points. This compares with average proportions of time in employment of between 30 per cent and 36 per cent (see Table 3.5).

What we still cannot determine, however, is in which way the causation runs. The results presented in Table 3.6 are most consistent with the hypotheses that causation runs in both directions, but that the effect might be strongest running from homelessness to employment.[12]

Finally we again tested whether effects were similar for men and women. They are not. Results are presented in Table 3.7 and suggest three main conclusions. First, it is only among men that employment and housing status are significantly related. Among women the estimated coefficients are effectively zero. Second, for men the magnitude and significance of associations is much stronger when time in employment is the outcome variable. (Indeed, the effect is statistically insignificant when homelessness is the outcome.) In other words, the evidence suggests that the effect of homelessness on employment is much stronger than the reverse. Third, the magnitude of this negative effect of past homelessness on employment among men is quite large; men that are homeless will experience employment rates over the following 6 months that are 6 percentage points lower than otherwise comparable housed men.

3.5 What about voluntary employment?

Many Australians undertake voluntary work. It is often presumed that the motivation for such activity is the satisfaction derived from contributing to worthwhile causes, even if they had to be asked to volunteer (Freeman 1997). Alternatively, volunteering may be an investment activity that can lead to the development of new skills and contacts that can then enhance the prospects of paid employment in the future (Polidano, Harris and Zhao 2007). It is this latter investment hypothesis that we examine here. That is, we are interested in knowing whether the undertaking of unpaid voluntary work by JH sample members, and especially those who are also not in work, has any positive impact on the chances of securing employment in the future.

[12] But note that when we replace the binary measure of homelessness with a measure of the proportion of time spent in homelessness (that is, the analog of the proportion of time spent in employment variable) no significant associations are found.

Table 3.7: Employment duration and homelessness by sex – Dynamic linear fixed effects regression results (coefficients, standard errors in parentheses, and probabilities of significance)

Explanatory variables	*Outcome variable*			
	Men		*Women*	
	Homeless at t	*Proportion of time employed since t-1*	*Homeless at t*	*Proportion of time employed since t-1*
	(1)	*(2)*	*(3)*	*(4)*
Proportion of time employed since t-1	-.028 (.026) P=.281		-.007 (.035) P=.846	
Homeless at t		-.022 (.018) P=.240		-.005 (.022) P=.823
Homeless at t-1		-.061 (.022) P=.005		-.006 (.022) P=.783

We begin by reporting, in Table 3.8, figures on the incidence of volunteer work (defined as help willingly given in the form of time, service or skills to a charity, club, organisation or association) by both housing and employment status. For most of the survey period the 6-month overall rate of volunteering has hovered around 12 per cent. National population estimates of the incidence of volunteering, based on the General Social Survey, are periodically reported by the ABS, with the most recent figures being for 2010 (ABS 2011). A 12-month volunteering rate of 36.2 per cent is reported for the population aged 18 years or older. If we pool JH data across successive waves we can calculate comparable 12-month volunteering rates. These are 19.9 per cent in 2012 (waves 2 and 3) but only 13.4 per cent in 2013 (waves 4 and 5). The lower rates in the JH sample are to be expected given the tendency for volunteer rates to be lowest in low socio-economic areas. More surprising is the tendency for volunteering rates to be higher among the homeless than the housed. One potential explanation for this may be the greater levels of contact that the homeless have with charities. Also in contrast to the national population-wide incidence rates, the employed within the JH sample are not more likely to be involved in volunteering activities than persons not in employment.[13] Indeed, the employed members of the JH sample typically have lower volunteering rates. Given employment is measured at a point in time and volunteer activity over the preceding 12 months, this suggests that recent volunteer activity has no beneficial effects for employment prospects, at least in the short-run.

[13] The ABS (2011) reports volunteering rates that vary according to labour force status as follows: full-time employed, 37.9 per cent; part-time employed, 44.3 per cent; unemployed, 19.6 per cent; not in the labour force but not retired, 29.8 per cent; retired, 31.0 per cent.

Table 3.8: Incidence of volunteering in previous 6 months by housing status, employment status, waves 1 to 5 (%)

Housing status	*Survey wave*				
	1	*2*	*3*	*4*	*5*
Housed					
Employed	13.7	8.9	11.1	11.1	11.8
Not employed	14.0	11.7	11.0	13.1	12.3
Total	13.9	10.9	11.0	12.5	12.2
Homeless					
Employed	13.5	20.9	12.9	8.6	7.1
Not employed	16.2	11.6	18.4	12.7	14.3
Total	15.7	13.2	17.4	12.0	13.3

In Table 3.9, we present estimates of the frequency and extent of volunteer activity by persons reporting undertaking any volunteer activity, averaged over the 5 survey waves. Two-thirds of those homeless people who reported doing at least some unpaid voluntary work in the preceding six months, and 61 per cent of volunteers who were housed, reported that such activity occurred at least on a weekly basis. Weekly hours of volunteering averaged around 10 among the homeless and 8 among the housed, but the distributions were highly skewed (with a long tail of persons reporting quite large numbers).

In short, only a relatively small minority of JH sample members report regularly undertaking unpaid voluntary work (about 10 per cent), but those that do are quite active.

But is there any evidence that unpaid voluntary work can improve the chances of an individual securing paid employment? We again test this hypothesis by estimating a simple dynamics fixed effects regression model. The outcome variable is paid employment and the explanatory variables of most interest identify whether the respondent undertook any paid employment in the recent past (both the previous 6 months and the 6-month period prior to that). Voluntary work status was never statistically significant at conventional levels. Further, even if we are prepared to ignore statistical significance (given the relatively small effective sample sizes we are dealing with), it is only volunteer status during the past 6 months (which includes any current activity) that attracts a coefficient of even modest size, and it is negative (-.028). In other words, even if we were prepared to ignore the relatively high probability that the measured relationship is a statistical artefact, we would draw the conclusion that, in the JH sample at least, voluntary work and paid employment tend to be substitutes.

We then experimented with different specifications of the voluntary work variable. Notably we included a measure that identified not just whether a respondent undertook any voluntary work over the 6-month reference period but also whether that activity occurred on at least a weekly basis. In this specification we find a statistically significant and negative coefficient for voluntary work over the previous six months. This finding provides stronger evidence for the hypothesis that voluntary work and paid employment are substitutes for people in the JH sample.

Table 3.9: Frequency and hours of volunteer activity among volunteers, by housing status and employment status (average waves 1 to 5)

	Homeless			*Housed*		
	Employed	*Not employed*	*Total*	*Employed*	*Not employed*	*Total*
Frequency of volunteering (%)						
< once a month	12.1	20.4	19.1	24.8	17.8	19.6
At least once a month	13.6	5.8	7.0	14.8	9.2	10.7
At least once a fortnight	13.5	5.9	7.1	10.1	7.8	8.4
At least once a week	60.8	67.9	66.8	50.2	65.3	61.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Mean weekly hours of volunteering	10.9	10.0	10.1	5.1	8.6	7.7

3.6 Conclusion and discussion

The results presented in this chapter arguably throw up more questions than they answer. When we focussed just on labour force transitions, results are mostly in line with expectations. Notably, persons that ceased job search at one point in time were found to be much less likely to be employed six months later, and rates of transition into employment from outside the labour force were relatively low. These findings are entirely consistent with the notion that there is state dependence in labour force status.

Obvious associations between changes in housing status and changes in employment status, however, were much more difficult to identify. Panel regression analysis uncovered evidence of negative contemporaneous relationships between homelessness and employment, but the size of these relationships were quite small. More importantly, there was little evidence to suggest this relationship might be causal. But once we switched our attention to a measure of the proportion of time spent in employment, evidence of a statistically significant association between employment and changes in housing status was uncovered, but only among men. Further, while it is difficult to identify the direction in which causation runs, we drew the conclusion that the path from changes in homelessness to employment is strongest. This thus might be seen as providing support for the 'housing first' policy approach.

Finally, we also examined whether voluntary work might provide an avenue to assist JH sample members into paid employment. We found that the incidence of voluntary work is relatively low, but among those that do undertake voluntary work there was no evidence that future employment chances were enhanced. Indeed, for those that undertake voluntary work on a frequent basis (at least weekly) we found that the likelihood of paid employment was reduced. This finding might be of particular interest, and of concern, given the inclusion of volunteer work for non-profit organisation as an eligible activity under the Work for the Dole program.

Perhaps the most important question to emerge from this analysis is why there was so little evidence of relationships between changes in housing and changes in employment status. Is it because there really is no such relationship, or could it be that the small size of the JH sample

and the short duration of the panel (together with and the amount of noise inherent in the data) make it difficult to detect such relationships? And if there is no relationship, why is that? For example, could it reflect a lack of incentive to find employment, or alternatively is the capacity to both find and maintain a job largely independent of housing status?

That said, relationships between employment duration and changes in homelessness are found, though arguably the magnitude of these relationships are modest. Most importantly, this relationship was found to be restricted to men. Why is that? Are women better supported (e.g., by service providers) when their housing circumstances change?

By Mark Wooden and Abraham Chigavazira

3.7 References

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4 Health and homelessness: associations between physical health and entry, duration and exits from homelessness

4.1 Introduction

The poor physical and general health of the homeless has long been a subject of concern and controversy among policy makers and services providers. More than two decades of epidemiological, clinical and social studies of the homeless have documented the high incidence of acute and chronic health conditions compared to the adequately housed (Herrman et al. 1989; Winkleby et al. 1992; Toro et al. 1995; Kermode et al. 1998). However, while studies of this type are useful for program and service planning, they systematically bias results in a number of ways.

First, the high rates reported in many studies are, in part, a consequence of drawing samples from the currently homeless. Sub-groups, such as the long-term homeless, are more likely to be sampled than those who experience short episodes of homelessness (Shinn, Knickman & Weitzman 1991; Link et al. 1994). Numerous studies indicate that the physical and mental health of the long-term homeless is markedly poorer than those whose experience of homelessness is relatively short (Culhane & Metraux 2008; Chamberlain & Johnson 2013). In fact, studies from the US of the formerly homeless suggest 'that a large number of fairly "ordinary" Americans have experienced homelessness' (Phelan & Link 1999, p. 1336), and for them economic, and not medical, issues were the main problem. By over-sampling the long-term homeless, the prevalence of chronic health conditions will be over-estimated.

A second issue is that reports of the poor health of the homeless can lead 'to the confounding of causes of the occurrence of an event with the causes of its persistence' (Phelan & Link 1999, p. 1337). Without longitudinal data that includes the housed, as well as both the short-term and long-term homeless, it is difficult to tell whether poor physical health is more strongly associated with the causes of homelessness or its persistence. This has important policy implications. If, for instance, homelessness is largely caused by poor health, then the preventative policy responses will be quite different from that required if homelessness is driven by structural factors, such as housing market conditions.

From earlier reports in this series, we know that the health of JH respondents is poor when compared to the general population. More specifically, the JH sample report higher rates of mental illness, psychological distress, substance misuse, as well as poorer physical heath (Scutella et al. 2012; Chigavazira et al. 2013; Johnson et al. 2013). However, at this stage relatively little is known about the relationship between physical health, both self-reported and diagnosed, and the onset of homelessness, the duration of homelessness, and exits from homelessness. Nor do we know whether the physical health of the homeless differs from those who are vulnerable to homelessness. In this chapter we use five waves of longitudinal data to address the following questions:

- Are there differences between the physical and general health of the housed and the homeless in the JH sample?
- Is there any evidence to suggest that poor physical health leads to homelessness?
- Does the prevalence of poor physical health increase the longer people remain homeless?
- Once individuals have exited homelessness, is there any evidence their physical health improves?

With respect to the first question, JH is just one of a number of studies that provide evidence showing that the health of homeless individuals is poorer than the general community. However, using the general population as a point of comparison is problematic as the literature indicates that health is strongly correlated with income and that the general physical health of poorer households is worse than the broader community. A number of explanations are offered for this, including: poorer nutrition; poorer living conditions; poorer working conditions; and less money to meet health care costs. Thus, if we want to 'separate the factors uniquely associated with homelessness from those associated with the more general problems of poverty' (Toro et al. 1995, p. 280), then low-income households are a more appropriate comparison group. Unlike many studies interested in the physical health of the homeless, the JH sample contains people vulnerable to homelessness – that is, people who are housed but on low incomes. It is these people that we use as the relevant comparison group.

Building on the first question, we are interested in establishing if physical health is a common 'cause' of homelessness. If physical health does indeed 'cause' homelessness, then we should observe an increase in the proportion of individuals with physical health problems as the onset of homelessness approaches. We are, however, cautious about making claims about causality. Although poor physical health can make it difficult to maintain housing, it is also the case that the stress of losing a home might create or exacerbate existing health problems.

With respect to the third question, we assume that the prevalence of poor physical health will increase the longer people remain homeless. Here we build on existing literature that notes many health problems are, in part, caused by homelessness. Research from a variety of sources tells us that living on the street is harsh (Snow & Anderson 1993; Robinson 2010; Wasserman & Clair 2010). We also know that substandard accommodation, such as boarding houses, provide limited facilities for good personal hygiene. Infectious diseases are often the result of limited washing facilities or a lack of clothes. Also, homeless people often cannot afford food, or lack cooking facilities, and the resulting poor nutrition can significantly affect their health.

Our final line of enquiry focuses on the benefits of housing. Existing research notes the psycho-social benefits of housing, in particular improved psychological functioning (Kearns et al. 2000; Hiscock et al. 2001; Padgett 2007). While considerable research points to the physical health benefits of housing, we recognise that the relationship between housing and health is not a straightforward one – issues to do with the quality, stability, location and affordability of housing greatly affect the relationship between housing and health (Foster et al. 2011). Consequently, our interest is in whether any damage to peoples health is 'undone' if they maintain their housing, rather than examining the various benefits of housing per se.

4.2 Method

We start by examining whether an individual's health differs by their homeless status. We then investigate whether there are changes in the distribution of individuals' health outcomes

depending on the duration of their homeless and housed spells. Here we do two things. First, to assess the relationship between health and entry into homelessness, as well as the impact of homelessness itself, we examine individuals' health outcomes by the amount of time preceding homelessness (for the housed who subsequently become homelessness), and by the amount of time homeless (for the homeless) at each interview. Second, to assess the relationship between health and exiting homelessness, we do the reverse. Here we group individuals by how much time they have until they exit homelessness (for the homeless) and then by how long since they exited homelessness (if they were housed). Multiple health outcome measures are used, some of which may only appear after a certain period of time in unfavourable circumstances.

We must emphasise that we cannot unequivocally determine the direction of causality between health and homelessness in this descriptive analysis. Instead, our aim is to examine whether patterns in health outcomes on entry to, and exit from, homelessness are suggestive of any particular direction of causality being more important than the other. For instance, if poor health is the cause of homelessness, we would expect to see health outcomes of individuals worsen as entry into homelessness approaches. Similarly, we would expect to observe an improvement in health outcomes prior to exiting homelessness, all other things equal.

On the other hand, if poor health is a consequence of homelessness, we would not expect to see health outcomes varying systematically prior to entering or exiting homelessness. Instead, we should observe health outcomes deteriorating after entering homelessness. However, if healthier persons exit homelessness earlier than others (i.e., health is a cause of homelessness) this will also lead to an association between poor health and the persistence of homelessness. Thus, to shed light on the direction of causality between health and homelessness, investigating both entry and exit patterns are extremely important.

It is also possible that as a homeless spell approaches, the stress of losing one's home might create or exacerbate existing health problems. In this situation, homelessness (or the threat of homelessness) will be the cause of health problems. However, if poor health is simply a consequence of homelessness one would not expect to see health improvements prior to exiting homelessness.

4.3 Data and definitions

Sample selection

We restrict our base sample to only those individuals who completed all five waves of the study, thus ensuring each individual have very similar observation windows. Thus a total of 6180 observations, representing 1120 individuals, are included in the base sample. Observations with missing information on an outcome variable were excluded from the base sample when that specific outcome was analysed. The maximum exclusion is 1.3 per cent of the base sample.

Health outcomes

Seven self-reported health outcomes are investigated in this chapter. These are now described.

- Self-assessed poor health. This is derived from asking respondents to assess their general health as being "excellent", "very good", "good", "fair" or "poor". We focus on those observations reporting "poor" health, as this is the group that are likely to require substantial medical resources.

- Physical/emotional health interfered most of the time. This measure is derived from respondents' answers to the question: "During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your daily activities?" Again, we focus on those whose activities were most disrupted by their health problems.

- Long-term health/disability causing restrictions. This is derived from a binary choice question that asked respondents whether they have a long-term health condition, impairment or disability that restricts their everyday activities, and whether the condition had, or is likely to, last for 6 months or more.

- Have one or more physical health problems in the past 6 months. There are 9 health problems that are prevalent among the homeless population (or those in extreme poverty) that are included in the survey.[14] Respondents were asked whether they have ever had any of these health problems in the past 6 months.

- Ever diagnosed with chronic health condition. Interviewers went through a list of 14 chronic physical health conditions and asked each respondent whether they had ever been diagnosed with any of the conditions by health professionals in the first wave and whether they have been diagnosed these conditions in the past 6 months in subsequent waves.[15] Since these health conditions are unlikely to be cured, once a respondent reports that they have been diagnosed with the condition in the past, it is then treated as a health condition in all subsequent waves. Therefore, we do not look at the changes in this outcome measure over the elapsed time of homeless or housed spells.

- Doctor visits. Respondents were asked whether they have ever been to see a doctor or health professional about their health in the past 6 months. They were also asked whether the visit was for a mental or physical health problem (or both), but we do not distinguish between these two types of visits.

- Satisfaction with health. This is a measure of an individual's subjective satisfaction with their health, scored on a 0 to 10 point scale, where 0 means "totally dissatisfied" unsatisfied and 10 mean "totally satisfied".

Defining homeless and housed spells

We draw on the JH housing calendar to calculate both homeless and housed spells. The housing calendar records every move, including the time of the move and the type of accommodation moved to, since the previous interview. The timing of each accommodation

[14] The 9 health problems are: sight problems not corrected by glasses or contact lens; hearing problems; migraines; stomach ulcers; eye infections; ear infections; skin infections; pneumonia; and gastro problems.
[15] The 14 conditions are: stroke; heart or circulatory conditions; diabetes; asthma; chronic bronchitis or emphysema; cancer; liver problems; arthritis, gout or rheumatism; epilepsy; kidney disease; hepatitis c; chronic neck or back problems; intellectual disabilities; and acquired brain injury.

move was recorded in a 10-day block. This allows us to construct detailed homeless and housed spells.

In using the calendar data we need to depart from the way the cultural definition of homelessness is operationalised from other chapters in this report as the calendar does not provide as many details of people's accommodation as their current accommodation details provide. Therefore in this chapter, and in Chapter 5, individuals were classified as homeless if they were sleeping rough, squatting, or staying in emergency or crisis accommodation, staying in the home of friends, a caravan, a mobile home, a hotel, a motel or a boarding house. If people move between different types of homelessness they are treated within the same homeless spell. Those accommodation types that are classified as housed include participant's own place, parents' home and homes of other relatives, foster care, residential care or kin care. For those people that are in institutions (i.e. in a hospital, nursing home, health or other treatment facility or in a juvenile or youth detention centre, adult prison or a remand centre) we categorise them based on where they were living prior to moving into these institutions. If they were housed prior to moving into one of these forms of accommodation, the time they were in the institution is considered as housed. In contrast, if they were previously homeless, the time they were in the institution is classified as homeless.[16]

Determining time to homeless entry and time since homeless entry

First we determine where people at each wave of the survey are in their homeless trajectory in relation to homeless entry. For those observations where individuals are housed we look forward in time and determine their *time to homeless entry.* That is we examine how much time it takes until they enter their next spell of homelessness. Based on this information we group housed observations into three categories: 'time to homelessness unknown'; '6 months or more to homeless entry'; and '0 to 5 months to homeless entry'. Observations for those people whom we do not observe entering homelessness after that point in time are generally included in the 'time to homelessness unknown' category. However, those observations where we observe enough of that individual's housing situation to know that they were not homeless for at least 6 months from that point in time, are included in the category '6 months or more to homeless entry'.

For those observations where individuals are homeless, we calculate the time since they last entered homelessness (i.e., the length of time between the commencement of their current spell and their interview date). We then classify these observations into three categories: '0 to 5 months since homeless entry'; '6-11 months since homeless entry'; and '12-23 months since homeless entry'. If the commencement of the current homeless spell is unknown (i.e., it is left censored) we code the observation into a fourth category, 'homeless entry unknown'.

We then look at the distribution of health outcomes according to where people are in relation to homeless entry. This provides a more dynamic picture of the ways in which health outcomes are associated with time to and time from homeless entry.

[16] For the accommodation at interview, more detailed housing types are recorded and then classified into those 13 categories listed above by the JH survey team. Owner occupied housing, private rental, public housing or renting from community or cooperative housing groups are treated as being the participant's 'own place'. See Bevitt et al. (2013) for details.

Determining time to homeless exit and time since homeless exit

We apply a similar approach in relation to exiting homelessness. For those observations where individuals are homeless we determine their *time to homeless exit* and for those housed their *time since homeless exit*.

For those observations where individuals are homeless, we look forward in time and determine how much time it takes until they exit their current homelessness spell. *Time to homeless exit* is therefore calculated as the length of time between that individual's current interview date and the date they exit their current spell of homelessness. Observations for those people whom we do not observe exiting homelessness after that point in time are included in the 'time to homeless exit unknown' category.

Where individuals are housed we calculate the time since they last exited homelessness. *Time since homeless exit* is therefore calculated as the length of time between that individual exiting their previous homeless spell and their current interview date. Where we do not observe that individual's prior homeless spell, or the date that they exited this prior spell cannot be determined (i.e., their housed spell is left censored) these observations are categorised as 'time since homeless exit unknown'.[17]

This information is then used to classify all observations into seven categories − time to exit unknown, 6 months or more to homeless exit, 0 to 5 months to homeless exit, 0 to 5 months since homeless exit, 6 to 11 months since homeless, 12 months or more since homeless exit. Those observations whose time to homeless exit are unknown but are known to be homeless for at least 6 months are re-classified to the category '6 months or more to homeless exit'. Likewise, those observations who we know have been homeless for more than 12 months are re-classified into the category '12 months or more since homeless exit'.

Graphical illustration of time to/since homeless entry and homeless exit definitions

To help understand how we determine time to / since homeless entry and time to / since homeless exit, Figure 4.1 presents examples of different homeless spells (shown as the solid horizontal line) for three people (A, B and C). Each individual has five interview observations. Some observations were classified as homeless and some observations classified as housed. For each observation, there are two measures − time since homeless entry and time to homeless exit for the homeless observations; and time to homeless entry and time since homeless exit for the housed.

We first illustrate how we determine the time to homeless entry for the housed observations. For the wave 1 observation of person A, the time to homeless entry is the length of time between the wave 1 interview and point 'a' and, for wave 2, it is the length between wave 2 and point 'a'. For wave 5, we do not know whether there will be any homeless spell after the observation window ends (wave 5 interview), so the time to homeless entry is unknown. Similarly, for the wave 4 and wave 5 observations of person C, the times to homeless entry are unknown. However, for the wave 4 observation, we check whether the time between

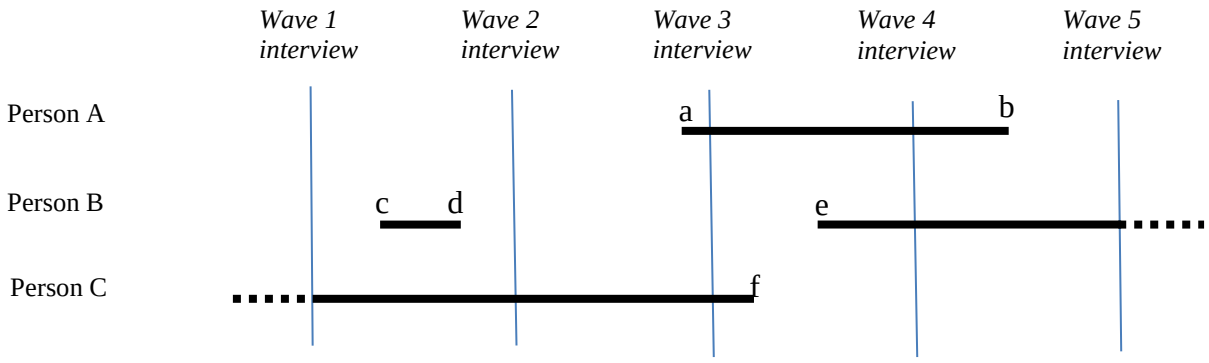
[17] For the housed spells that are ongoing at wave 1, length in current accommodation is used as the left censoring point instead of the wave 1 interview date. However, we do not do the same for the homeless spells as the duration in one type of accommodation is very unevenly distributed across different type of homeless accommodation. If we use the start of current accommodation as censoring point, the results will biased toward homeless people, such as those boarding house residents, who often remain in the one place for long periods of time.

homeless exit (point ‘f’) and the wave 5 interview is greater than 6 months. If so, we know that the time to homeless entry is at least 6 month for wave 4 observation. We then re-classify this observation to 6 month or more to homeless entry, although the exact length is unknown.

Person B has two homeless spells. The time to homeless entry for Person B’s wave 1 observation is the length of time between the wave 1 interview and the closest homeless entry point ‘c’. The time to homeless entry for wave 2 observations is the length of time between the wave 2 interview and point ‘e’.

We next illustrate how we determine time since homeless entry for homeless observations. Person A is homeless at their wave 3 and wave 4 interviews. At their wave 3 interview their time since entry is the length of time from point ‘a’ to the wave 3 interview date. Likewise their time since entry at their wave 4 interview is the length of time from point ‘a’ to their wave 4 interview date. For person B, their first short homeless spell lies between their wave 1 and wave 2 interviews so this spell would not be captured by the analysis of time since homeless entry. This does not present any concerns as there will be other short spells that run across one interview and there should not be any systematic difference between short spells that run between interviews and those that run across interview dates. Person A’s second homeless spell is treated in the same way that person A’s spell is treated. For person C, the homeless spell commenced some time prior to wave 1 but we do not know when; the time since homeless entry is therefore unknown for the first three waves of person C.

Figure 4.1: Example of homeless spells



We next use Figure 4.1 to show how we determine the time to homeless exit for each person at each interview observation. For person A, the time to homeless exit at wave 3 is the length of time from the wave 3 interview to point ‘b’, and at wave 4 it is the length of time from the wave 4 interview to point ‘b’. For the wave 4 and wave 5 observations of person B, the homeless spell starting at point ‘e’ is right censored. This means we do not know when the spell will end, so the time to homeless exit is unknown. However, if the length of time between point ‘e’ and the wave 5 interview date of person B is greater than 6 months, then we know the time to homeless exit will be at least 6 months at their wave 4 interview. As such, we then re-classify person B’s wave 4 observation as ‘6 months or more to homeless exit’.

Finally we illustrate how, for observations where people are housed, we determine the time since they last exited from homelessness. For observations where we know when their most

recent homeless spells end: such as for person A at wave 5; person B at wave 2 and wave 3; and person C at wave 4 and wave 5, the time since homeless exit is defined as the length of time between the end of their most recent homeless spell date (point 'b' for person A, point 'd' for person B and point 'f' for person C) and each respective interview date. For observations where we do not observe any previous homeless spell during the survey period, such as for person A at wave 1 and 2 and for person B at wave 1, time since homeless exit is unknown.

4.4 Analysis and discussion

This section examines the seven measures of general health discussed earlier to address the question of whether there are any differences between the physical health of the housed and the homeless. We distinguish between the homeless who are in some form of accommodation and those without any accommodation. As we use the cultural definition of homelessness we refer to those without accommodation as primary homeless and those in some form of temporary accommodation or boarding houses as the secondary / tertiary population.[18] Our reasoning behind this approach is that we want to investigate whether the effects of street life are more damaging to individuals' general health than moving between temporary forms of accommodation.

When we examined the various measures of health outcomes across the three groups, presented in Table 4.1, three patterns stand out. First, and most notably, the health of the primary homeless is always worse than the secondary/tertiary homeless, or those who are housed. Second, the secondary/tertiary homeless generally report better general and physical health than the primary homeless, but slightly worse than individuals who are housed. Third, the differences between both homeless groups and the housed are relatively modest, although most of the differences between the secondary/tertiary homeless and the housed are statistically significant.

[18] The secondary /tertiary homeless are operationalised slightly differently to other chapters in this report. Here secondary and tertiary homeless includes those who stayed in emergency or crisis accommodation, home of friends, caravan, mobile homes, hotel, motel or boarding houses, regardless of how long they are in their current accommodation.

Table 4.1: Health, by homeless status

	Primary homeless	*Secondary / Tertiary Homeless*	*Housed*	*Total*
Self-assessed health – poor (%)	16.8	15.2	11.4	12.2
Health interfered – most of the time (%)	32.6	31.1	24.9	26.3
Long-term health condition / disability (%)	55.0	52.3	45.2	46.8
Ever diagnosed with chronic health conditions (%)	47.4	50.8	44.4	45.7
Had at least one of 9 common health problems in past 6 months (%)	89.8	86.8	84.2	84.9
Visited doctor in past 6 months (%)	67.4	72.1	72.5	72.3
Health satisfaction score	6.1	6.1	6.2	6.2
Numbers of observations	133	1186	4833	6152

When respondents were asked to rate their health, approximately 17 per cent of the primary homeless assessed it as poor, while 15 per cent of the secondary / tertiary homeless also assessed their health as poor. Among those who were housed, 11.4 per cent assessed their health as poor. We found little difference between the proportion of primary and secondary / tertiary homeless who report that their health interfered with their day-to-day activities (32.6 and 31.1 per cent respectively), and once again the proportion was slightly lower among the housed (24.9 per cent). There is a nearly 10 percentage point difference between the primary homeless and the housed who reported that long-term health problems caused restrictions (55.0 per cent and 45.2 per cent respectively). The differences between the secondary / tertiary homeless and housed groups are smaller (7.1 percentage points).

In terms of chronic health conditions ever diagnosed by health professionals, just under half (47.4 per cent) of the primary homeless reported they had one or more conditions, as did 50.8 per cent of the secondary/tertiary homelessness. Among the housed, just under 44 per cent reported they had one of more of these conditions. As for those health problems that are more common among the homeless population, over 80 per cent of our sample had at least one problem in the past 6 month, with the primary homeless being highest (89.8 per cent) followed by the secondary/tertiary homeless (86.8 per cent) and the housed (84.2 per cent). This suggests that these conditions are also common for people who were vulnerable to homelessness. The low income and quality of housing may have contributed to the prevalence of these health conditions. However, further analysis is required to understand the causes.

Although the primary homeless have the worst health across all five indicators, the proportion that visited a doctor in the past 6 months was the lowest among the three groups (4.6 percentage points lower than the housed). However, the differences are modest and not statistically significant. Nevertheless, considering that the primary homeless have the worst health, further investigation into the types of doctors utilised by the primary homeless is warranted. If, for instance, the primary homeless are more likely to visit hospital emergency

departments rather than doctors and other health professionals, this imposes a heavy burden on the more expensive hospital system.[19]

Few studies directly compare the physical health of the homeless with those who are poor but housed. One study by Toro et al. (1995) compared three groups – the currently homeless (n=59), the previously homeless (n=31) and the never homeless poor (n=54). They reported that the physical health symptoms did not differ markedly between the three groups. Our findings also suggest there is relatively little difference between the general and physical health of the homeless and low income housed individuals. Three key points emerge from this. First, our findings substantiate existing evidence that homeless and low-income households generally have poorer physical health than the broader community. Second, the physical health of the homeless is not that much different from poorer members of the community. Third, although the health of the primary homeless is the poorest, the difference between the primary and secondary / tertiary homeless is small.

The physical health of the homeless is poorer than the housed but it is not as distinctive a characteristic as might be expected. This implies that the causal link between the health and homelessness is relatively weak. However, many of the housed observations experienced homelessness recently, and consequently comparing health at a point-in-time may not be very informative. In order to establish if physical health does indeed 'cause' homelessness, we need to consider health at different stages of homeless spells. In the next section we use the unique housing calendar data to address the question of 'cause', as well as the association between duration, housing and the respondents' physical health.

4.5 Homelessness entry and duration

While the difference between the physical health of the poor and the homeless is relatively small, the high proportion of both groups reporting poor health raises questions about physical health and its relationship to the onset and duration of homelessness. In the following section we address two questions. First, is there evidence to suggest that poor physical health leads to homelessness? Second, does the prevalence of poor physical health increase the longer people remain homeless?

We start, in Table 4.2, by examining the proportion of people reporting various forms of physical health problems in two periods prior to becoming homeless – six or more months prior to the onset of homelessness and 0 to 5 months prior to the onset of homelessness. If physical health problems do indeed 'cause' homelessness we should observe a deterioration in health outcomes between the two periods, with worse health for those observed in the 0-5 month period prior to homelessness.[20]

In the table, we also examine whether there is any evidence that individuals' physical health gets worse the longer they remain homeless, that is at 0-5 months, 6-11 months, and 12-23 months since becoming (entering) homelessness. If health does indeed get worse, the proportion of people reporting health problems should increase in each period, with the highest rates seen in the 12-23 month category.

[19] The primary homeless in JH have a slightly higher rate of being admitted to hospital. However, we do not have information about how many people visited emergency wards.

[20] Note that we draw on six of the seven health outcome measures used in the previous section, omitting the measure of chronic health conditions (as this does not vary over time).

Table 4.2: Health outcomes prior to, and subsequent to, homeless entry

	Time to entry unkn	*6m+ prior to entry*	*0-5m prior to entry*	*0-5m since entry*	*6-11m since entry*	*12-23m since entry*	*Time since entry unkn*
Self-assessed health – poor (%)	11.8	10.6	12.5	11.6	18.8	20.3	15.8
Health interfered – most of the time (%)	25.0	23.5	30.4	31.2	31.3	30.5	31.3
Long-term health condition / disability (%)	48.2	41.3	46.1	47.1	47.8	52.5	55.0
Had at least one of 9 common health problems in past 6 mths (%)	44.1	43.2	50.8	44.9	46.4	59.3	52.2
Visited doctor in the past 6 mths (%)	73.3	71.3	73.7	67.7	71.4	81.4	72.2
Health satisfaction score	6.1	6.2	6.1	6.3	6.1	4.9	6.1

What we see in Table 4.2 is that the proportion of people reporting poor health at various stages prior to the onset of homelessness is quite small and does not change much as homelessness approaches; approximately 11 per cent report their health to be poor 6 or more months prior to entering homelessness, and 12.5 per cent report poor health immediately prior to the onset of homelessness (0-5 months prior). The difference in the proportion of people reporting poor health is not statistically significant.

A slightly stronger pattern is evident in relation to homeless duration. Here we observe that as homeless duration increases there is also an increase in the proportion of people reporting poor health. More specifically, we find that 12.5 per cent of individuals who have been homeless for less than 6 months are in poor health. This subsequently increases to 18.8 per cent among those homeless for 6-11 months and then to 20.3 per cent among those who had been homeless for between 12 and 23 months.

Turning to our second health outcome measure, we find that the proportion who reported that their health interfered with day-to-day life increased from 23.5 per cent in the period 6 months or more prior to the onset of homelessness to 30.4 per cent in the 0-5 month period. There are two possible explanations for this pattern. One explanation is that people whose health conditions limit their activities may have a higher risk of entering homelessness. The other possible explanation is that the stress of losing their home may have caused serious health concerns, especially with respect to emotional health. However, when we look at how this health outcome measure changes with homeless duration there is little difference irrespective of how long people had been homeless; just under a third report that physical health interfered with daily life, which is not very different from the rate immediately preceding homelessness.

In terms of the proportion that reported long-term health problems caused restrictions, the measure increased nearly five percentage point in the period 0-5 months prior to the onset of homelessness compared with 6 months or more prior to the onset of homelessness (46.1 per cent versus 41.3 per cent). The proportion increases slightly over the next 12 months, followed by a more notable increase (4.7 percentage points) for those whose homeless duration are 12-23 months. However, although the increase in the final period is not trivial in magnitude, it is statistically insignificant (possibly due to the small sample size).

The percentage reporting they suffered from one or more health problems increases by 7.6 percentage points as homelessness approaches, from 43.2 per cent to 50.8 per cent. The rate decreases slightly at entry and then increases again as duration of homelessness increases. Those who have been homeless for 12-23 month are almost 13 percentage points more likely to have physical health problems than those who have been homeless for 6-12 months. It is not entirely clear why there is a sudden rise in the last period, although it may be that it takes time before the damaging physical effects of homelessness manifest.

We also observe a similar pattern with respect to the relationship between doctor visits and homeless entry. The proportion who visited doctors increased slightly in the two periods prior to homeless entry. It subsequently decreased before increasing again. Those who have been homeless for more than 12-23 months are much more likely to visit a doctor than others.

Finally, we examine overall satisfaction with health. Although the participants' scores with respect to satisfaction with their health declines between the two periods prior to the onset of homelessness, it subsequently improves, albeit slightly, among those who had been homeless for up to 11 months. For those who had been homeless for 12 months or more it declines markedly to 4.9.

Overall, the findings indicate that the proportion reporting physical health problems are generally higher the closer individuals are to the onset of homelessness. However, not all changes are statistically significant. While there is no conclusive evidence that poor physical health is a direct cause of homelessness, it is, in varying degrees, implicated in the onset of homelessness for some individuals nonetheless. The association between homeless duration and physical health is slightly stronger. Overall, we can see that, with the exception of one measure, the proportion of people with poor physical health trends upwards the longer people remain homelessness.

4.6 Exits from homelessness

Research indicates that stable, good quality housing is linked to positive self-esteem and improved psychological functioning (Wong & Piliavin 2001) and better general health (Smith & Mallison 1997). To assess the association between housing and physical health among the JH sample, this section examines whether the proportion of people reporting various indicators of poor health improves the longer people are housed. More specifically, in Table 4.3 we examine whether the proportion reporting poor physical health in the two periods prior to exiting homelessness declines once people are housed.

In the two periods prior to exiting homelessness (6 plus months and 0-5 months), 16.1 per cent and 11.1 per cent of participants' respectively reported that their health was poor. During the first six months after exiting homelessness the rate increased slightly to 12.3 per cent but then declined to just under 11 per cent in both the 6-11 months and 12 months or more periods. The data suggest a very slight improvement in general health over time, but one that is not statically significant.

There are more marked, and statically significant, improvements in the extent to which individuals' health problems no longer interfere with their day-to-day activities once they are housed. These improvements start to occur soon after exiting homelessness and continue the longer people remain housed. In the period 0-5 months prior to exiting homelessness, 32.1per cent reported that health problems interfered with day-to-day life all or most of the time.

Table 4.3: Health outcomes prior to, and subsequent to, homeless exit

	Time to exit unkn	*6m+ to exit*	*0-5m to exit*	*0-5m since exit*	*6-11m since exit*	*12m+ since exit*	*Time since exit unkn*
Self-assessed health – poor (%)	17.6	16.1	11.1	12.3	10.6	10.8	11.8
Health interfered – most of the time (%)	30.8	31.0	32.1	27.7	22.7	23.4	26.0
Long-term health condition / disability (%)	52.9	55.2	48.9	46.9	41.7	40.7	49.6
Had at least one of 9 common health problems in past 6 months (%)	52.5	50.3	47.8	46.7	43.1	42.6	45.8
Visited doctor in the past 6 mths (%)	70.0	71.5	74.0	71.3	72.7	70.6	74.8
Health satisfaction score	6.0	6.0	6.2	6.1	6.2	6.2	6.1

The proportion declines to 27.7 per cent in the first five months following an exit from homelessness, and declines consistently in each subsequent period – among those who were housed for 12 or more months, just under one quarter (23.4 per cent) reported that health problems continued to interfere with their day-to-day life most of the time.

We observe an almost identical pattern with respect to the impact of long-term health conditions. Among those whose exit from homeless is over 6 months away, 55.2 per cent report their health conditions create restrictions; at 0-5 months from exiting homelessness the proportion drops to 48.9 per cent. Once out of homelessness the proportion declines from 46.9 per cent at 0-5 months to 40.7 per cent among those who have been housed for 12 months or more.

Turning our attention to whether there is any change over time in the proportion of respondents reporting they suffered from a range of physical health conditions, including heart or circulatory conditions, diabetes, asthma, cancer, chronic bronchitis or emphysema, hepatitis C or other kidney diseases, the findings in Table 4.3 indicate a steady improvement for those approaching homeless exits and among those housed. However, the improvement is not large (4.1 percentage points) and only marginally significant (at the 10% level) when comparing those have been housed over 12 months with those who were just housed.

There is not a great deal of change in the proportion who visited a medical doctor or other health professionals. Prior to exiting homelessness approximately three quarters reported visiting a doctor. Once housed the proportion remains relatively constant, fluctuating around 70 per cent. Given the poor health reported by many of the participants, the high proportion visiting medical practitioners is no surprise. Similarly, we did not find any significant changes in average health satisfaction scores.

Overall, the data provides limited support for the conclusion that housing is associated with better health, and that the longer people are housed the greater the improvement in their physical health. Nonetheless, it is important to reflect on the point that many of the physical health conditions reported in the JH sample are chronic issues and these often take time to resolve, if indeed they can be.

4.7 Conclusion

In this chapter we focused on the health of JH participants. Poor health is commonly reported among the homeless, but as this chapter and a number of previous JH reports have shown, it is not just the health of homeless JH participants that is poor – the overall health of the JH sample is considerably worse than the general population. Poor health among low-income households remains a major and ongoing policy issue.

The evidence presented in this chapter indicates some variation in the health of the homeless, with the primary homeless appearing to be in poorer health than both the secondary/tertiary homeless and the housed. This is not entirely surprising as the primary homeless are more exposed to extreme conditions. Nonetheless, it is worth remembering that the primary homeless are a relatively small subgroup of the homeless population.

This information, while important from a broader policy perspective, is not entirely new. Furthermore, it reflects a snapshot at a particular point-in-time. The real strength of JH is that it collects data over time, and this provides an opportunity to try and untangle causes from consequences. Our longitudinal analysis provides some evidence that the health of JH participants worsened as entry into homelessness approached. However, the evidence was relatively weak. Further, only some indicators of health show improvements prior to exiting homelessness and they are generally not statistically significant. There is therefore little evidence to suggest that poor physical health is a direct cause of homelessness.

The chapter does present stronger evidence that poor heath was more prevalent among people who have been homeless for longer periods of time. These differences, however, are not significant for measures of long-term health conditions or whether physical and emotional health interfered with daily activities. This is not surprising given long-term health problems may take longer to develop. We are also conscious of the fact that even though JH is a longitudinal study, the observation period is relatively short. As such, there may be a stronger relationship between health and duration that would be uncovered if our observation period were longer. Further, we did not account for the differences in the characteristics (observed or unobserved) of those in the different groups we examined. These factors may well influence the relationship between health and housing.

Finally, there is some evidence of improvements in the participants' health since exiting homelessness, but this improvement is not statistically significant until 12 months after exiting homelessness. This finding is consistent with the argument that poor health is a consequence of homelessness.

In summary, the evidence presented in this chapter is consistent with a view that poor health is more often a consequence of homelessness than a cause, and that individuals whose homeless experiences is characterised by a lack of any form of shelter (e.g the primary homeless) experience the poorest heath. Further, while research that investigates the effect of housing instability and housing quality on heath is clearly required, it is important not to lose sight of the strongest empirical finding - while the health of the homeless is indeed poor, it is not that much different to the health of low income individuals who are housed.

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5 Social networks and social support: association with the entry, duration, and exit from homelessness

5.1 Introduction

Social researchers have long held an interest in the social networks of the homeless. According to early studies the homeless were isolated individuals, with few social connections and little family support. In fact, the key element that defined homelessness was not a lack of housing per se, but rather that homelessness was 'a condition of detachment from society characterised by the absence or the attenuation of the affiliative bonds that link settled persons to a network of interconnected social structures' (Caplow, Bahr & Sternberg 1968, p. 494).

However, the homeless population has changed considerably, both in the U.S and in Australia, since the 1960s and early 1970s when it was largely confined to single, middle-aged men who lived on 'skid row'. The contemporary homeless population is much more heterogeneous and includes young people, women, and families. Further, experiences of homelessness are now more varied – some people have relatively short experiences of homelessness, while others remain homeless for much longer. Changes in both the demographic composition, as well as the experience of homelessness, means that the role of social networks in reducing vulnerability to homelessness, and their role in enabling people to get out of homelessness, remain as important as ever.

Broadly speaking, empirical studies have produced contrasting findings. On the one hand, many studies, most often cross-sectional surveys, suggest the homeless are 'isolated from all social contact of an intimate and personal nature' (Snow & Anderson 1993, p. 318). Many studies, primarily from the US, have found that homeless adults do indeed lack social ties, as well as supportive family relationships (Bahr 1973; Rossi et al. 1987; Jordon 1994; Caton et al. 2005). However, these studies typically focus on single adults who have been homeless for relatively long periods of time. Consequently, they tend to reflect the experiences of only one, relatively small segment of the homeless population. Without a broader sample of the homeless and/or a housed comparison group, it is difficult to tell whether their findings are limited to the longer term homeless, are a characteristic of the homeless more generally, or of others in extreme poverty but who have housing.

A few studies use comparison groups but the findings are mixed. Sosin, Colson and Grossman's (1988) study of 173 homeless and 348 housed individuals found that domiciled respondents were, in comparison to homeless individuals, in contact with relative and friends more frequently, but the housed had no more friends than the homeless. Other studies, such as Bassuk and Rosenberg (1988), report the homeless have weaker social ties both in terms of frequency of contact and the nature of interactions, than the housed. However, as both studies sample currently homeless individuals it is likely they also over-represent the long-term homeless and thus skew the results.

To address this problem, Shinn, Knickman and Weitzman (1991) compared 677 female-headed families seeking shelter with 495 mothers selected randomly from the public assistance case load. They found that women seeking shelter were more likely to have had recent contact with parents, relatives and friends than mothers who were housed. What contributed to their housing problems was not a lack of social ties but rather that they had used up all their available sources of support. While Shinn et al.'s study indicates that

'relatives and friends are a crucial safety net in preventing homelessness' (1991, p. 1186), the findings are also limited to a subgroup of homeless individuals – mothers.

On the other hand, another set of studies, most commonly longitudinal and ethnographic studies, suggest that homeless individuals often have intricate social networks. This work has a long lineage dating back to the early work of sociologists like Anderson (1923), Sutherland and Locke (1936), as well as Wallace (1965). However, it is the ethnographic research of Snow and Anderson (1993) that has been particularly influential in more recent times. Snow and Anderson noted that the social relationships homeless people have with their peers are based on 'an ethos supporting the sharing of modest resources' but that the social ties are characterised 'by chronic distrust … fragility and impermanence' (p. 194). The idea that the homeless have social networks comprised of other homeless people has led some scholars to investigate the idea of a 'homeless subculture' (Snow & Anderson 1993; Rice et al. 2005; Johnson, Gronda & Coutts 2008; Ravenhill 2008). Here the idea of a homeless subculture:

> … is not a subculture in the conventional sense, though, in that it is neither anchored in, nor embodies a distinctive set of shared values. Rather ... its distinctiveness resides in a patterned set of behaviours, routines and orientations that are adaptive responses to the predicament of homelessness itself and to the associated conditions of street life (Snow & Anderson 1993, p. 76).

The existence of a homeless subculture indicates the presence of structured social interactions between homeless people. This contradicts the idea that homeless individuals are withdrawn and chronically isolated. However, studies show that social relationships and interactions between homeless people reflect a paradoxical combination of isolation and sociability; while the relationships homeless people develop with their peers can create a sense of belonging, relationships are often very fragile and commonly generate what has been termed 'negative' social capital (Hawkins & Abrams 2007).

In the context of homelessness, the idea of negative social capital is particularly important. Whereas studies have shown the negative impact of peers with respect to substance use behaviour, criminal behaviour and educational outcomes to name just three areas, it is presumed that because the homeless are isolated from mainstream social contact they lack social capital. However, homeless peers are important sources of social capital, but it is often negative in that it can deny individuals access to resources as well as 'introduce[s] destructive behaviour' (Hawkins & Abrams 2007, p. 2033). The issue of destructive behaviours is particularly relevant here as many studies have identified that as the social networks of the homeless become more concentrated with other homeless people, exposure to and involvement with illicit substances increases, as does criminal behaviour (Rice et al. 2005; Johnson & Chamberlain 2008). While engagement with other homeless people can contribute to entrenchment in the homeless population through the adoption of destructive behaviours (Grigsby et al. 1990), there is also evidence that some people subsequently withdraw from social contact with their homeless peers to escape the pressure and disappointment of interaction (Hawkins & Abrams 2007). Thus, we see how homeless peer networks gives rise to two quite paradoxical effects – entrenchment and isolation.

While it is abundantly clear from the literature that the relationship between social networks and homelessness is extremely complex, a number of patterns stand out. First, the social networks of the homeless appear weaker, even if only slightly, than those of poor households, when they first become homeless. Second, interaction with existing social ties tends to

diminish over time. Third, as mainstream social networks collapse they are often replaced by new social networks composed primarily of other homeless people. These new networks are double edged – they can provide a sense of belonging but they can also 'generate' negative social capital. Fourth, some people withdraw from social contact with their homeless peers to avoid the damaging effects of the homeless subculture.

Previous JH reports have also examined the social networks of the JH sample. The first report drew on baseline data to examine the social networks of those who were homeless and those who were housed at the time of the first interview, as well as by lifetime homeless duration respondents (Scutella et al. 2012). That report found that contact with family diminishes both with current homelessness status, and also longer lifetime experiences of homelessness. The second JH report, which drew on two waves of data, applied a different framework to analyse social relationships (Chigavazira et al. 2013). The framework identified four groups – those who had been continuously homeless, those who entered homelessness, those who exited homelessness, and those who had been continuously housed – and reported similar findings to the first report. Both reports provide evidence of a general pattern of reduced contact with family and mainstream social networks, stronger patterns of interaction with individuals whose characteristics are suggestive of negative social capital, as well as increasing isolation among some of the JH participants who were homeless.

This chapter builds on previous JH research in two important ways. First, with five waves of longitudinal data we are in a better position to examine the relationship between individuals' social ties and the onset and duration of homelessness. Second, given relatively little is known about the role social networks play in exiting homelessness, we intend to can scrutinize this issue more thoroughly. Similar to the previous chapter, but with a focus on social networks, this chapter examines the following questions:

- Are there differences in the social networks of the housed and the homeless in the JH sample?
- Do individuals' support networks change prior to entering homelessness?
- Do support networks change the longer individuals remain homeless?
- Is there any evidence the peoples social networks change once individuals have exited homelessness?

5.2 Approach

In this chapter we use the same approach as in Chapter 4. First we compare, at a point in time, the social networks of the homeless, separated into the primary and secondary / tertiary homeless, and the housed. Next we examine changes in the size and composition of social networks according to both the time individuals take to enter homelessness and the time since entering homelessness (as well as since exiting homelessness).

The information on social networks presented in this chapter draw on questions contained in 'Section S' of the Journeys Home questionnaire. A range of indicators of the strength or extent of networks are used. The following describes the definition of each of these indicators.

- Family contact. Respondents were asked whether they had been in contact with family members who do not live with them. If they answered yes, they were then asked how frequently. Those who were in contact with their family on a daily or weekly basis are defined as having 'frequent contact'.

- Numbers of friends. Friends are defined as "people you can share your thoughts and feelings with and who stick by you when you need them". This definition thus distinguishes friends from acquaintances. For those who were unsure of the exact number of friends, they were then asked whether the number was 5 or less, 6 to 10, 11 to 20, 21 to 50 or more than 50. In this analysis, distinguish between persons with no friends, those with one to five friends, and those with more than five friends.

- Type of friends. Those with friends were asked specific questions about their friends: whether their friends have a full-time job; are currently homeless; have used drugs in the past 6 months; and whether they had ever been in a juvenile justice facility, a detention centre or a prison in the past 6 months. Homelessness in this context is worded as staying temporarily with friends or family because they have nowhere else to stay, in a boarding house or emergency accommodation, or sleeping rough. If they were unsure of the exact number of friends, they were asked whether 'all or most, few or some of their friends were in those circumstances'. Most friends having a full-time job is defined as having 50 per cent or more of their friends working full-time. The same rules are applied to other types of friends.

- Social support score. Respondents were asked to assess to what degree they agree with a series of statements, regarding the social support they receive, on a five-point scale, where 1 means 'strongly agree' and 5 means 'strongly disagree'. The statements are: (1) You often need help from others but can't get it; (2) You have someone you can lean on in times of trouble; (3) There is someone who can always cheer you up when you are down; (4) You often feel very lonely; and (5) When something is on your mind, just talking with the people you know can make you feel better. We reversed the scores on items (2), (3) and (5) such that higher scores represent better support. Reliability tests show item 5 has the lowest correlation with the combined scores of others (item-rest correlation), which is not surprising as item 5 appears to be less a reflection of social support and more a reflection of an individual's personality. We therefore excluded item (5), with the resulting social support score calculated as the average of the scores of the first 4 items.

We use the same sample selection and approach to defining homeless and housed spells, calculating the amount of time to entry into and exit from homelessness as in Chapter 4.

5.3 Analysis and discussion

Families can provide a range of practical, material and emotional resources that can protect people from becoming homeless. Table 5.1 shows the frequency of contact the primary homeless, secondary / tertiary homeless and the housed had with their family. The primary homeless were nearly three times more likely to have had no contact with their family compared to those who were housed (27.3 per cent vs 10.1 per cent), and nearly twice as likely to have had no family contact compared to the secondary / tertiary homeless (13.8 per cent). However, Table 5.1 also shows that nearly half of the primary homelessness (47.7 per cent) had frequent contact (either daily or weekly) with their family. The later result is surprising given that studies regularly identify a lack of family support as a key characteristic of individuals entrenched in the homeless population (Rossi 1989; Caton et al. 2005).

Among those who were housed, two thirds (66.5 per cent) had regular contact with their family, while the corresponding figure among the secondary / tertiary homeless was 56.7 per cent. Not surprisingly, the primary homeless report they have less social support than both the

secondary / tertiary homeless and the housed. Among the primary homeless the average social support score was 3.0. Although the difference between the scores of the housed and the secondary / tertiary homeless is quite small (0.2), it is statistically significant nonetheless.

The primary homeless were also more likely to report that they had no friends – just over one fifth (21.2 per cent) said they had no friends, which is approximately 7 percentage points higher than the housed (13.9 per cent) and 6 percentage points higher than the secondary / tertiary homeless (15.0 per cent). This is a relatively modest difference, and suggests that while the primary homeless are more likely to experience chronic social isolation, social isolation is also a risk factor for a small minority of people living in or close to poverty. While the primary homeless were more likely to report that they had no friends they could share their thoughts and feelings with, the housed were more likely to identify that they had six or more friends – one fifth (19.8 per cent) of the housed reported they had six or more friends. This is higher than the primary homeless (12.9 per cent), but not much different from the secondary / tertiary homeless (20.9 per cent)

Table 5.1: Family and friends support, by homeless status

	Primary homeless	*Secondary / tertiary homeless*	*Housed*
No family contact (%)	27.3	13.8	10.1
Frequent family contact (%)	47.7	56.7	66.5
No friends (%)	21.2	15.0	13.9
6 or more friends (%)	12.9	20.9	19.8
Average social support score	3.0	3.4	3.6

Evidence that the primary homeless are more disconnected from mainstream social networks but engaged more with social networks comprised of homeless and other marginalised individuals can be seen in Table 5.2. Among the primary homeless, over half (57.3 per cent) had no friends that were employed full-time, while the corresponding rate among the housed and the secondary / tertiary homeless was 31.5 per cent and 30.6 per cent respectively. Just over 40 per cent of those who were housed reported that most or all of their friends were in full-time work, but the corresponding rate among the primary homeless was a touch under 20 per cent.

The primary homeless were much more likely to have friends who were also homeless. While just over half (51.9 per cent) of the primary homeless reported that none of their friends were homeless, among both the secondary / tertiary homeless and the housed the rate was closer to three quarters. Furthermore, almost 30 per cent of the primary homeless reported that most or all of their friends were homeless, which is approximately four times higher than the rate reported among the housed (6.9 per cent), and triple the rate reported among the secondary / tertiary homeless (9.6 per cent).

Table 5.2: Types of friends for those with friends, by homeless status

	Primary homeless	*Secondary / tertiary homeless*	*Housed*
No friends work full-time	57.3	31.5	30.6
Most friends work full-time	19.4	35.0	40.2
No friends who are homeless	51.9	72.3	76.0
Most friends homeless	29.8	9.6	6.9
No friends use drugs	70.2	51.1	61.0
Most friends use drugs	11.5	26.9	17.4
No friends incarcerated	76.0	80.3	83.7
Most / all friends incarcerated	4.8	3.1	2.6

With respect to friendships with people who use drugs, the pattern is difficult to interpret. The proportion of people who report that none of their friends use drugs is highest among the primary homeless (70.2 per cent) and lowest among the secondary / tertiary homeless (51.1 per cent), with the housed falling midway between the two homeless groups (61.0 per cent). We observe the same general pattern with respect to whether most of their friends use drugs – over one quarter of the secondary / tertiary homeless report most of their friends use drugs, as do 17.4 per cent of the housed, but only 11.5 per cent of the primary homeless report most of their friends use drugs. These findings are counter-intuitive; our expectation was that networks containing drugs users would be more highly concentrated among the primary homeless. Clearly further investigation is warranted.

Table 5.2 also shows that while a significant majority of individuals in the three groups reported that none of their friends were incarcerated, the proportion was lowest among the primary homeless (76.0 per cent). Further, just under 5 per cent of the primary homelessness reported that most or all of their friends were incarcerated, which is more than 2 percentage points higher than the rate reported among the housed. However, these differences are not statistically significant, primarily because not many people reported that ‘most’ of their friends were incarcerated in the past 6 months.

In sum, the results presented in Table 5.1 and Table 5.2 suggest there are differences between the frequency of contact, the size and the composition of the social networks of the housed and the homeless. However, the differences are more pronounced when the homeless population is segmented into the primary and secondary / tertiary homeless. The general pattern we observe is that the social networks of the secondary / tertiary population are more similar to the housed than the primary homeless. This is quite different from what we found in the previous chapter where, in terms of their health, the secondary / tertiary homeless are more similar to the primary homeless than the housed. The primary homeless were less likely to have family contact and more likely to have no friends. Among those who the primary homeless counted as friends, more were homeless, fewer were employed full-time and more were incarcerated than either of the two others groups. The findings suggest considerable variation in the extent to which the homeless can draw on family support and the size of the friendship networks. The primary homeless appear more disconnected from both family and friends, but the secondary / tertiary homeless much less so.

In order to better understand these patterns we now turn our attention to the longitudinal data to address three questions:

- Do homeless individuals support networks change prior to entering homelessness?
- Do support networks change the longer individuals remain homeless?
- Is there any evidence the peoples social networks change once individuals have exited homelessness?

5.4 Entry and duration

Drawing on the questions raised from the previous section we now examine whether there are changes in the size and composition of social networks in two periods preceding homelessness, and then if any changes are observed the longer people remain homeless. Our first area of interest is whether the availability of family support changes as entry into homelessness approaches. Table 5.3 shows that in the two periods prior to homelessness the proportion reporting no family contact increases from 9.1 per cent to 12.1 per cent and the proportion reporting frequent family contact decreased by 4.3 percentage points. Although the results are only marginally significant (at the 10 per cent level) in statistical terms, they do suggest the loss of family support may have contributed to homelessness for a small number of individuals. Once homeless, the proportion that have no contact with their family fluctuates slightly but there are no statistically significant patterns. The proportion reporting frequent family contact continues to decline at homeless entry and after but bounces back slightly at 12-23 months since entry. However, these changes are very small and statistically insignificant.

As also indicated in, the proportion who report 'no friends' declines slightly from 13.8 per cent to 12.5 per cent in the two periods preceding homelessness, and the decline continues into the first homeless period (0-5 months since entry), although none of the results were significant. Thereafter the proportion reporting no friends increases and stays high – among those who had been homeless for 12-23 months, 15.9 per cent report no friends, a 5.5 percentage point increase compared with those that just entered homeless. There are no notable changes in the proportion with six or more friends. The general pattern is that the proportion increases slightly just prior homeless entry and decreases thereafter. In terms of people's feeling about whether they are supported, the average social support score decreased prior to entry into homeless and thereafter remain constant for the next few periods and then decreased again for those who were homeless over 12 months. also shows that there is a relationship between long-term homelessness and the types of friends people have in their networks. The table indicates that the longer people remain homeless the less likely they are to have friends who are working full-time. While the pattern on the proportion reporting no friends working full-time is not clear, there is a decline in the proportion reporting most of their friends worked full-time. However, even though there is a 10 percentage point reduction from homeless entry to 12-23 month after entry, the change is not statistically significant. Despite the lack of statistical significance, the loss of contact with people who have jobs means that the long-term homeless are less likely to hear about employment opportunities through their informal networks, which is a common way people secure employment.

Table 5.3: Social networks by time to homeless entry and time since homeless entry

	Time to entry unkn	*6m+ to entry*	*0-5m to entry*	*0-5m since entry*	*6-11m since entry*	*12-23m since entry*	*Time since entry unkn*
No family contact (%)	10.5	9.1	12.1	12.5	14.2	12.7	16.4
Frequent family contact (%)	65.4	68.4	64.1	60.8	59.3	61.9	53.2
No friends (%)	14.2	13.8	12.5	11.4	16.7	15.9	16.9
6 or more friends (%)	18.9	20.4	21.6	20.0	19.3	19.1	20.3
Average social support score	3.6	3.6	3.4	3.4	3.4	3.2	3.4
Types of friends (as % of those with friends):							
No friends work full-time (%)	31.5	30.1	28.3	27.0	36.8	28.3	36.5
Most friends work full-time (%)	40.8	39.8	38.7	40.2	30.5	30.2	31.8
No friends homeless (%)	78.3	74.8	69.7	71.2	75.8	73.6	69.2
Most friends homeless (%)	6.3	7.0	9.6	10.1	6.3	13.2	12.6
No friends use drugs (%)	65.4	58.6	49.3	50.8	57.9	41.5	53.8
Most friends use drugs (%)	14.8	18.1	27.2	23.1	25.3	37.7	25.5
No friends incarcerated (%)	87.1	81.0	78.6	80.5	88.4	83.0	78.2
Most friends incarcerated (%)	1.8	3.1	4.2	3.9	2.1	1.9	3.3

While individuals who are long-term homeless appear to lose touch with people who are employed, over time they are more likely to have more contact with other homeless people, many of whom subsequently become their friends. In the 6 months and more prior to becoming homeless, 7 per cent reported that most or all of their friends are homeless and this increases to just over 10 per cent in the period just after the onset of homelessness (0-5 months). The proportion subsequently, and unexpectedly, declines to 6.3 per cent once homeless for 6-11 months, but then increases to 13.2 per cent among those who had been homeless for 12-23 months.

With respect to friendships with people who use drugs, prior to homelessness we observe a decrease among those who report they have no friends who use drugs and an increase in the proportion who report most of their friends use drugs, both changes are highly significant statistically and in terms of magnitude. This pattern suggests a possible causal link between entry into homelessness and drug use. Once people are homeless there is also some evidence that over time social networks do indeed become more concentrated with other drug users Finally, we found no significant patterns between being homeless and proportion of friends incarcerated. We can draw a number of tentative conclusions from these findings. First, prior to the onset of homelessness we observe a number of statistically significant changes – as homelessness approaches more individuals lose contact with their family, the availability of social support declines and there is an increase in the proportion reporting their social networks include many people who use drugs. We also observe changes in the expected direction on most measures the longer people remain homelessness, but the results are generally insignificant.

5.5 Exiting homelessness

The role social supports play in enabling people to get out of homelessness is unclear. Some studies suggest the social support provided by social networks is a crucial element in enabling people to exit homelessness (Warnes, Crane & Coward 2013). This implies the absence of social networks is detrimental to people's chances of getting out of homelessness. While this is intuitively appealing, it is also important to recognise that some homeless individuals have strong social ties with other homeless people and it may well be that these networks are equally detrimental to an individual's chances of getting out of homelessness. Thus, we are interested in examining not only the changes in the size of people's social networks but in the composition of these networks as well.

Table 5.4 shows that six months or more prior to exiting homelessness the proportion of individuals who had no contact with their family was 16.3 per cent. Family contact improves in the period immediately preceding an individual's exit from homelessness with the proportion reporting no contact declining to 12 per cent. Once individuals are out of homelessness, approximately 10 per cent report no family contact at all. The evidence suggests that increased family contact just prior to exiting homelessness may be an important factor in assisting individuals exit from homelessness.

Table 5.4: Social networks by time to exit, and since exit

	Time to exit unkn	*6m+ to exit*	*0-5m to exit*	*0-5m since exit*	*6-11m since exit*	*12m+ since exit*	*Time since exit unkn*
No family contact (%)	16.3	16.3	12.0	9.7	11.4	9.3	10.8
Frequent family contact (%)	50.1	57.7	61.5	64.8	61.3	69.5	64.9
No friends (%)	15.9	18.5	11.7	13.9	15.3	12.8	14.7
6 or more friends (%)	18.4	17.8	25.4	19.8	18.5	18.9	20.9
Average Social support score	3.4	3.3	3.4	3.5	3.6	3.6	3.5
Types of friends (as % of those with friends):							
No friends work full-time (%)	35.0	36.3	29.8	31.6	30.5	29.2	31.7
Most friends work full-time (%)	34.7	30.8	35.2	43.0	40.0	40.7	38.8
No friends homeless (%)	75.1	68.9	65.8	71.5	73.6	77.0	76.6
Most friends homeless (%)	11.2	12.3	11.1	7.7	6.9	7.2	6.5
No friends use drugs (%)	51.6	53.0	54.4	52.7	56.1	62.5	62.7
Most friends use drugs (%)	29.2	24.0	22.2	21.5	21.3	15.9	17.1
No friends incarcerated (%)	80.9	80.9	77.2	84.5	80.9	84.6	83.2
Most friends incarcerated (%)	3.0	4.1	2.5	3.4	1.7	2.4	2.8

Another way of examining the potential contribution of family support to exiting homelessness is by looking at the frequency of contact. Table 5.4 shows an increase in the proportion of people who are in daily or weekly contact with members of their family – in the two periods prior to exiting homelessness 57.7 per cent and 61.5 per cent of individuals respectively report daily or weekly contact with their family. Once an individual exits homelessness the proportion in regular contact generally increases and among those who

have been housed for over 12 months over two thirds (69.5 per cent) are in daily or weekly contact with their family. More frequent contact with family members is likely to reflect the effects of two processes – first, being housed provides a better opportunity to engage with family members. Second, those who have the sort of family support that enables them to sustain their accommodation are more likely to remain housed. Finally we observe a consistent increase in the social support score in the 0-5 month period prior to exiting homelessness and in the first two periods individuals are housed.

As to the size of individuals' friendship networks, it appears that these grow before exiting homelessness but then they don't change very much once housed. The proportion who reported they have no friends declines by 6.8 percentage points between the two periods prior to exiting homelessness. Thereafter there are not significant changes. The proportion who report 6 or more friends increases by 7.6 percentage points between the two periods prior to exiting homelessness. It then falls again subsequent to exiting homelessness and thereafter the proportion remains relatively constant, with about one fifth of the housed reporting they have six or more friends, irrespective of how long they had been housed.

While the number of friends does not appear to change much after people have exited homelessness, there is much clearer evidence that the composition of social networks change. First, when we examine the proportion whose social networks contain no other homeless individuals the proportion increases in each period following an individual's exit from homelessness – in the period immediately following exit (0-5 months since exit) 71.5 per cent report they have no homeless friends, but among those who had been housed for 12 months or more this rises to 77 per cent. Further evidence that the composition of homeless individuals social networks change once they are housed can be found when examining whether their peers use drugs or not. Here we see an increase in the proportion reporting that their friends use drugs. We observe both an increase in the proportion who report they have no friends who use drugs and a decline in the proportion who report most of their friends use drugs the longer individuals are housed – in both cases the largest change is observed among those who have been housed for 12 months or more. There are a number of possible explanations for this. It could be that drug issues take time to resolve or perhaps only those who can successfully distance themselves from their drug using peers can maintain their housing. Another explanation may be that individuals who have fewer drug using peers to begin with are more likely to sustain accommodation. This requires further investigation.

5.6 Conclusion

The importance of supportive families and a network of trusting, reliable friends can often be taken for granted. Supportive social networks do matter; they provide emotional and material assistance that can be a crucial factor that prevents households from losing their housing. However, not all social networks are protective; indeed, some social networks can be extremely damaging to individuals and, in the context of homelessness, can lead to deeper entrenchment.

In Australia the issues of social isolation and exclusion have received considerable attention from both policy makers and researchers, but the role of social networks in preventing and perpetuating homelessness remains poorly understood. JH provides an opportunity to examine social networks of low-income and homeless individuals in much greater depth. This chapter contributes to our knowledge in a number of ways.

First, it confirms that there is variation within the homeless population, with the primary homeless more likely to report that they have no friends, no family contact and less social support. However, the social ties of the secondary / tertiary homeless are very similar to low-income individuals who are housed.

Second, the same pattern is evident when the types of friendships are examined. Here we find that the social network characteristics of the primary homeless are different from the housed and the secondary / tertiary homeless. The primary homeless report fewer friends working full-time, more friends who are homeless and more friends in prison.

Nonetheless, these findings are a snapshot and a key aim of this chapter has been to examine if there is a link between levels of social support and entry into homelessness, as well as whether social networks change (in terms of both size and composition) as the duration of homelessness increases.

While we observe declines in family contact in the periods preceding homelessness, the change in number of friends is not significant. Overall, we found that people felt less supported prior to entering homelessness (a significant reduction in their social support score). In addition, we found that contact with families and number of friends increased prior to individuals exiting homelessness. These suggest a lack of social ties contribute to homelessness, but the picture is far from complete.

In addition to the lack of social support, negative social capital also appears to contribute to homelessness. There are significant increases in the proportion of friends who are homeless, used drugs, or were incarcerated prior to entering homelessness. However, changes in the composition of social networks prior to exiting homelessness were less noticeable. The only significant change is that a smaller proportion of people reported no friends working full-time.

Evidence that a lack of stable accommodation has an impact on social networks is mixed. While the composition and size of social networks appears to change the longer people are homeless, the results are generally insignificant. Changes in the composition of social networks after exiting homelessness are also modest. Significant changes include a reduction in the number of homeless friends and friends who use drugs, but these changes were significant only after maintaining housing for 12 months. Once again it is worth pointing out that the observation period of JH is relatively short, and the impact of homelessness on the size and nature of individuals' social networks may be greater if we had a longer observation period. Also, the analysis presented did not account for differences in the individual characteristics (either observed or unobserved) of people at the different stages of the homelessness–housed trajectory. These factors may well contribute to the patterns we have been seeing, and therefore further analysis is required.

Nonetheless, the findings in this chapter raises a number of issues for policy makers – strengthening families and social networks of low-income individuals is a difficult task, but it is an important one nonetheless. Similarly, assisting homeless people to maintain or re-establish 'mainstream' social connections is equally important, but also equally difficult. Nonetheless, as much as support interventions need to address a lack of housing, or other ailments, there is a need to focus some attention on improving the social ties of people experiencing homelessness. The findings also raise some important theoretical issues – the social ties of the homeless are dynamic but also quite fragile. Thus, we need a better understanding of the social networks processes that contribute to the co-existence of

sociability and isolation. Further, the issue of negative social capital deserves far greater scrutiny.

By Guy Johnson and Yi-Ping Tseng

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6 First episode of homelessness and initiation to substance use: what comes first?

6.1 Introduction

It is widely believed that homelessness is positively associated with substance use. Numerous studies, across various countries and target populations, present evidence consistent with this belief, although much of this evidence is drawn from small cross-sectional samples of very specific – often acutely homeless or acutely using – populations (e.g., Teesson, Hodder & Burhrich 2000; Booth et al. 2002; Kemp, Neale & Robertson 2006).

Previous research reports in this series have examined substance use and homelessness in the JH sample during the survey period. Scutella et al. (2012) reported high levels of homelessness in the JH sample and highlighted that JH respondents smoke, drink alcohol at risky levels and use illicit drugs at much higher rates than the general population. Chigavazira et al. (2013) and Johnson et al. (2013) established that transitions in and out of substance use and in and out of homelessness were strongly associated over the first three waves of the survey. Scutella et al. (2014) highlighted that respondents consume these substances 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.

Previous reports also proposed typologies of homelessness and substance use (for each type of substance) characterising respondents' experiences over the first four waves of the survey. This analysis demonstrated that dynamics of homelessness and risky drinking, cannabis use, and illegal/street drug use were intimately related. 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 amongst the long-term homeless that move around a lot.

Few papers examine associations specifically between the onset of substance use and the onset of homelessness (e.g., Caton et al. 2005). Yet the onset of these behaviours and the extent to which they are associated is crucial for understanding how the cycle of substance use and housing instability starts and for providing research evidence likely to be of use to policy makers in this space. Appropriate interventions for people in these situations might be more efficient if programs are able to understand the dynamics of housing instability and substance use, the interplay between them and detect issues in the early stages.

This chapter analyses how the cycle of substance use and housing instability started. Did one lead to the other? Are they tied to other events, such as parents' separation, experience of violence during childhood or parents' own issues? Specifically, we address the following research questions:

- How old were the respondents when they first became homeless? At what age did they start smoking, using cannabis, illegal / street drugs and injecting?
- How are these patterns related? That is, what comes first: homelessness or substance use?

- How does the first episode of homelessness and the onset of substance use relate to other childhood events, such as parents' separation, violence or parental substance use?

This chapter focuses on the use of tobacco, cannabis (ever and daily), other illegal/street drugs (ever and weekly) and the injection of illegal/street drugs, using the balanced panel (waves 1-5; N=1243), with weights.

6.2 First experiences of homelessness and substance use

In wave 1, information was collected about respondents' first experience of homelessness. In particular, respondents were asked: "How old were you the first time that you were without a place to live?" This information, together with the information on homelessness experiences during the survey period is used to construct the variable for the age when respondents first experienced homelessness.

Table 6.1 presents the prevalence of homelessness and the prevalence of use for the different substances for the complete JH balanced sample and for the subsample of respondents who have experienced primary homelessness (N=720). Table 6.1 also provides the age at which respondents' first experienced homelessness and at which they first started using. Almost all respondents (99 per cent of the balanced panel) have experienced homelessness at some stage in their life. On average, they first became homeless at 22 years old. Respondents who have experienced primary homelessness (58 per cent of the balanced panel) may have had different trajectories. They have experienced homelessness slightly younger at 21 years old.

In wave 3, respondents were asked about their initiation to the use of tobacco and other drugs. More precisely, users were asked the following questions:

- At what age did you first start smoking daily?
- About what age did you first try marijuana or cannabis?
- At what age did you first start using marijuana or cannabis on a daily basis?
- About what age did you first try any of these drugs? (This might include amphetamines, such as speed and ice, heroin, cocaine, ecstasy, and so on, but does not include marijuana or cannabis.)
- At what age did you first start using any of these drugs on a weekly basis?
- About what age did you first inject any of these drugs?

This information was then updated for respondents who had never used until wave 3 but started using at wave 4 or 5 with the information on use at these subsequent waves. As noted in earlier reports, prevalence of use is high among Journeys Home respondents: 84 per cent have smoked daily; 81 per cent have used cannabis; 51 per cent have used it daily; 54 per cent have used illegal street drugs; 24 per cent have used those weekly and 24 have injected at some point in their life. Prevalence of use is even higher among those who have experienced primary homelessness: 91 per cent have smoked daily; 89 per cent have used cannabis; 63 per cent have used it daily; 67 per cent have used illegal street drugs; 34 per cent have used those weekly and 24 have injected.

Table 6.1: Prevalence and onset of homelessness and substance use

	All	*Have been primary homeless*
Homelessness		
Ever (%)	99.0	100.0
Age of onset	22.2	21.2
Tobacco - daily use		
Ever used (%)	83.9	91.0
Age of onset	16.6	16.2
Cannabis		
Ever used (%)	80.5	88.5
Age of onset	16.2	15.8
Cannabis - daily use		
Ever used (%)	51.2	63.2
Age of onset	17.8	17.6
Illegal / street drugs		
Ever used (%)	54.0	66.9
Age of onset	19.8	19.8
Illegal / street drugs weekly use		
Ever used (%)	24.2	33.7
Age of onset	20.6	20.7
Injecting		
Ever used (%)	24.0	32.7
Age of onset	21.4	21.0
N	1243	720

The age at which respondents first used drugs does not vary substantially between the complete sample and the subsample of respondents who experienced primary homelessness. On average (among users), respondents first started smoking daily at 16, started using cannabis at 16 (daily at 18), started using illegal street drugs at 20 (weekly at 21) and injecting at 21.

To gain more insight on whether the onsets of homelessness and drug use vary between the complete sample and the subsample of respondents who experienced primary homelessness, Figures 6.1 to 6.7 present the distribution of onsets of homelessness, smoking daily, cannabis use, daily cannabis use, other illicit drug use, weekly use of other illicit drugs, and injecting of illicit drugs respectively for the two samples. The percentage of respondents who first experienced homelessness or a specific substance at a certain age among the whole sample is given by the plain black line while this percentage among respondents who have experienced primary homelessness is given by the dash grey line.[21] Overall, those who experienced primary homelessness have a higher level of use but a similar pattern of onset: they did not

[21] The percentages represent the number of respondents who first experienced homelessness or a specific substance among "All respondents" or among "respondents who experienced primary homelessness" respectively. Therefore, the sum of the percentages across all ages gives the percentage of "All respondents" or of "respondents who experienced primary homelessness" who ever experienced homelessness or used a specific substance respectively.

start earlier. At each age, there is a higher proportion of respondents first experiencing homelessness or using a specific substance among those who experienced primary homelessness; i.e., the dashed grey line is above the plain black line but is not shifted towards the left.

From Figure 6.1we see that homelessness mostly occurs for the first time during teenage years between 14 and 18 years old with a peak at 15-16 years of age at which 19 per cent of the complete sample and 23 per cent of those who experienced primary homelessness first experienced homelessness

Most respondents started smoking daily between 13 and 16 years old (Figure 6.2). Indeed, 41 per cent of the whole sample and 47 per cent of the restricted sample started smoking daily during this period. Similarly, in Figure 6.3 and Figure 6.4 it is clear that typically respondents started using cannabis and cannabis daily during their teenage years, independently of their homelessness experience. The initiation to cannabis and its daily use peaks at 16 years old for both samples.

Again although the prevalence of use and regular use are both higher for respondents who have experienced primary homelessness, the profiles of initiation for other illicit drugs (Figure 6.5 and Figure 6.6 for weekly use) do not differ according to the homeless experience. The use of other illegal street drugs starts later than cannabis and peaks at 18 years of age. It is also less concentrated around teenage years, with significant proportions of respondents starting after 20 and even 25 years old.

In Figure 6.7 we see that first experiences of injecting drugs also peaks at 18 years of age but also occurs into the late 20's.

6.3 Substance use and homelessness: what comes first?

In this section, we study how the initiation to substance use is related to the first experience of homelessness. We describe the substance use experiences of respondents with different types of homelessness histories: those who have never been homeless, those who have been homeless (any type) and those who have been primary homeless.

Table 6.2 presents data on the proportion of respondents using a particular substance among groups of respondents having had different experiences of homelessness. Respondents who experienced primary homelessness use all substances more often than respondents who experienced any type of homelessness who also use more often than those who did not experience homelessness at all.

Of particular interest when studying first experiences, is the timing of events. In this chapter, we are particularly interested in whether the initiation to a specific substance preceded or followed the first experience of homelessness. Table 6.3 presents, for each substance, how the initiation to that substance relates to first experiences of homelessness. The percentage of respondents in each of the mutually exclusive alternatives—homeless before, homeless at the same age, and homeless after —are presented in relation to the timing of their first use of each type of substance. Interestingly, since most of the sample have experienced homelessness at some point in their life, there are only very few respondents who have not been homeless and not been using a specific substance, from who we cannot identify the sequence of onsets.

Figure 6.1: Age of onset of homelessness

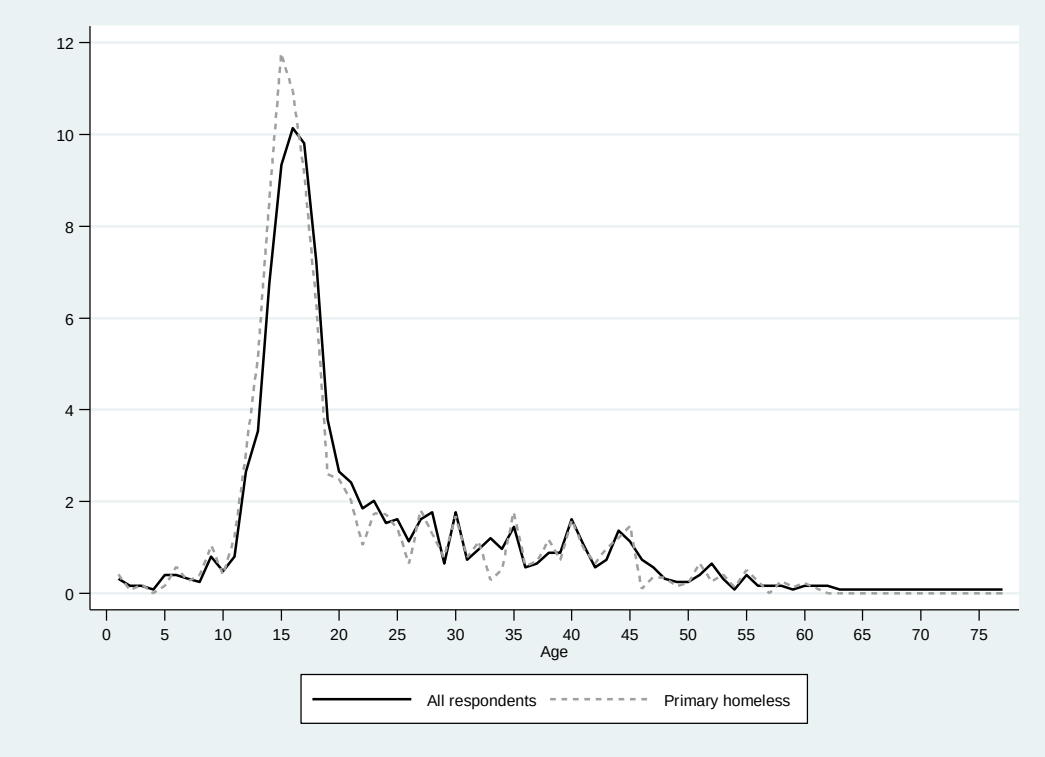


Figure 6.2: Age of onset of smoking daily

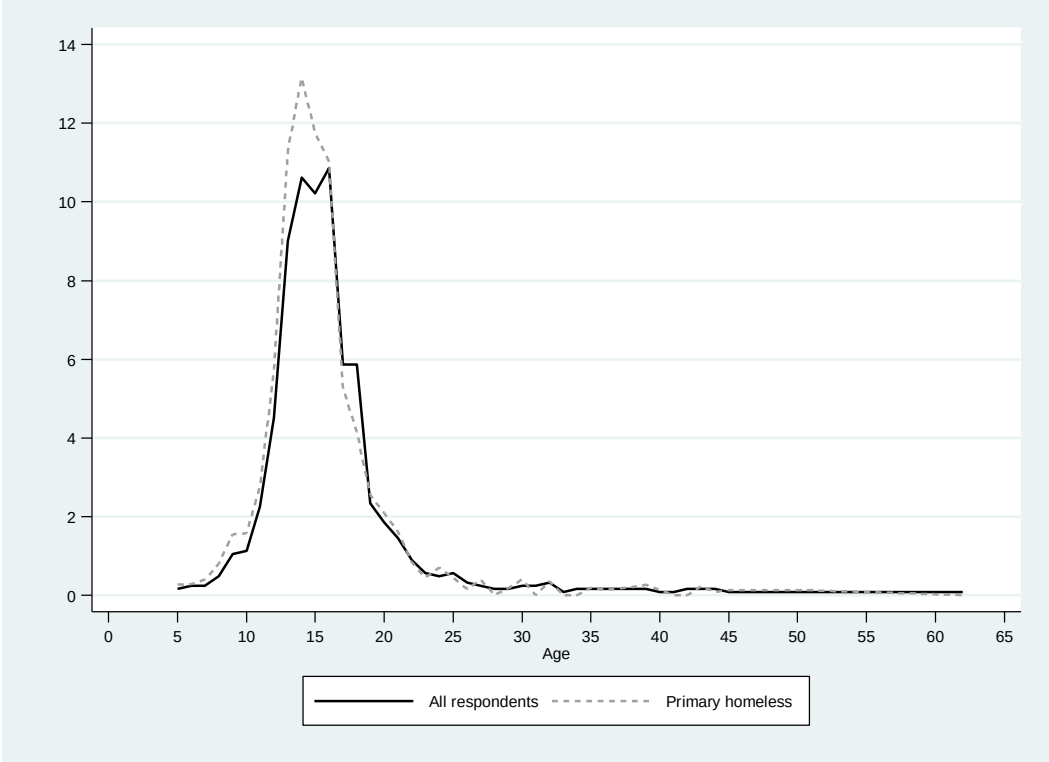


Figure 6.3: Age of onset of cannabis use

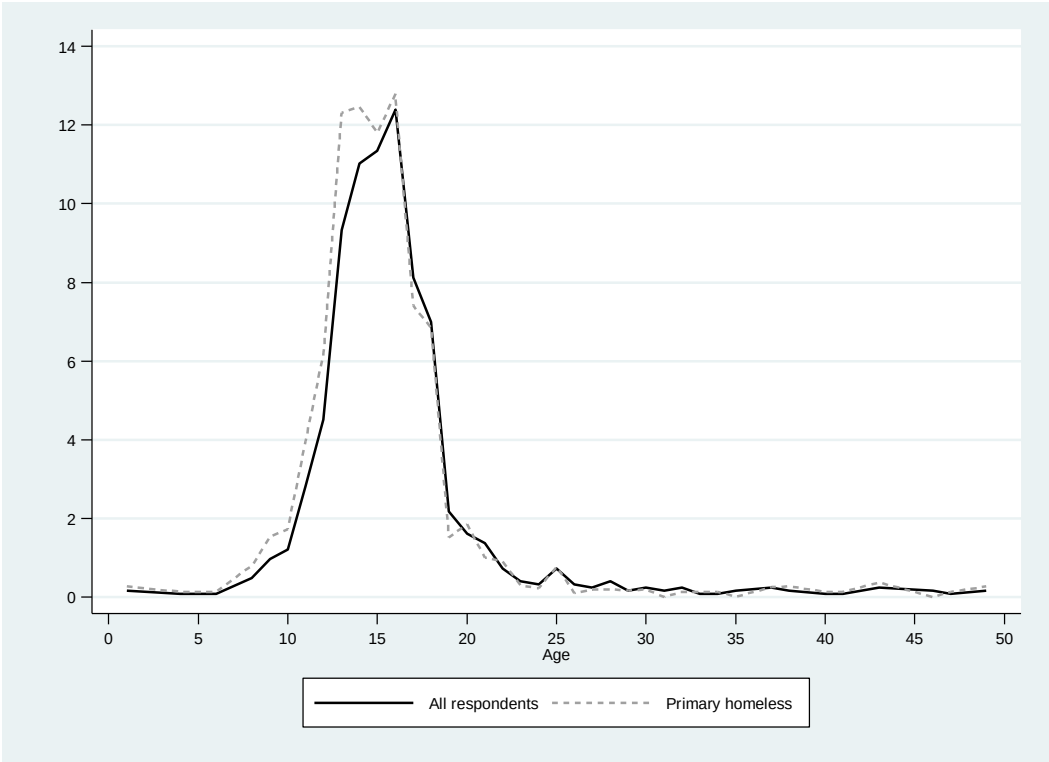


Figure 6.4: Age of onset of daily cannabis use

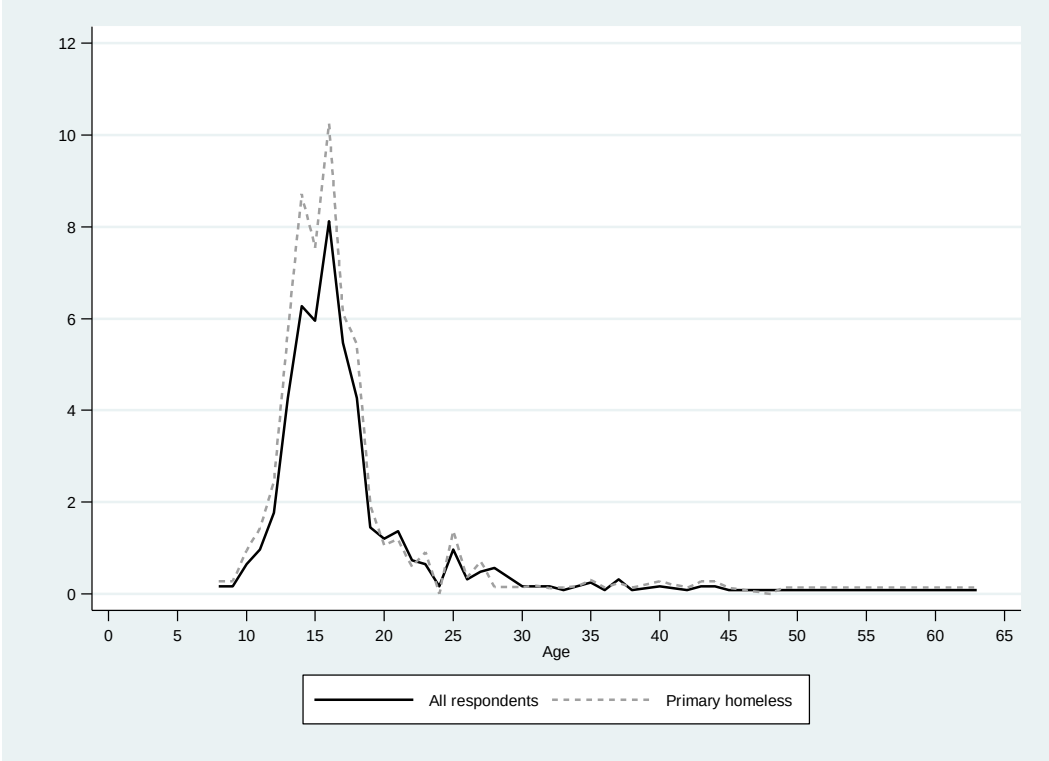


Figure 6.5: Age of onset of other illicit drug use

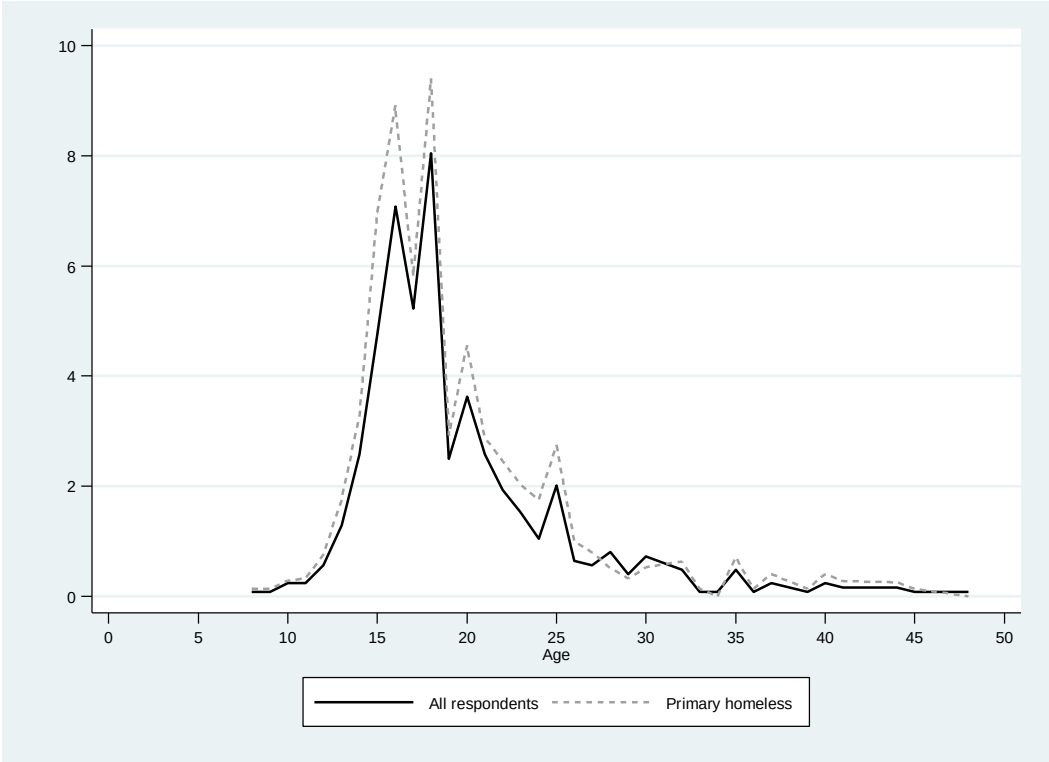


Figure 6.6: Age of onset of weekly drug use of other illicit drugs

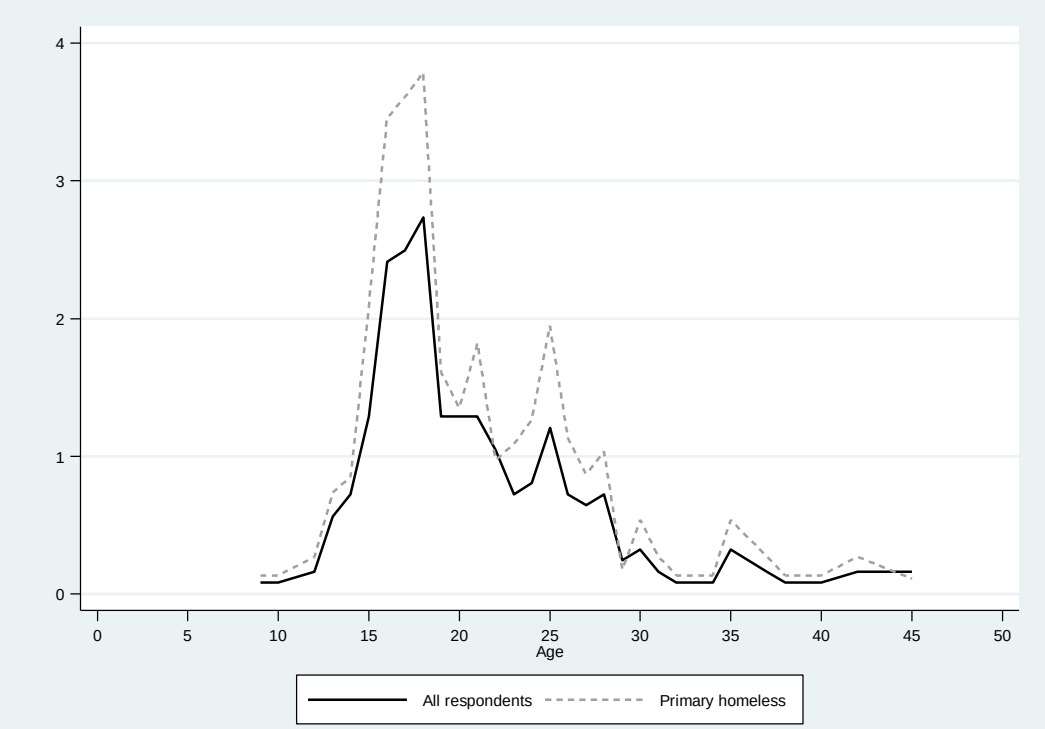
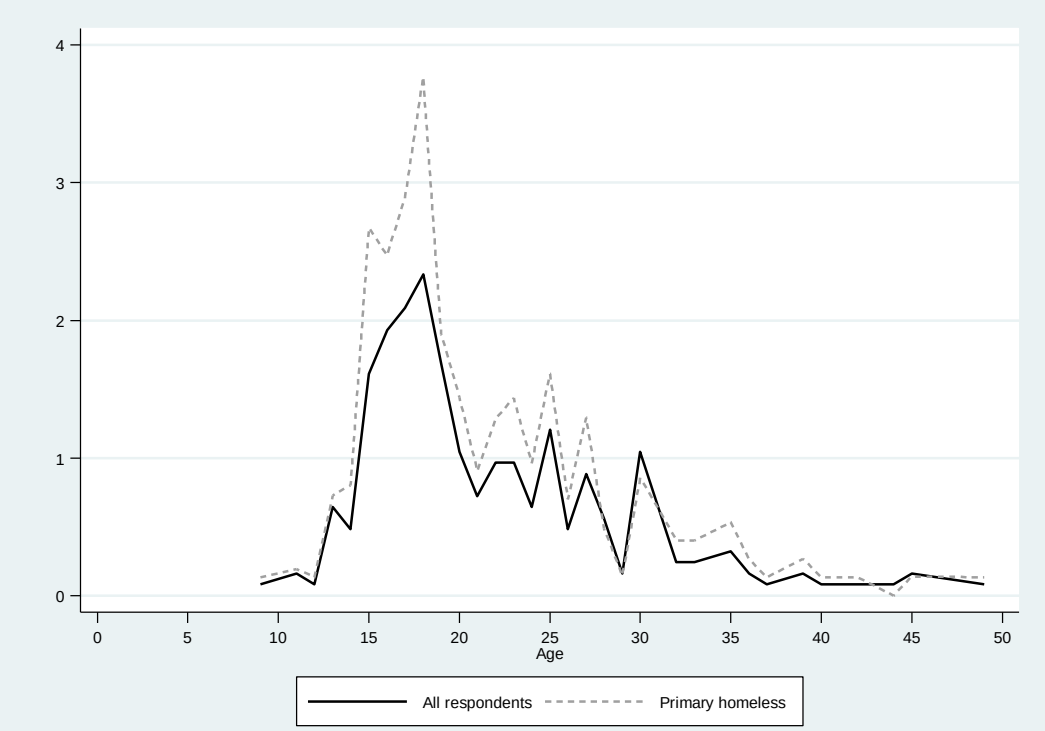


Figure 6.7: Age of onset of injecting illicit drugs



Of particular interest when studying first experiences, is the timing of events. In this chapter, we are particularly interested in whether the initiation to a specific substance preceded or followed the first experience of homelessness. Table 6.3 presents, for each substance, how the initiation to that substance relates to first experiences of homelessness. The percentage of respondents in each of the mutually exclusive alternatives—homeless before, homeless at the same age, and homeless after —are presented in relation to the timing of their first use of each type of substance. Interestingly, since most of the sample have experienced homelessness at some point in their life, there are only very few respondents who have not been homeless and not been using a specific substance, from who we cannot identify the sequence of onsets.

Table 6.2: Association between the prevalence of homelessness and substance use

	Homelessness		*Have been primary homeless*
	No	*Yes*	
Tobacco - daily use			
No	42.5	15.7	9.0
Yes	57.5	84.2	91.0
Cannabis			
No	39.5	19.1	11.4
Yes	60.5	80.7	88.5
Cannabis - daily use			
No	86.8	48.5	36.8
Yes	13.3	51.5	63.2
Illegal / street drugs			
No	72.8	45.7	33.1
Yes	27.2	54.3	66.9
Illegal / street drugs weekly use			
No	100.0	74.7	64.9
Yes	0.0	24.4	33.7
Injecting			
No	100.0	75.6	67.1
Yes	0.0	24.3	32.7
N	12	1231	720

Table 6.3: Association between the timing of homelessness and substance use

	All	*Have been primary homeless*
Smoking daily		
Homelessness before	14.3	17.5
Same age	7.5	7.8
Homelessness after	50.8	55.3
No homelessness, smoking	0.4	0.0
Homelessness, no smoking	15.2	8.8
No homelessness, no smoking	0.4	0.0
Missing starting age for starters	11.5	10.7
Cannabis		
Homelessness before	16.7	19.7
Same age	7.6	9.1
Homelessness after	53.6	57.6
No homelessness, cannabis	0.6	0.0
Homelessness, no cannabis	18.0	10.7
No homelessness, no cannabis	0.4	0.0
Missing starting age for starters	3.2	3.0

	All	*Have been primary homeless*
Cannabis - daily use		
Homelessness before	14.3	19.2
Same age	6.5	9.3
Homelessness after	29.2	33.3
No homelessness, cannabis	0.1	0.0
Homelessness, no cannabis	46.3	35.6
No homelessness, no cannabis	0.9	0.0
Missing starting age for starters	2.8	2.7
Illegal / street drugs		
Homelessness before	24.1	34.4
Same age	6.9	7.6
Homelessness after	21.9	23.7
No homelessness, illegal / street drugs	0.3	0.0
Homelessness, no illegal / street drugs	43.2	31.4
No homelessness, no illegal / street drugs	0.7	0.0
Missing starting age for starters	3.0	2.9
Illegal / street drugs - weekly use		
Homelessness before	14.2	20.5
Same age	2.4	3.2
Homelessness after	7.3	9.5
No homelessness, illegal / street drugs	0.0	0.0
Homelessness, no illegal / street drugs	71.7	63.0
No homelessness, no illegal / street drugs	1.0	0.0
Missing starting age for starters	3.4	3.8
Inject illegal / street drugs		
Homelessness before	12.5	18.7
Same age	2.3	3.4
Homelessness after	8.0	8.8
No homelessness, injecting	0.0	0.0
Homelessness, no injecting	72.7	65.3
No homelessness, no injecting	1.0	0.0
Missing starting age for starters	3.5	3.8
Total	1243	720

Smoking and cannabis use tend to occur for the first time before homelessness. 51.2 per cent of respondents (50.8+0.4) have started smoking daily before becoming homeless for the first time. 54.2 per cent of respondents experimented cannabis before their first homeless experience. This suggests that homelessness probably does not often lead to starting smoking or using cannabis. However, this does not imply that the use of tobacco and cannabis leads to homelessness as other related events could be causing both substance use and homelessness.

Homelessness occurs before respondents start using cannabis daily for 60.6 per cent of respondents (14.3+46.3). But a large number of respondents have been homeless and have not started using cannabis daily. Although these could still start using cannabis daily, it makes it hard to identify a clear pattern.

First experiences of homelessness also occur more often before respondents start using or injecting illegal street drugs (for 67.3 per cent, 85.9 per cent and 85.2 per cent of respondents in relation to overall use, weekly use, and injecting respectively). But again, most respondents do not start using illegal street drugs. Even in our very disadvantaged population a significant number of those who experienced homelessness never started using illegal street drugs. If we focus only on those respondents who experienced both homelessness and substance use, respondents more often become homeless and then start using illegal street drugs than the reverse, i.e. they start using and then become homeless. This suggests that homelessness could lead to the use of hard drugs (if anything) but for some people only.

6.4 Adverse childhood experiences

Homelessness and substance use experiences may both derive from adverse childhood experiences such as parents' death or separation, conflicts with parents, abuse or violence, parents' substance use, mental health issues or unemployment. Exploiting the rich information contained in the Journeys Home data on risk factors and vulnerabilities, we examine how the initiation to substance use and first experiences of homelessness vary with these adverse experiences.

Table 6.4 shows that adverse childhood experiences are relatively common in the Journeys homes sample: a third of the sample had divorced or separated parents at age 14, more than half were abused or neglected and six out of ten respondents experienced physical violence as a child. Their parents often experienced issues with substance use (28 per cent for the male caregiver and 17 per cent for the female), mental health problems (5 per cent and 11 per cent respectively) or long-term unemployment (14 per cent and 39 per cent respectively).

Table 6.4: Prevalence of adverse childhood experiences

	Frequency	*%*
Parents were divorced /separarted at age 14	414	33.3
Parents were dead at age 14	81	6.6
Conflict with parents at age 14	84	6.7
Emotional abuse/neglect as a child	724	58.3
Physical violence as a child	752	60.5
Sexual violence as a child	331	26.6
Male caregiver had an alcohol or drug problem	343	27.6
Male caregiver spent time in hospital for mental health problems	56	4.5
Male caregiver was unemployed more than 6 months	179	14.4
Female caregiver had an alcohol or drug problem	206	16.6
Female caregiver spent time in hospital for had mental health problems	136	10.9
Female caregiver was unemployed more than 6 months	483	38.9
Total	1243	100

To study how these adverse experiences relate to first experiences of homelessness and substance use, Figure 6.8 to Figure 6.14 present the distribution of the age at which respondents first experienced homelessness, first smoked or used illicit drugs by childhood

experiences respectively. Respondents who experienced adverse childhood circumstances experienced homelessness, smoked daily and used illegal substance more often than those respondents who did not experience such circumstances. This is especially true before 18, when the proportion of respondents experiencing homelessness or a substance for the first time is higher among respondents who went through an adverse childhood experience. After that, those who experienced such childhood experiences do not appear to be at higher risk of becoming homeless or to start using.

The age at which respondents experience homelessness for the first time is very sensitive to other adverse experiences. The first experience of homelessness happens earlier if the repondent experienced conflicts with his parents or death, any kind of abuse or violence and if his caregivers had mental health issues. Parents' separation and caregivers' substance use and unemployment does increase the chance of experiencing homelessness but not necessarily at a younger age.

Smoking daily tends to start earlier for respondents who were in conflict with their parents or whose parents are dead or had mental health issues. The use (and regular use) of cannabis starts earlier when the respondent was in conflict with his parents or when his caregivers had mental health or substance abuse issues or when his male caregiver was unemployed for more than 6 months.

Respondents start using illegal street drugs younger when they were in conflict with their parents and when their male caregiver had a mental health problem. Weekly use of illegal street drugs starts younger when the respondent was in conflict with his parents, his parents separated or he suffered from sexual violence.

Respondents started injecting drugs younger when they were in conflict with their parents or suffered from sexual violence.

6.5 Concluding comments

Almost all Journeys Home respondents have experienced homelessness at some point in their life and over half (58 per cent) have experienced primary homelessness. They also exhibit high levels of daily smoking, cannabis use and regular use, illegal street drugs use and regular use and drug injection. For most, the first experiences of homelessness and substance use occur during their teenage years. Those who experienced primary homelessness have a higher level of use but a similar pattern of onset: they did not start using earlier.

The extent to which the onset of substance use and the onset of homelessness are associated is crucial for understanding how the cycle of substance use and housing instability starts. This can help policy makers identify those at risk of entering a vicious circle of substance use and housing instability. Unfortunately, the descriptive evidence provided in this report does not provide a clear-cut answer to that question. First experiences of homelessness happen both before and after the onset of substance use for all substances. Homelessness and substance use probably contribute to one another such that the exact effect of each is not quantifiable in a descriptive framework. Further research is necessary to estimate how much first experiences of homelessness lead to substance use and vice versa.

Figure 6.8: Age of onset of homelessness by adverse childhood experiences

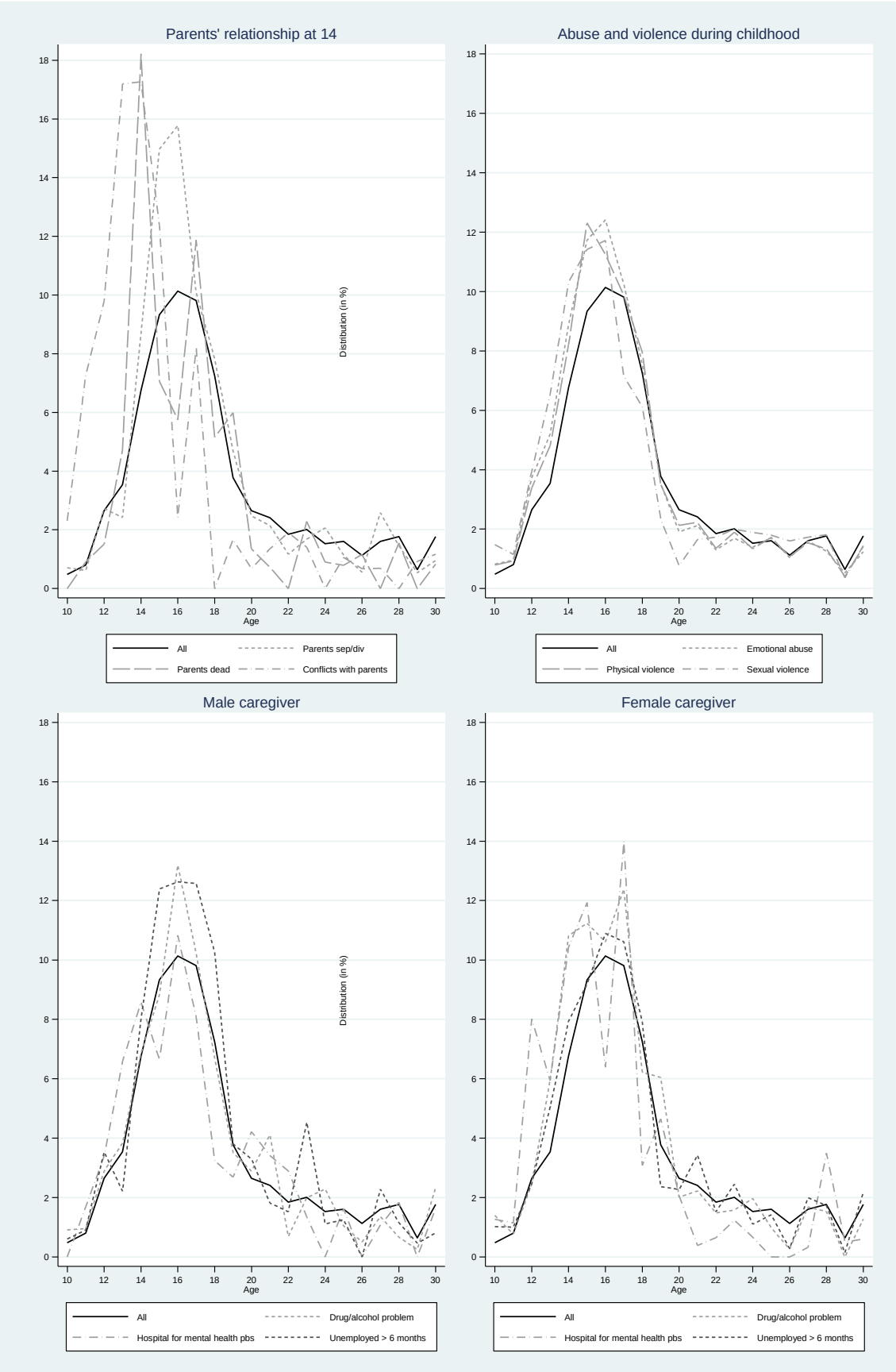


Figure 6.9: Age of onset of daily smoking by adverse childhood experiences

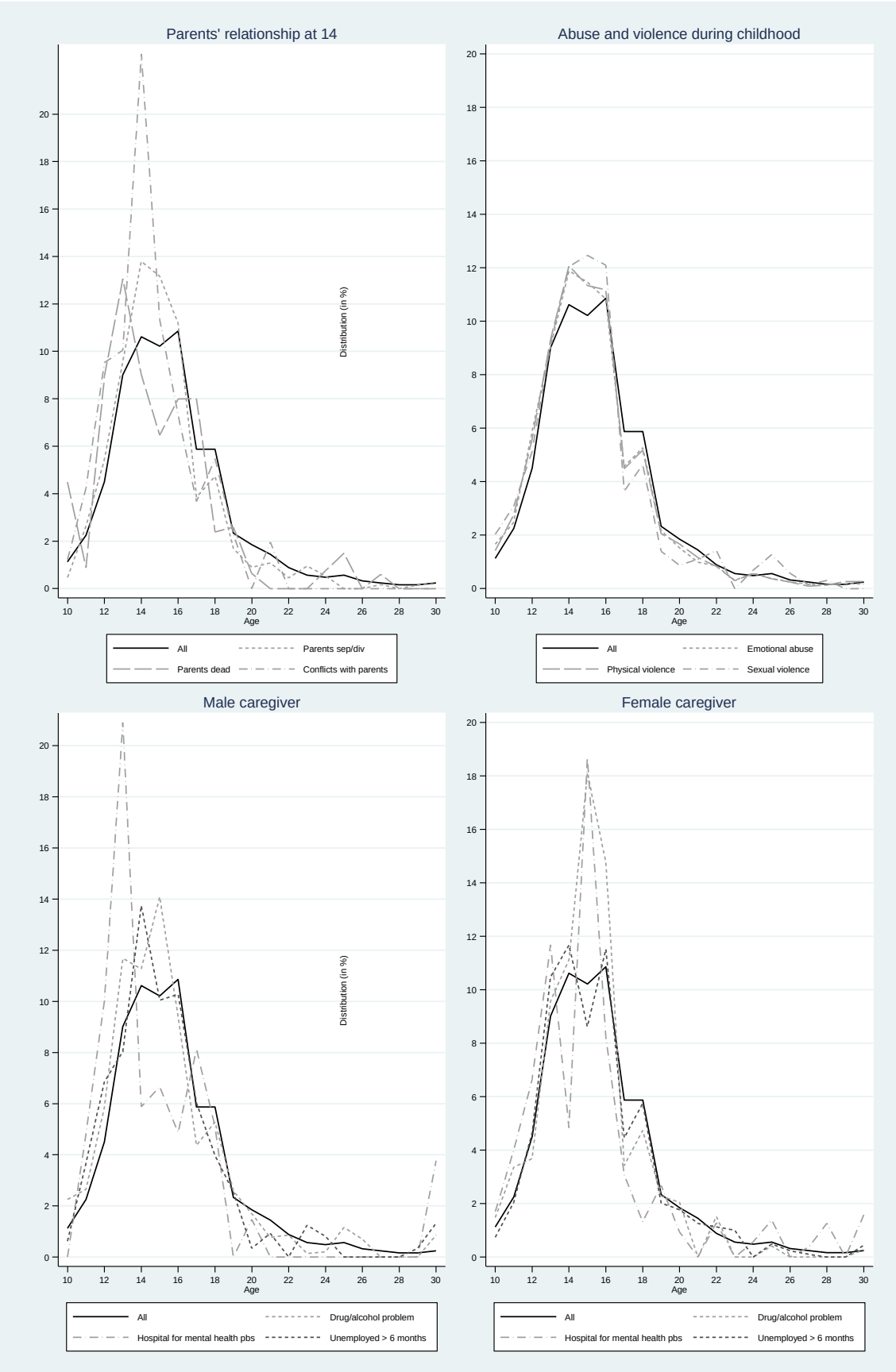


Figure 6.10: Age of onset of cannabis use by adverse childhood experiences

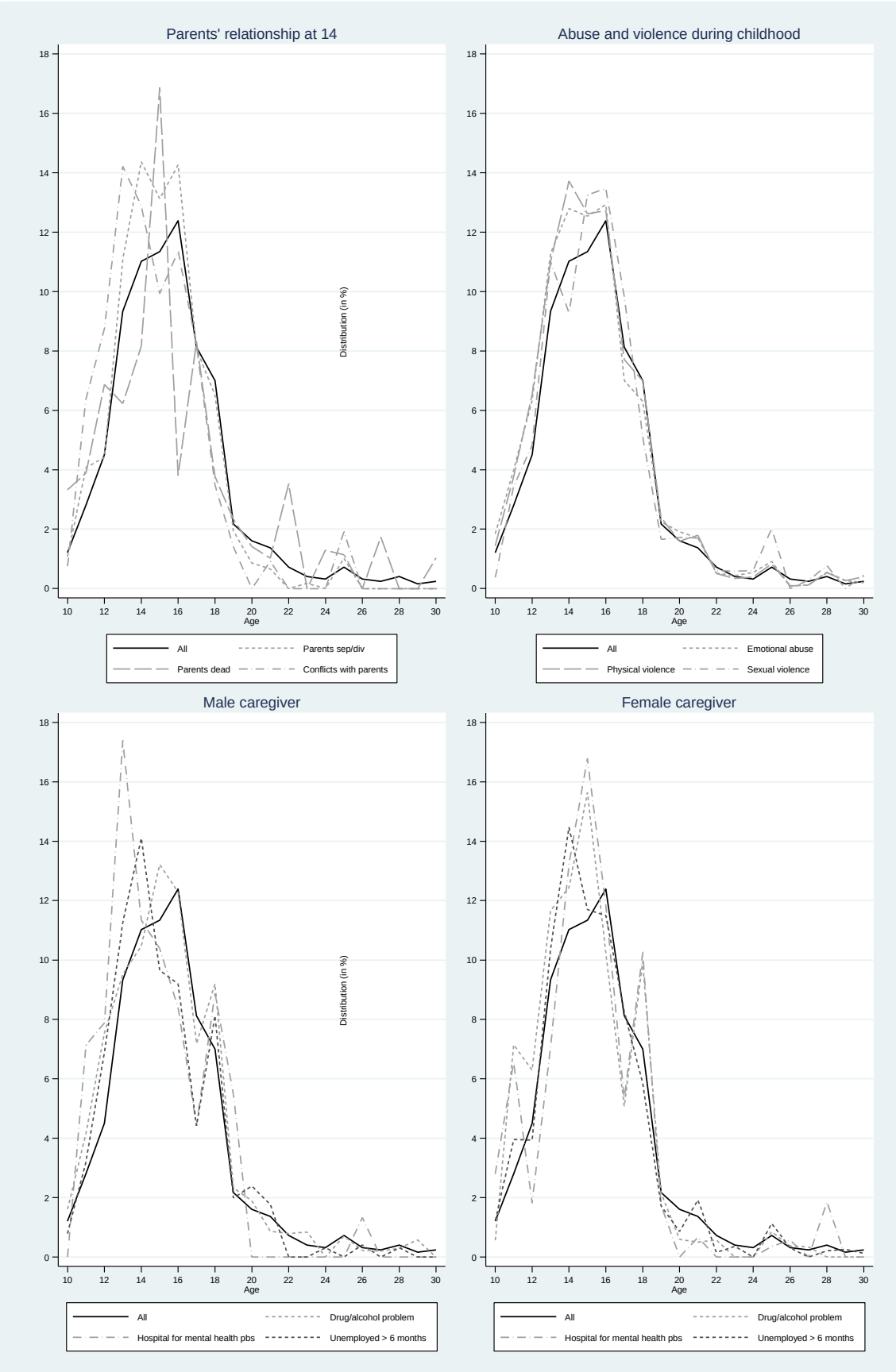


Figure 6.11: Age of onset of daily cannabis use by adverse childhood experiences

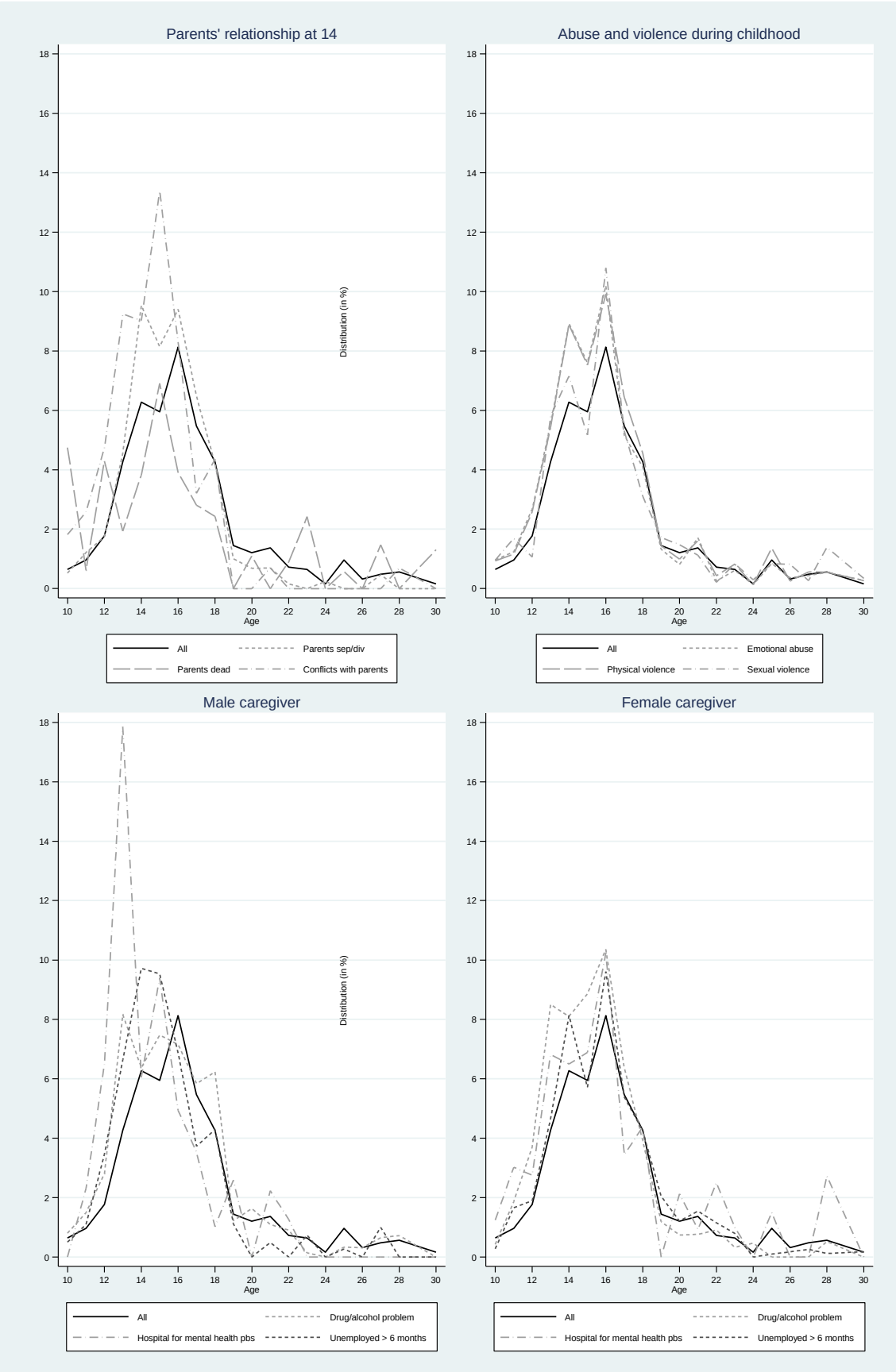


Figure 6.12: Age of onset of other illicit drugs by adverse childhood experiences

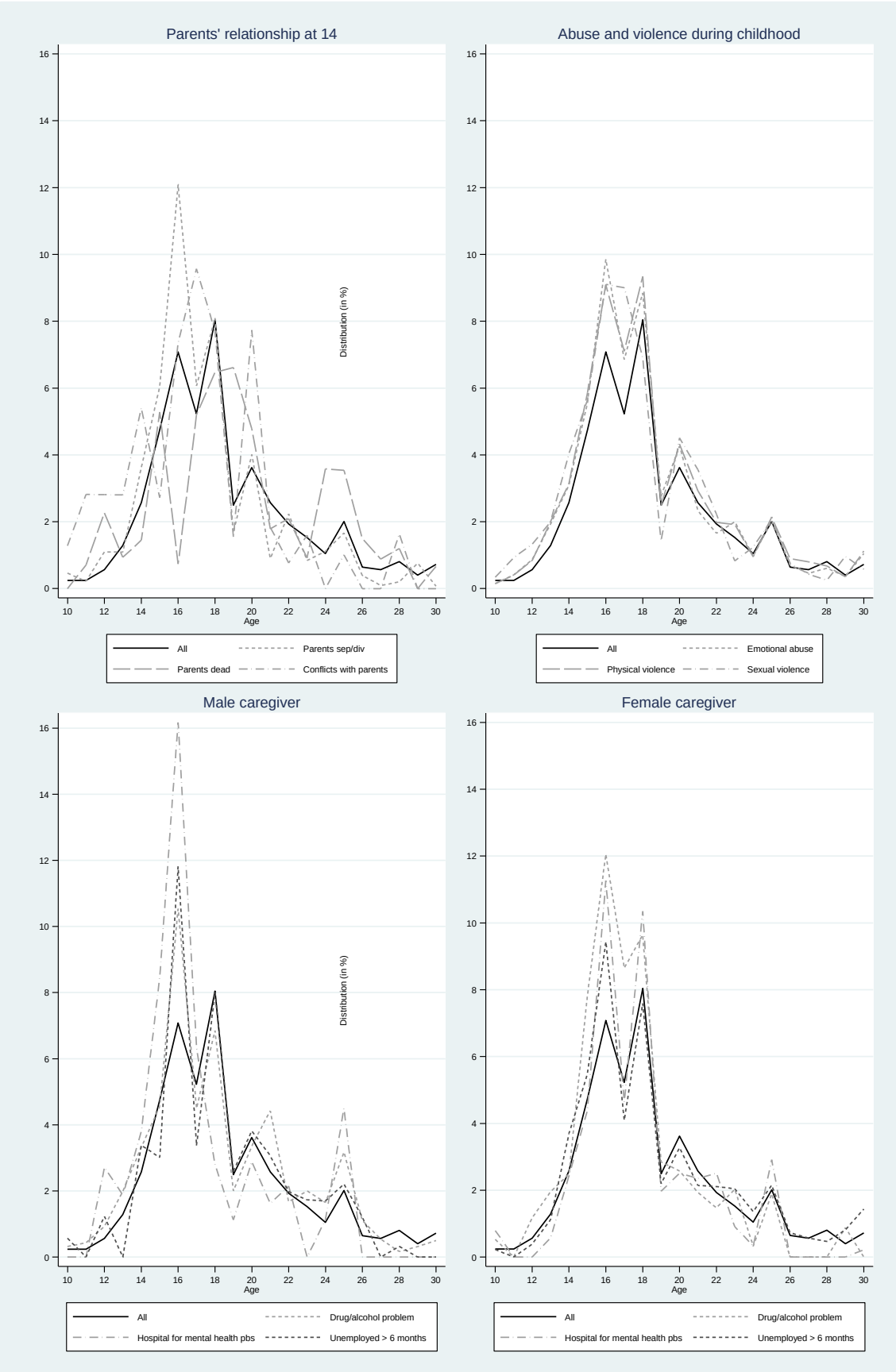


Figure 6.13: Age of onset of weekly use of other illicit drugs by adverse childhood experiences

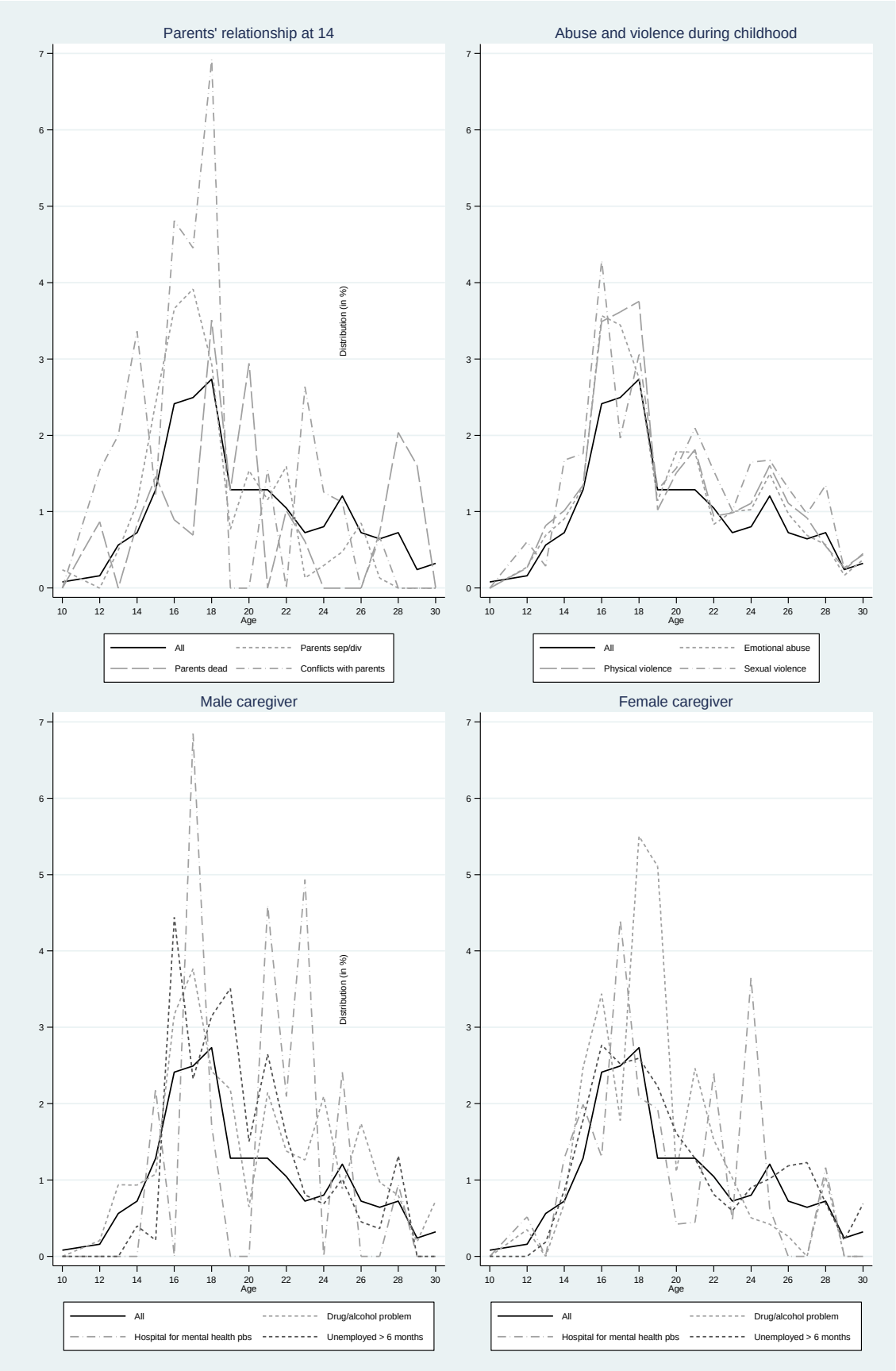
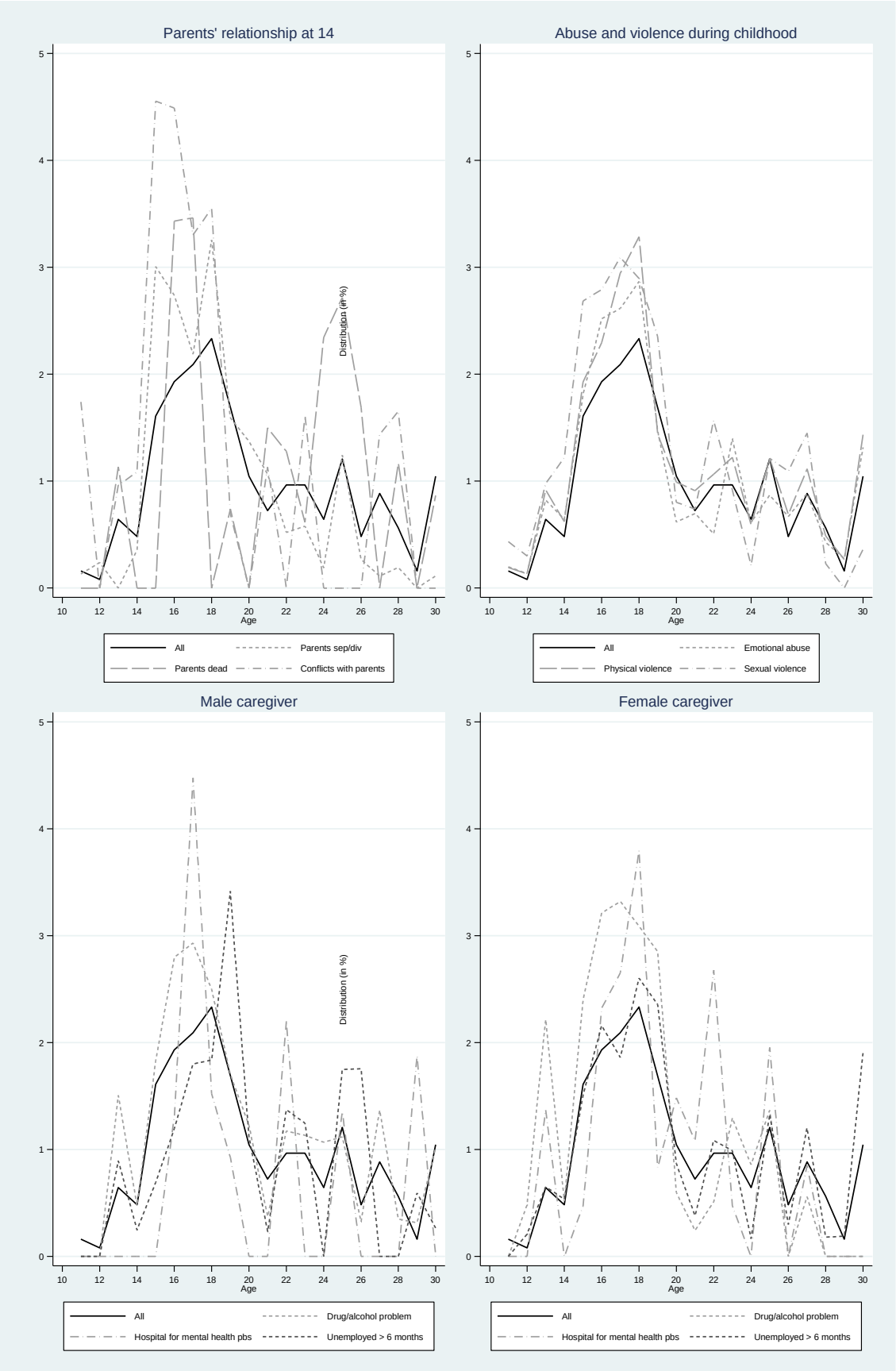


Figure 6.14: Age of onset of injecting of other illicit drugs by adverse childhood experiences



Respondents who experienced adverse childhood circumstances experienced homelessness, smoked daily and used illegal substance more often than those respondents who did not experience such circumstances. Respondents who experienced conflicts with their parents, parents' death or separation, abuse and violence and caregivers' substance abuse, mental health issues and unemployment have higher rates of homelessness and substance use experiences. These experiences also tend to be related with experiencing homelessness and substance use younger, especially conflicts with parents.

By Duncan McVicar and Julie Moschion

6.6 References

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7 Diet and food security

7.1 Introduction

A nutritious diet is essential to good health. Many diet-related chronic diseases, such as cardiovascular disease, type-2 diabetes and some forms of cancer, are major causes of death and disability among Australians (NHMRC 2013). Diet is affected by many lifestyle choices; however it can also be driven by the affordability and availability of nutritious options. Similarly, food insecurity, even in such a rich country as Australia, may adversely affect dietary intake and weight status of individuals (Booth 2006).

People living in low-income households tend to be more likely to face food insecurity (Coleman-Jensen, Nord & Singh 2013) and have poorer diets and suboptimal nutrition than persons living in higher income households (Nelson et al. 2007).

Persons experiencing homelessness are typically considered to be particularly vulnerable to poor diet and food insecurity due to a lack of money to purchase nutritious food and a lack of a home to prepare it. However there is a very limited evidence base exploring diet and food security patterns amongst the homeless. The small number of existing studies on these issues suffer from being small scale (Darnton-Hill et al. 1990; Dachner & Tarasuk 2002; Booth 2006); focus on particular locations and/or demographic cohorts (Gunderson et al. 2003; Weiser et a.l 2013); or take a narrow view of homelessness by drawing samples of shelter users (Lee & Greif 2008).

Journeys Home (JH), on the other hand, is a national survey of people homeless or vulnerable to homelessness using more rigorous sampling methods than those used in prior studies. Also in wave 5 of the survey, respondents were asked to report on their diet and food security. The wave 5 data can therefore add quite substantially to a rather small existing evidence base.

In this chapter we therefore use the wave 5 JH data to examine diet patterns and food security of a population of Australians vulnerable to homelessness. Gender differences are explored, as well as differences between those homeless and those housed. Note that in this chapter 'homeless' reflects those that have been homeless (that is have been living with family or friends; in a boarding house; in caravans, cabins, mobile homes, boarding or rooming houses, hostels, hotels or motels; or squatting in abandoned buildings, living in emergency or crisis accommodation, or sleeping rough) in the last 6 months. Also all estimates provided in this chapter are weighted for non-random survey response in wave 5.

7.2 Diet

First we examine the diet of respondents, summarising responses on consumption of fruits and vegetables and meat, fish, legumes or pulses. In Table 7.1 we compare fruit and vegetable consumption of JH respondents with that of the general population. It is obvious from this table that JH respondents tend to consume fewer fruits and vegetables than the general population. For instance in Panel A we see that only 26.9 per cent of JH respondents eat fruit 6-7 days of the week compared to 48.9 per cent in the general population (panel B). Likewise 43.7 per cent of JH respondents consume vegetables 6-7 days per week compared to 59.9 per cent of the general population. As with the general population females tend to eat fruit and vegetables more often, however the difference between male and female consumption is much smaller in the JH population (as the fruit and vegetable intake of females is comparatively much lower than in the general population).

Table 7.1: Fruit and vegetables consumption — Number of days in a usual week

A. Journeys Home Wave 5 (2013) (%)

	Fruit			*Vegetables*		
Days	*All*	*Females*	*Males*	*All*	*Females*	*Males*
0	21.9	20.3	23.0	5.8	4.3	6.9
1	13.0	12.2	13.5	6.8	6.4	7.1
2	11.6	11.0	12.1	8.3	6.4	9.7
3	13.5	11.2	15.1	12.9	12.4	13.3
4	7.0	7.7	6.5	11.9	13.2	11.1
5	5.7	6.5	5.1	10.1	12.3	8.5
6	1.8	1.7	2.0	5.6	4.1	6.6
7	25.1	29.0	22.3	38.1	40.3	36.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: Those with missing observations are not shown.

B. HILDA Wave 7 (2007) (%)

	Fruit			*Vegetables*		
Days	*All*	*Women*	*Men*	*All*	*Women*	*Men*
0	5.8	4.4	7.3	0.6	0.4	0.8
1	7.6	5.9	9.3	1.4	1.2	1.5
2	9.4	7.6	11.4	3.2	2.4	4
3	9.7	8.9	10.5	7.3	6.2	8.4
4	8.2	7.6	8.8	11.2	10.3	12.2
5	10.3	9.8	10.9	16.4	15.5	17.4
6	4.6	4.3	5.0	10.9	10.8	11
7	44.3	51.6	37.0	49.0	53.3	44.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Goodes and Hahn (2010, Table 23.1, p. 105).

According to the Australian dietary guidelines (NHMRC 2013), adults aged 19 to 50 years should consume a minimum of two serves of fruits and five serves of vegetables (six for males) per day. However, as we can see in Table 7.2, few Journeys Home respondents actually meet these minimum recommendations. Only 20 per cent of respondents report eating two or more serves of fruits on average per day and 3.8 per cent report eating five or more serves of vegetables on average daily. Females consume slightly more than males, but the differences across gender are negligible. Likewise, while those homeless in the past 6 months consume slightly less fruits and vegetables the differences between the housed and the homeless are negligible. While it is clear that fruit and vegetable consumption among the JH population is relatively low, it is important to note that even the general population struggles to meet the dietary guidelines minimum recommendations; the ABS National Health Survey in 2007-08 for instance found that just over half of the adult population

consumed the recommended two serves or more of fruit per day and 9 per cent consumed the recommended five serves of vegetables per day (AIHW 2013).

Consumption of meat, fish and seafood, and legumes and pulses is presented in Table 7.3. There is not enough information in the survey to accurately determine the number of servings people consume per day to compare intakes to the dietary guidelines. However, we can see that the consumption of meat is more common than fish & seafood or legumes & pulses; over a third of respondents eat meat every day and only 3.9 per cent of respondents don't eat meat at all. Many respondents however do not eat fish at all (38.4 per cent) and almost half (48.1 per cent) don't eat legumes or pulses at all, and very few eat fish or legumes & pulses on a regular basis (4 or more days a week). Females show a slightly lower frequency of intake of all of these sources of protein. Interestingly however, consumption does not vary substantially with homeless status; those experiencing homelessness do consume fish and seafood slightly less frequently than the housed but the difference is small. Also they consume meat slightly more frequently. They also appear to consume legumes and pulses as frequently as the housed.

Table 7.2: Fruit and vegetables consumption—average daily intake (%)

				Homeless			*Housed*		
	All	*Males*	*Females*	*All*	*Males*	*Females*	*All*	*Males*	*Females*
Fruits									
None	21.9	23.0	20.3	23.1	24.7	20.1	20.6	20.8	20.4
< 2 serves	57.2	56.9	57.6	55.1	52.7	59.6	59.3	62.2	56.0
2+ serves	19.9	19.2	21.0	20.7	22.2	17.9	19.1	15.4	23.2
Vegetables									
None	5.8	6.8	4.3	6.9	9.0	3.1	4.7	4.2	5.3
< 5 serves	89.6	89.0	90.5	89.4	87.3	93.3	89.8	91.1	88.5
5+ serves	3.8	3.7	4.1	3.0	3.7	1.7	4.7	3.6	5.9
N	1,395	816	579	696	450	246	699	366	333

Notes: Average daily intake = (Days in a usual week consumed x Serves usually eat per day) / 7. Those with missing observations are not shown.

Table 7.3: Consumption of meat, fish and legumes or pulses—number of days in a usual week (%)

				Homeless			*Housed*		
Days	*All*	*Males*	*Females*	*All*	*Males*	*Females*	*All*	*Males*	*Females*
Meat									
0	3.9	2.7	5.7	3.4	2.6	4.7	4.5	2.7	6.4
1	5.0	5.1	4.9	4.7	3.9	6.3	5.2	6.5	3.8
2	8.6	7.4	10.1	8.3	7.5	9.8	8.8	7.4	10.4
3	10.5	11.2	9.4	10.5	11.7	8.2	10.5	10.6	10.4
4	13.3	13.5	12.9	13.5	13.9	13.0	13.0	13.1	12.9
5	13.5	12.6	14.7	12.9	12.8	13.1	14.0	12.3	16.0
6	5.9	6.0	5.7	5.5	5.6	5.3	6.3	6.5	6.0
7	39.0	41.1	36.0	40.7	41.8	38.5	37.3	40.2	34.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fish & seafood									
0	38.4	34.5	43.8	40.6	35.9	49.3	36.1	32.8	39.8
1	32.1	31.9	32.5	29.6	29.3	30.2	34.6	34.9	34.3
2	14.8	16.0	13.1	14.2	15.4	12.1	15.4	16.7	13.9
3	6.4	7.7	4.7	7.2	8.8	4.3	5.6	6.2	4.9
4	2.1	2.3	1.7	1.4	1.8	0.7	2.7	2.9	2.4
5	1.9	2.0	1.8	1.7	2.0	1.1	2.1	2.0	2.3
6	0.7	1.0	0.3	1.2	1.8	0.0	0.2	0.0	0.4
7	2.7	3.6	1.3	3.0	4.1	0.8	2.3	2.9	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Legumes & pulses									
0	48.1	44.2	53.6	47.8	44.1	54.6	48.4	44.3	52.9
1	20.8	22.1	18.8	20.6	20.8	20.3	20.9	23.8	17.8
2	13.6	14.2	12.6	14.5	16.5	10.8	12.6	11.4	13.9
3	8.8	9.7	7.4	8.8	9.8	7.0	8.8	9.7	7.8
4	3.2	3.3	3.0	3.1	3.5	2.5	3.2	3.1	3.4
5	1.6	2.0	0.9	0.8	1.2	0.0	2.4	3.1	1.6
6	0.4	0.4	0.4	0.5	0.6	0.4	0.3	0.2	0.4
7	3.0	3.5	2.4	3.3	3.4	3.0	2.8	3.5	1.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	1395	816	579	696	450	246	699	366	333

Respondents are also asked to report the number of days per week they usually have some food —separately for— breakfast, lunch and dinner. In addition they are asked how many days per week they buy meals from a restaurant, cafe, fast food outlet, or any other place that prepares and sells meals —separately for— breakfast, lunch and dinner. The resulting average number of meals per day eaten overall and purchased are summarised in Table 7.4.

Less than a third of people (29 per cent) eat an average of 3 meals a day (i.e. breakfast, lunch and dinner) in a usual week. An additional 40 per cent eat at least 2 meals a day. This is perhaps not that alarming, as anecdotally at least, it seems quite common for people to skip a meal a day. What is particularly worrying however is the remaining 30 per cent who eat less than 2 meals a day. Males and persons experiencing homelessness in the past 6 months are slightly more likely to eat fewer than 2 meals a day than females and persons housed respectively. Twenty three percent of people did not buy any purchased meals in a usual week, with an additional 64 per cent on average buying purchased meals for less than one meal a day. As expected, females are slightly less likely to buy purchased meals. Also, the homeless are less likely to buy purchased meals overall and buy purchased meals less often than the housed.

In Table 7.5 we present summary information on the consumption of free meals provided by welfare organisations in a usual week. Only a minority of respondents (3.9+3.5=7.4 per cent) report consuming free meals provided by welfare organisations in a usual week. Males are almost twice as likely to consume free meals as females (9.3 per cent compared to 4.8 per cent), as are the homeless relative to the housed (10 per cent compared to 4.8 per cent).

Table 7.4:Average number of meals per day (%)

				Homeless			*Housed*		
	All	*Males*	*Females*	*All*	*Males*	*Females*	*All*	*Males*	*Females*
All meals									
>0 and <1	2.6	1.7	3.9	2.9	1.3	5.8	2.3	2.2	2.5
≥1 and <2	27.3	29.2	24.7	29.1	30.8	25.9	25.6	27.2	23.9
≥ 2 and <3	40.2	40.3	40.0	39.1	38.1	40.9	41.2	42.9	39.4
3	29.1	27.8	30.9	28.2	29.3	26.2	29.9	26.0	34.3
Bought meals									
0	22.9	20.9	25.6	22.0	21.8	22.4	23.7	19.8	28.0
>0 and <1	63.9	62.4	66.1	65.0	63.5	67.7	62.9	61.1	64.9
≥1 and <2	10.6	14.0	5.9	9.8	11.2	7.3	11.4	17.4	4.8
2 or more	1.5	2.0	1.0	2.0	2.9	0.2	1.1	0.8	1.5
N	1395	816	579	696	450	246	699	366	333

Note: Those with missing observations are not shown.

Table 7.5 Number of meals provided for free by welfare organisations per week (%)

				Homeless			*Housed*		
	All	*Males*	*Females*	*All*	*Males*	*Females*	*All*	*Males*	*Females*
0	92.2	90.4	94.8	89.6	88.5	91.7	94.8	92.6	97.1
1 or 2	3.9	4.1	3.6	5.3	5.0	5.9	2.5	2.9	1.9
3 or more	3.5	5.2	1.2	4.7	6.5	1.5	2.3	3.5	0.9
N	1395	816	579	696	450	246	699	366	333

Note: Those with missing observations are not shown.

7.3 Food insecurity

Indicators of food insecurity are presented in Table 7.6. The first six indicators, only asked in wave 5 of the survey, are based closely on the Household Food Insecurity Access Scale (HFIAS) outlined in Coates, Swindale and Bilinsky (2007). Key differences to the HFIAS include: reducing the number of items from nine to six, shifting the emphasis away from the "household" to the "individual", and some rewording of items – rewording one item to refer to "skipping meals" rather than "eating fewer meals in a day" and including the word "ever" in most of the part (a) screener questions. The seventh item on whether respondents, because of a shortage of money, 'had to go without food when hungry', is the first item of a battery of questions on financial stress and was included in all waves.

Reassuringly, when examining each of the 6 indicators of food insecurity in isolation, the overwhelming majority of JH respondents respond that they 'never' or 'rarely' experienced each particular aspect of food insecurity in the past 4 weeks. For instance almost three quarters (73.3 per cent) of respondents reported that, in the past 4 weeks, they did not ever worry about not having enough food. An additional 11.9 per cent reported that they did worry, but did so rarely (i.e once or twice in the past 4 weeks). The remaining 14.1 per cent reported worrying that they would not have enough food at least 'sometimes' (that is more than three times in the past 4 weeks).

A similar pattern is evident across each of the indicators, with some slightly more common and some slightly less common than others. The most common element of food insecurity is having to eat a limited variety of foods; with 13.4 per cent reporting 'rarely' having to eat a limited variety of foods because of a lack of money, 14.3 per cent reporting 'sometimes' and 7 per cent reporting they would do so 'often'. The least common is the most extreme form of food insecurity; having to go without food for an entire day and night. Encouragingly, 85.9 per cent say that, in the past 4 weeks, they never had to go without food for an entire day and night. But even having to go without once (i.e., 'rarely') in the past 4 weeks is a concern, and 13.5 per cent of respondents report that they did so at least once.

Table 7.6: Indicators of food insecurity (%)

				Homeless			*Housed*		
	All	*Males*	*Females*	*All*	*Males*	*Females*	*All*	*Males*	*Females*
Worry that you would not have enough food (in past 4 weeks)									
Never	73.3	73.9	72.4	73.1	72.8	73.8	73.4	75.2	71.4
Rarely	11.9	11.2	12.8	9.7	9.5	10.1	14.0	13.3	14.7
Sometimes	9.1	8.5	10.0	10.4	10.5	10.2	7.9	6.0	9.9
Often	5.0	5.4	4.3	6.3	7.1	4.8	3.7	3.5	3.9
Eat a limited variety of foods because of a lack of money (in past 4 weeks)									
Never	64.4	64.3	64.6	64.0	63.9	64.3	64.8	64.8	64.8
Rarely	13.4	13.9	12.8	11.1	12.0	9.5	15.8	16.2	15.3
Sometimes	14.3	13.4	15.7	15.7	13.9	19.0	13.0	12.7	13.3
Often	7.0	7.5	6.3	8.5	9.7	6.4	5.6	4.9	6.3
Eat some foods that you really did not want to eat because of a lack of money (in past 4 weeks)									
Never	74.8	75.1	74.4	73.4	71.9	76.2	76.1	79.0	73.0
Rarely	11.5	11.8	11.1	10.5	11.4	8.9	12.5	12.2	12.8
Sometimes	9.3	9.1	9.5	10.5	11.6	8.6	8.0	6.1	10.1
Often	3.9	3.5	4.5	5.0	4.8	5.3	2.9	1.9	3.9
Eat a smaller meal than you felt you needed because there was not enough food (in past 4 weeks)									
Never	74.0	73.7	74.4	71.6	71.6	71.6	76.3	76.2	76.4
Rarely	10.2	10.0	10.4	9.3	8.8	10.2	11.1	11.5	10.6
Sometimes	10.8	10.6	11.0	12.8	13.3	11.9	8.8	7.3	10.4
Often	4.4	5.0	3.7	5.7	6.0	5.1	3.1	3.6	2.6
Skip a meal because of a lack of money (in past 4 weeks)									
Never	77.0	75.1	79.7	73.8	71.7	77.5	80.2	79.2	81.3
Rarely	8.3	9.2	7.0	7.6	8.5	5.9	9.0	10.2	7.8
Sometimes	9.8	10.5	8.9	11.8	13.0	9.4	7.8	7.3	8.4
Often	4.5	4.9	4.0	6.5	6.8	6.1	2.5	2.5	2.5
Go a whole day and night without eating anything because there was not enough food (in past 4 weeks)									
Never	85.9	83.6	89.1	83.2	81.5	86.2	88.5	86.1	91.3
Rarely	6.7	8.2	4.6	7.0	7.8	5.6	6.4	8.8	3.8
Sometimes	4.8	5.9	3.2	6.5	8.3	3.3	3.0	2.9	3.1
Often	2.0	1.5	2.6	2.5	1.8	3.7	1.5	1.2	1.9
Had to go without food when hungry (in last 6 months)	26.0	28.8	22.1	30.4	33.7	24.3	21.6	22.7	20.4
N	1395	816	579	696	450	246	699	366	333

Note: 'Rarely' = Once or twice in the past 4 weeks; Sometimes = 3-10 times in the past 4 weeks; Often = More than 10 times in the past 4 weeks. Those with missing observations are not shown.

The only indicator where we are able to compare Journeys Home respondents with the general population is the final one, showing that 26 per cent of respondents report having 'had to go without food when hungry (in the last 6 months)'. This same question was asked in the 2010 General Social Survey, albeit covering a longer 12-month period. According to the the GSS, only 2.3 per cent of the adult population report having had to go without food over a 12-month period (ABS 2010, Datacube Table 46.1). This provides a clear indication that JH respondents are at much greater risk of food insecurity than the general population.

While gender differences in the indicators capturing food anxiety ('worry that you would not have enough food') and issues with food quality ('eat a limited variety of foods because of a lack of money' and 'eat some foods that you really did not want to eat because of a lack of money') are negligible, males are slightly more likely to report going without food (the last three indicators) than females. Also, persons experiencing homelessness are more likely to report experiencing six of the seven indicators at least once (i.e., at least 'rarely) than do those housed. Also, on the one indicator where the homeless are just as likely to report experiencing at least once as the housed (worry that would not have enough food in the past 4 weeks) they are however more likely to report experiencing 'sometimes' or 'often' than housed persons.

It is difficult to ascertain overall patterns in levels of food insecurity from the detail on the individual items in Table 7.6. Therefore in Table 7.7 we summarise this information by creating a measure of overall food insecurity from the 6 HFIAS items as suggested by Coates et al (2007). To construct the summary measure we simply sum across each of the 6 items where responses of 'never' are assigned a value of 0, 'rarely' a value of 1, 'sometimes' a value of 2 and 'often' a value of 3. The resulting score therefore has a range between 0 and 18, where a higher value indicates a higher level of food insecurity.

Table 7.7: Measure of overall food insecurity

				Homeless			*Housed*		
	All	*Males*	*Females*	*All*	*Males*	*Females*	*All*	*Males*	*Females*
Never (%)	53.7	52.8	54.8	53.7	51.7	57.3	53.6	54.2	53.0
Ever (%)	44.7	45.3	44.0	44.5	46.7	40.5	45.0	43.6	46.5
Average score	2.6	2.6	2.5	2.9	3.0	2.7	2.2	2.1	2.4
Standard error of score	(0.109)	(0.149)	(0.160)	(0.174)	(0.224)	(0.277)	(0.133)	(0.183)	(0.192)
N	1395	816	579	696	450	246	699	366	333

Notes: "Never" refers to those with an overall score of 0 and "Ever" to those with an overall score of greater than 0. Those with missing observations are not shown.

The table shows that almost 54 per cent respond 'never' to all of the 6 items. Thus we can consider that over half of JH respondents are food secure. The remaining 45 per cent show at least once indication of being food insecure. The average score is 2.6. There are negligible differences by gender. While those experiencing homelessness in the past 6 months are no more likely to have ever experienced any of the food insecurity indicators than the housed,

their average food insecurity score is slightly higher, even after considering the confidence interval of the score. Thus the homeless are either more likely to experience a greater number of types of food insecurity than the housed and/or they experience them more often.

7.4 Conclusion

Access to nutritious food options seems to be an issue for JH respondents; they eat fewer fruits and vegetables and there is evidence that they are much more at risk of food insecurity than the general population. Males tend to have poorer diets than females, and the homeless more than the housed. However these differences are quite small, probably because we are dealing with such a disadvantaged population who overall have poor diets.

The relationship between food insecurity and homelessness, although more pronounced than with overall diet, is still not huge. As our sample are overwhelmingly on low-incomes, it is possible that high housing costs in most Australian capital cities and major regional centres are contributing to the observed problems experienced by the housed.

It is unclear whether the poor diets of JH respondents are driven by a lack of affordable healthy food options, are due to other lifestyle choices, or are the result of a lack of education and awareness of healthy options. What is clear is that while only a small proportion of JH respondents go without food on a regular basis, many more report being constrained in their food choices due to a lack of money. Further research is required to examine how these limitations impact on overall diets and, eventually, on health outcomes.

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