Mental Health Problems, Disability and Income Support Receipt: A Replication and Extension Using the HILDA Survey

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Abstract
There is considerable evidence that social position and economic status are related to mental health. This article uses data from the first wave of the HILDA Survey to replicate and extend previous research demonstrating the elevated prevalence of mental disorders among different groups of Australian income support recipients. Welfare recipients were significantly more likely to experience moderate or severe disability due to poor mental health than non-recipients, with rates particularly elevated among clients receiving disability, lone parent and unemployment payments. To a large extent, these elevated rates of mental disability are consistent with the pattern of financial hardship and demographic characteristics such as gender and partnered status, and physical disability. However, a significant proportion of mental disability remains unexplained in several client segments. These findings have important implications for the design, delivery and evaluation of interventions to improve the social and economic participation of different welfare client groups.

1. Introduction
People who experience mental health problems often incur substantial economic and personal costs, including lost opportunities. Given the

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widespread prevalence of mental disorders and mental health problems and the substantial impairment that these conditions cause, many researchers, practitioners and policy makers argue that mental health should receive greater consideration in the design and implementation of mainstream social and economic policy (e.g., Jenkins, 2001; WHO, 2001). Further, many of the solutions to mental health problems lie with social rather than medical responses (Fryer, 1999; WHO, 2001), suggesting mental health should be viewed as a major social as well as public health issue. In Australia, for example, the workplace costs of depression due to absenteeism and reduced productivity are estimated at $3.5 billion per year (WORC, 2000). We expect that the costs of mental illness (personal and societal) for those not in the workforce may be even greater. It is important to assess the prevalence of mental health problems among income support recipients and subsequently, the extent to which mental disorders present a barrier to increased social and economic participation and increase the risk of social exclusion and welfare dependency.

Why Consider Common Mental Disorders in a Social Policy Context?

There are many different types or classifications of mental disorders, each with different characteristics and effects. Australian social policy responses recognise that ‘low prevalence’ mental illnesses, such as schizophrenia, limit a person’s capacity to participate in society and assistance is provided in areas such as independent living skills, housing, employment, and financial/income support. Our research focus, however, is on high prevalence ‘common’ mental health problems such as anxiety and depression (Butterworth, 2003a; 2003b). These conditions have received less emphasis and recognition in the social policy context. Goldberg and Gournay (1997) note that common mental health problems are highly amenable to treatment, are likely to result in disability, but do not usually receive specialist treatment. Given this combination of features, the common mental health problems are a potential target for interventions delivered in the social policy environment.

Around 20 per cent of adult Australians experience a clinical mental disorder in a given year (Andrews, Hall, Teesson and Henderson, 1999). Recent research has demonstrated the severity and high levels of disability associated with mental disorders, prompting increased efforts to address mental health problems (e.g., Jenkins, 2001; WHO, 2001). In Australia, mental illness is the leading cause of non-fatal disease burden (Mathers, Vos and Stevenson, 1999). That is, mental illness is responsible for the greatest level of disability or impairment in the Australian community, over twice that associated with either cardiovascular or musculoskeletal disorders. Much of this disease burden is due to the common mental disorders. At the level of specific diseases and disorders, depression is the leading cause of disability. Sanderson and Andrews (2002) demonstrated 94 per cent of people with a depressive disorder and 80 per cent of people with an anxiety disorder experience disability (i.e., limitations restricting daily activities).

Whereas the prevalence of most forms of disability increases with age, mental disorders are most prevalent in young adulthood (Henderson,
Andrews and Hall, 2000). Thus, the onset and impact of mental disorders co-occurs with significant life stages such as the transition from adolescence to adulthood, family formation, child rearing, and career establishment and development. As such, the impact and consequences of mental health problems may be more enduring over the life-course.

Given this profile of mental illness, we consider that efforts to address common mental health problems could be an effective strategy to promote employment outcomes and increase levels of economic and social participation. This is important given current concerns about welfare dependency, the impact of structural aging on the population profile, and the social and economic policy priority to maximise participation and productivity amongst people of working age (e.g., Commonwealth of Australia, 2002; FaCS, 2002).

**The Relationship between Mental Health and Income Support**

There has been extensive research on the relationship of social position and economic status with mental health, including research from the fields of epidemiology, psychology, psychiatry, sociology and economics. This has provided an enormous literature, including considerable Australian research, examining the relationship between unemployment and various psychological and mental health constructs (see reviews by Dooley, Fielding and Levi, 1996; Murphy and Athanasou, 1999; and Australian examples such as Comino, et al., 2003; Feather, 1997; Flatau, Galea and Petridis, 2000; Mathers and Schofield, 1998). In the present study, we are extending this consideration to a range of welfare client segments in addition to those identified as unemployed.

We anticipate elevated levels of mental health problems among welfare recipients for a number of reasons. For example, given the eligibility criteria, those who are entitled to, and have a need for income support payments must demonstrate a lack of economic resources. Poverty or financial hardship is a risk factor for poor mental health (Feather, 1997; Fryer, 1999; Hope, Power and Rodgers, 1999). Further, many welfare recipients have experienced traumatic or adverse life circumstances, and often these factors are directly associated with their eligibility or need for income support (e.g., unemployment and redundancy, divorce and separation, death of spouse, disability). These adverse life events are also proven risk factors for poor mental health (e.g., Turner, Wheaton and Lloyd, 1995).

**The Importance of Causality**

As is obvious even from this brief discussion, the relationship between receipt of income support payments and mental health is complex. The issue of causality, while clearly important, is extremely difficult to determine and, for our current purposes, not necessary. Given that this claim may seem controversial, we provide a brief overview of why we consider this is the case, and outline our analytic and conceptual approach.

Taking the example of unemployment, there is widespread acceptance that the experience of unemployment can cause a decline in mental health (Murphy and Athanasou, 1999). Nonetheless, for some people, mental
illness may be the primary reason for their unemployment (i.e., selection into unemployment). What is more, the relationship between these two constructs becomes more complex and intertwined over time, with deteriorating mental health as both a consequence of unemployment and a growing barrier to efforts to end this state (Dooley et al., 1996). It is also likely that early adverse experiences, social disadvantage (e.g., family dysfunction and instability, abuse/trauma), social isolation and loss of self-esteem, and health risk behaviours are common factors underlying later experience of both unemployment and poor mental health (Bartley, 1994; Fergusson, Horwood and Lynskey, 1997).

While understanding causality provides a basis for early intervention or prevention approaches (e.g., economic policies to reduce/prevent unemployment), in general, policy makers seek to intervene after an ‘event’ has taken place (i.e., onset of mental disorders and/or unemployment). In these circumstances, the determination of causality is not a necessary part of providing an effective policy response.

As discussed, depression and anxiety cause significant impairment and disability, are associated with substantial work impairment and lowered productivity, and reduce the likelihood of finding and maintaining employment. For some income support recipients, looking for a job or commencing employment may lead to better mental health. However, for others their mental illness, regardless of the initial cause, is a barrier to employment. These people will not benefit from a job-focused approach, and may require access to specialised services or employment interventions delivered in a manner that takes account of their needs and circumstances. As an example, employment interventions that incorporate psychological principles have been shown to promote long-term psychological wellbeing, prevent the onset of mental disorders, and lead to superior employment outcomes amongst those at risk of mental illness (Vinokur, Price and Schul, 1995).

It is important to recognise the functional and role limitations associated with mental disorders and not to discount the impact because the onset of the mental health problems may be due to unemployment, just as it is important to consider the consequences of a physical disability or lack of vocational skills. Conversely, it is unrealistic, given financial constraints and the need to target assistance to those with greatest need, to expect the health system to be responsible for the delivery of all services and assistance related to mental health. We are of the view, therefore, that where mental health problems interfere with the achievement of mainstream policy objectives (e.g., employment or social policy programs), mainstream programs and services should recognise and address these underlying psychological needs.

Our analytic approach, therefore, reflects this view. We seek to quantify the prevalence of disability due to poor mental health amongst recipients of income support payments, and particularly the non-disability payments. We see this as the first step to developing appropriate policy responses. We model the relationship using traditional statistical approaches, where the variables measuring income support receipt are used to ‘predict’ mental
health status. We consider these as predictors or explanatory variables only in a statistical sense and not to imply causation. We could, for example, examine the relationship in the other direction: the extent to which poor mental health predicts welfare receipt. The approach adopted here, however, enables us to compare the odds of having a mental disability in various welfare recipient groups with those of non-recipients. We also include a range of other factors (e.g., demographic characteristics, physical disability, financial hardship) as covariates. This is done to promote better understanding of the strength of the relationship between welfare receipt and mental health after partialling out the effects of common factors.

Research Findings with Welfare Recipients
Although there is limited Australian research, American research conducted in the context of welfare reform, primarily with single mothers, has shown an elevated prevalence of mental disorders amongst welfare recipients compared to the general population (Coiro, 2001; Danziger, Corcoran, Danziger, et al., 2000; Derr, Hill and Paretti, 2000; Kalil, et al., 2001; Moore, et al., 1995; Olson and Pavetti, 1996). Between 35 to 60 per cent of welfare recipients experience a clinical disorder or substantial mental health symptoms. These findings have been replicated in other Western countries (Byrne, et al., 1998; Kovess, 1999). The US research also provides evidence that those people with mental health problems have been less successful in their efforts to return to work than other welfare recipients (Danziger and Seefeldt, 2002; Loprest and Zedlewski, 1999; Moffit and Cherlin, 2002). These findings have promoted policy responses such as the introduction of screening and identification processes, improving staff skills, and better referral between, and integration of, mental health and employment services (Derr Douglas and Pavetti, 2001; California Institute for Mental Health, 2001).

The lack of Australian research examining the mental health of income support recipients is partly a reflection of data limitations. In general, surveys that are concerned with mental health do not collect detailed information on levels or sources of income. On the other hand, data collected for administrative or income support purposes do not include established measures of mental health using either symptom or diagnostic-based approaches. There are some examples where data has been collected for a particular project, but these are generally limited to a specific client segment or are not nationally representative (see, Croft, 2002; Eardley, Chalmers and Abello, 2002).

Previous Australian Research
Butterworth (2003a, 2003b) recently examined the mental health of Australian income support recipients, analysing data from the National Survey of Mental Health and Wellbeing (hereafter referred to as the National Survey). We are seeking to replicate and extend Butterworth’s analysis using the HILDA Survey dataset, and in doing so address a number of the limitations of the earlier research. We will, therefore, initially provide a summary of this research before identifying the specific objectives of the current paper.
The National Survey, conducted by the Australian Bureau of Statistics (ABS) in 1997, was designed to provide data on the prevalence of common mental disorders and the associated levels of disability and health service usage in Australia. The National Survey included the Composite International Diagnostic Interview (CIDI), a structured diagnostic interview which approximates clinical diagnosis of depression, anxiety disorders and substance use disorders.

The National Survey collected socio-demographic information including respondents main source of income, identifying those who reported that government pensions or payments were their main source of income. Butterworth’s (2003a; 2003b) analysis was restricted to working age respondents and, based on demographic characteristics, identified five client segments to correspond to the main types of income support payments: unemployed; students; partnered women with children; unpartnered women with children; and not in the labour force (NILF; payments that do not require active job search such as disability support pension and mature aged allowance). These different client segments were validated against administrative data.

The analysis found elevated levels of mental disorders among welfare recipients. Around 34 per cent of income support recipients had experienced an anxiety, depressive or substance-use disorder in the previous 12 months, compared to 19 per cent of non-recipients. The prevalence of mental disorders was elevated in all client segments, and particularly pronounced in the lone mother group, where around 45 per cent were identified with a mental disorder. The pattern of mental disorders differed across the different segments. The unemployed group demonstrated the highest levels of substance use disorders. The NILF group showed the greatest generalized psychological distress, but did not demonstrate levels of disorders as high as the group of unpartnered mothers.

Aim of this Study: Replicating Previous Australian Research

The findings from analysis of the National Survey identify an issue with significant social policy implications. They suggest a mechanism through which policy makers could help individuals to improve their personal and functional wellbeing and achieve positive social and economic outcomes. This could facilitate achieving the goals of welfare reform and promote greater economic participation. The aim of the current study, therefore, is to replicate these findings using a different national dataset to demonstrate the validity and generality of the previous findings. In conducting a replication, we also seek to address a number of limitations associated with the analysis of the National Survey.

First, in the analysis of the National Survey the variable defining income support receipt was based on respondents who reported that government pensions or payments were their main source of income. Thus, it could be argued that the results are based only upon the most disadvantaged individuals – that is, ignoring the most capable recipients who are also engaged in employment or deriving the majority of their income from other
sources. This could lead to an overestimation of the prevalence of disorders among welfare recipients. In the current study our focus is on those people who report currently receiving any government pensions or payments. This overcomes the limitation of the previous approach, though the issue of willingness to disclose and awareness or knowledge of the type of income support payment being received remains. This issue is endemic in all social policy research conducted at the population level.

Second, in Butterworth’s (2003a; 2003b) analysis of the National Survey some of the client segments represent multiple payment types, between which there may be important differences. For example, the NILF group represented the disability-related and other non-activity tested payments such as partnered or mature-age payments. It was not possible to separately estimate these different types of payments from demographic characteristics but there are likely to be differences between these two categories of payment recipients. The use of the HILDA Survey data overcomes this weakness as the survey identified the individual types of payments that respondents receive.

Third, Butterworth (2003a) also noted limitations in the estimation of the group of partnered mothers receiving income support. It was likely that this group included women whose main source of income was Family Allowance (now Family Tax Benefit), though this is not an income support payment. Thus, the group is likely to include women who are less disadvantaged in terms of household financial resources and, possibly, mental health. The estimate of the prevalence of mental health problems within this group could therefore be diluted. By identifying the type of payment received, the HILDA Survey data also overcomes this issue.

Whereas the primary focus of the analysis of Butterworth (2003a; 2003b) was on diagnostic measures of mental disorders, the analysis in the current study used a measure of mental health from the SF-36. Our focus is on the mental component summary (MCS) scale, a widely used measure of disability or limitations across domains of daily living and functioning due to mental health reasons. There are a number of benefits that derive from the use of this instrument.

1. Replication using a different outcome measure would demonstrate the validity and generality of the previous conclusions.
2. While the HILDA Survey included the SF-36, the National Survey only incorporated the shorter, less comprehensive SF-12. Nonetheless, both instruments produce an MCS scale score, providing a comparable measure across the two datasets. Having comparable measures will enable assessment of the classification process used in the National Survey analysis.
3. While the diagnostic measures in the National Survey are a strength, there is some controversy about the measurement of mental disorders in population surveys. Some have questioned whether all of those identified as ‘cases’ experience disability or limitations in their everyday activities that would make them a priority for interventions.
or assistance (e.g., Henderson, Andrews and Hall, 2000; Melzer, et al., 2003). However, the analysis by Sanderson and Andrews (2002) demonstrated a strong relationship between disability (as measured by the SF-12) and diagnosed common mental disorders. Nonetheless, by using the MCS measure we are focusing on respondents who are reporting disability.

**Extending Previous Australian Research**

Finally, we seek to extend the analysis of the National Survey by examining whether the relationship between income support receipt and poor mental health reflects factors such as financial hardship. As discussed, financial hardship has been identified as a cause of the greater mental health problems experienced by the unemployed (Feather, 1997; Fryer, 1999) and lone mothers (Hope, et al., 1999). In analysis of the 1998-99 Household Expenditure Survey (HES; ABS, 2000), Bray (2001) demonstrated elevated levels of financial stress or hardship among those receiving income support payments compared to non-recipients, and showed that those in receipt of Disability Support Pension, Newstart Allowance and Parenting Payment (Single) in particular experienced high levels of financial hardship, including multiple forms of hardship. A selection of the items from the HES, mainly those reflecting Bray’s hardship category, were included in HILDA. We include these measures to examine if experience of financial hardship can account for the poorer mental health of income support recipients.

**2. Methods**

**Data**

This analysis is based on the first-wave data of the HILDA Survey, a nationally representative household panel survey. The survey utilised a multi-stage sampling approach (sampling households within dwellings within Census Collection Districts; CCDs). Initially, a sample of 488 CCDs was selected from the 1996 Australian Census, each of which contained approximately 200 to 250 households. Within each of these CCDs, a sample of 22 to 34 dwellings was selected. If the dwelling contained four or more households a random sample of three households was obtained, otherwise all households were sampled. The aim of this approach was to provide a representative sample of all usual residents of private dwellings in Australia (Watson and Wooden, 2002a; 2002b).

Four survey instruments were included in wave 1. The Household Form and Household Questionnaire involved a personal interview with one adult member of each household. The Person Questionnaire, also administered by personal interview, was conducted with all adult household members. Finally, the Self-Completion Questionnaire (SCQ) was provided to all respondents to the Person Questionnaire and was collected at a later date or returned by post. Fieldwork was conducted between August 2001 and January 2002.

A total of 7,682 households responded to the survey (a household response rate of 66 per cent). Within households, there were 15,127 eligible adults. Of this group 13,969 (92 per cent) completed the Person Questionnaire and 13,159 (87 per cent) completed and returned the SCQ.
With regard to the representativeness of the achieved sample, there were some differences between the characteristics of HILDA respondents and those included in the Monthly Population Survey conducted by the ABS. Specifically, there was an under-representation of Sydney residents in HILDA, as well as an under-representation of men. Married persons were over-represented and dependent students, non-dependent children and non-family members not living alone appeared to be under-represented, as were immigrants from a non-English speaking background. However, Watson and Wooden (2002b) note that these discrepancies are not large enough to discredit the data and that the differences in rates of response across both sex and location can be corrected by applying population weights.

Measures
The primary outcome measure used in this analysis was drawn from the SF-36. The SF-36 is a widely used self-completion measure of health status comprising items related to physical, psychological and social functioning, symptoms experienced and limitations due to health. The 36 items from the SF-36 combine to form eight scales measuring various components of health. The mental health scale, for example, includes items assessing symptoms of depression and anxiety, such as nervousness, depressed affect and feeling calm. The SF-36 has proven test-retest reliability, sound psychometric properties, and has been subject to extensive assessment of content, construct, criterion and predictive validity (Ware and Gandek, 1998). Butterworth and Crosier have a manuscript in preparation demonstrating the validity and psychometric properties of the SF-36 data from the HILDA Survey.

Our focus is on the mental component summary (MCS) scale, which is a psychometrically-based combination of all eight summary scales, most heavily weighted on the mental health, role-emotional, and social functioning scales (see, Ware, Kominski and Keller, 1994). The MCS is scaled to have a mean of 50 and standard deviation of ten. Lower scores on the MCS scale represent greater impairment in role and social activities, significant levels of emotional problems and psychological distress. This summary score is a widely used measure of disability or limitations across domains of daily living and functioning due to mental health reasons. The MCS measure is used for screening and identification of clients with mental health problems in primary care and clinical studies.

We identify individuals who experience mental health problems associated with moderate to severe disability, operationalised as a score of less than 40 (a score under 30 is used to identify severe disability) on the MCS scale (Sanderson and Andrews, 2002).

Income support status. The questions concerning income and earnings within the HILDA Survey included a set asking respondents whether, and what type of government pension or allowance they currently received. Options were presented on a printed list. We identified seven groups of payment recipients who were contrasted with those respondents who reported that they did not receive a government pension or payment. The groups of payment recipients examined in this analysis are:
1. *Unemployed*, those respondents who reported that they received Newstart Allowance, or Youth Allowance recipients who were not currently involved in full-time study;

2. *Students*, defined as Youth Allowance recipients currently undertaking full-time study, and ABSTUDY and AUSTUDY recipients;

3. *Parenting Payment Partnered (PPP) recipients*, those who reported receipt of Parenting Payment and were either married or in a de facto relationship;

4. *Parenting Payment Single (PPS) recipients*, those who were receiving Parenting Payment and were divorced, separated, widowed, or never married;

5. *Disability or sickness*, defined at those receiving Disability Support Pension or Sickness Allowance;

6. *Mature-aged payments*, those who reported that they were receiving other forms of non-activity tested payments that reflect likely labour market disadvantage based on age and/or gender. These payments include Mature Age Allowance, Mature Age Partner Allowance, Service Pension, Wife Pension, Widow Allowance, and Partner Allowance. Many of these payments are no longer open to new applicants. While recipients of this category of payments are generally older, there may be some relatively young respondents who initially received Wife Pension (based on marriage to a DSP or Aged Pension recipient) prior to the 1995 cut-off; and

7. *Other payments*, a catch-all category that includes respondents who reported receiving Carer Payment (29.9 per cent) and Special Benefit (4.6 per cent), those respondents who reported that they received a government pension or allowance that was not identified (37.8 per cent), and those who reported that they did not know which payment they received (27.8 per cent).

To facilitate comparison with the categorisation used in the analysis of the National Survey data, as well as reporting analysis involving these seven categories we also include analysis in which the final three categories (disability or sickness, mature-aged payments, and other payments) are combined into a Not in the Labour Force (NILF) group.

**Demographic characteristics.** The variables and categories examined are: age (categorised as 15-25, 26-39, 40-55, and 56-65), marital status (partnered and unpartnered), housing tenure (identifying those households which rent their home vs others); and education (identifying respondents who had not completed Year 12 education, based on a derived variable included in the first-wave HILDA dataset).

**Physical disability.** Similar to the measure of mental disability, this is based on the Physical Component Summary (PCS) score from the SF-36. This is a derived summary measure based on all eight summary scales, but most strongly related to the physical functioning, role-physical and bodily pain measures. We define four levels of physical disability: no disability, represented by a score of 50 or higher, mild disability, a score of 40 to 49; moderate disability, scores between 30 and 39; and severe disability, a score of less than 30 (Sanderson and Andrews, 2002).
Financial hardship. The HILDA Survey included seven questions, based on items in the ABS HES (from the 1999 Survey of Living Standards Pilot), which asked whether any of the following events had recently occurred because of a shortage of money:
1. Could not pay electricity, gas or telephone bills on time;
2. Could not pay the mortgage or rent on time;
3. Pawned or sold something;
4. Went without meals;
5. Was unable to heat home;
6. Asked for financial help from friends or family; and
7. Asked for help from welfare/community organisations.
We used these seven separate binary items to measure financial hardship in the analysis.

Analyses
These analyses are restricted to those respondents of workforce age, that is males aged under 65 and females aged under 60. A preliminary analysis examined the association between the socio-demographic and financial hardship variables and income support status, with the presence of a significant association determined using Pearson chi-square statistic, corrected for the complex survey design.

Given the dichotomous nature of the outcome measure, logistic regression models were used to evaluate the association between income support status and mental health. Initially, simple logistic regression models assessed, by reference to odds ratios, whether the presence of moderate to severe mental disability (MCS < 40) was greater amongst each of the income support client segments compared to non-recipients. For comparative purposes, the prevalence rates and odds ratios from the current analysis are presented together with those from the previous analysis of the National Survey data.

Finally, a sequential logistic regression model examined the strength of the relationship between income support receipt and mental health after controlling for a number of potentially important factors. The initial model included only the series of dummy-coded variables representing income support client segments. The second model included a set of variables representing important social and demographic characteristics (age, gender, partner status, housing status, and educational attainment). The third model included dummy variables representing the four levels of physical disability. Finally, the seven measures of financial hardship were included in the model. Our interest is a) whether the additional variables are significantly associated with mental disability; and b) whether, following the inclusion of these additional variables, the various categories of income support receipt remain significantly associated with mental disability.  

1 Due to missing data on some of the covariates, primarily the financial hardship measures, the sample for the sequential logistic regression model differs somewhat from the sample for the initial simple model, which only included the income support status variable. This accounts for differences in the odds ratios between table 3 and those presented in model 1 in table 4.
Our analysis takes account of the complex clustered and stratified survey design of the HILDA Survey using the `svy` procedures of STATA version 7 and using weights to overcome differential response rates and replicate Australian population parameters. The HILDA Survey dataset contains person-level weights which, when applied to individual survey respondents, adjusts for the unequal probabilities of selection and completion of the Person Questionnaire. However, these weights do not adjust for further attrition associated with the SCQ. We conducted a logistic regression analysis to predict completion of the SCQ using the same types of variables used to derive the HILDA person-level weights (geographic location, labour-force status, sex, age, number of adults in household, number of children in household, marital status, English language ability, and dwelling type; Watson and Fry, 2002). The probabilities of responding were used to adjust the person-level weights. This produced more accurate population estimates from the respondents who completed the SCQ.

3. Results and Discussion

**Demographic Characteristics**

Table 1 presents data on the characteristics of those not receiving income support payments and each of the groupings of income support clients. The chi-squared analyses indicated significant associations (at p < .001) between income support client segment and each of the characteristics examined. The pattern of the distribution of gender and age across the different payment categories was consistent with administrative data. Unemployed and student clients were younger, disability and mature-aged payment recipients older. Parenting payment recipients were predominately female, while the majority of unemployed recipients and disability and sickness recipients were male. All categories of income support recipients were less likely to have completed high school than non-recipients and all except the mature-aged recipients were more likely to be in rental housing. The level of rental housing amongst PPS recipients (71.3 per cent) was particularly striking.

There were substantial differences between those receiving disability or sickness payments, and those receiving mature-aged payments. Compared to the mature-aged recipients, those in the disability segment were more likely to be male, more likely to have never married, were somewhat younger, more likely to be renting and reported a much higher level of moderate to severe physical disability. This is an important finding and suggests the analysis of the National Survey data, in which these groups were undifferentiated within the NILF group, may have masked substantial differences.

All income support recipients, with the exception of the mature-aged recipient group, experienced higher levels of financial hardship than non-recipients. The hardship experienced by PPS recipients was more pronounced than the other client segments on most measures, particularly in the area of cashflow problems (paying bills on time) and seeking assistance from friends/family or community organisations. The differences between income support client segments were less marked on
Table 1  Characteristics of Income Support Recipients and Non-recipients

<table>
<thead>
<tr>
<th>Income Support Payment Type</th>
<th>No Income Support</th>
<th>Unemployed</th>
<th>Student</th>
<th>Parenting/ Unemployed</th>
<th>Parenting/ Partnered</th>
<th>Parenting/ Single</th>
<th>Disability or Sickness</th>
<th>Mature-aged Payments</th>
<th>Other</th>
</tr>
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<tbody>
<tr>
<td>Sample (n)</td>
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<td>167</td>
<td>221</td>
<td>331</td>
<td>539</td>
<td>288</td>
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<tr>
<td>Female</td>
<td>45.8</td>
<td>40.1</td>
<td>51.4</td>
<td>90.7</td>
<td>91.7</td>
<td>37.4</td>
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<tr>
<td>15-25</td>
<td>22.9</td>
<td>55.1</td>
<td>65.8</td>
<td>12.4</td>
<td>18.5</td>
<td>7.0</td>
<td>1.0</td>
<td>9.5</td>
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<td>26-39</td>
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<td>23.3</td>
<td>54.0</td>
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<td>12.6</td>
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<td>18.7</td>
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<td>56-65</td>
<td>8.0</td>
<td>6.8</td>
<td>0.6</td>
<td>0.8</td>
<td>0.2</td>
<td>32.3</td>
<td>3.1</td>
<td>11.9</td>
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<td>Marital status (%)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/de facto</td>
<td>64.4</td>
<td>27.9</td>
<td>18.4</td>
<td>100.0</td>
<td>0.0</td>
<td>53.5</td>
<td>77.7</td>
<td>69.0</td>
<td></td>
</tr>
<tr>
<td>Divorced/separated</td>
<td>5.9</td>
<td>9.6</td>
<td>5.9</td>
<td>0.0</td>
<td>53.0</td>
<td>17.4</td>
<td>13.5</td>
<td>6.9</td>
<td></td>
</tr>
<tr>
<td>Widowed</td>
<td>0.6</td>
<td>0.4</td>
<td>0.0</td>
<td>0.0</td>
<td>1.9</td>
<td>2.3</td>
<td>5.2</td>
<td>1.8</td>
<td></td>
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<tr>
<td>Never married</td>
<td>29.1</td>
<td>62.1</td>
<td>75.8</td>
<td>0.0</td>
<td>45.2</td>
<td>26.8</td>
<td>3.7</td>
<td>24.3</td>
<td></td>
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<tr>
<td>Housing tenure (%)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renting</td>
<td>25.7</td>
<td>50.6</td>
<td>53.4</td>
<td>40.3</td>
<td>71.3</td>
<td>40.5</td>
<td>24.2</td>
<td>36.0</td>
<td></td>
</tr>
<tr>
<td>Highest education (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not completed Year 12</td>
<td>25.9</td>
<td>45.3</td>
<td>31.9</td>
<td>44.5</td>
<td>40.6</td>
<td>54.1</td>
<td>50.9</td>
<td>36.9</td>
<td></td>
</tr>
<tr>
<td>Completed Year 12</td>
<td>13.7</td>
<td>19.8</td>
<td>35.6</td>
<td>17.3</td>
<td>8.7</td>
<td>9.0</td>
<td>6.2</td>
<td>8.0</td>
<td></td>
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<tr>
<td>Certificate</td>
<td>36.1</td>
<td>29.5</td>
<td>16.9</td>
<td>27.1</td>
<td>42.9</td>
<td>32.0</td>
<td>24.5</td>
<td>38.3</td>
<td></td>
</tr>
<tr>
<td>Diploma/bachelor/+</td>
<td>24.3</td>
<td>5.4</td>
<td>15.6</td>
<td>11.2</td>
<td>7.8</td>
<td>5.0</td>
<td>8.4</td>
<td>16.8</td>
<td></td>
</tr>
<tr>
<td>Physical disability (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate to severe</td>
<td>9.4</td>
<td>15.8</td>
<td>10.1</td>
<td>16.2</td>
<td>14.0</td>
<td>69.1</td>
<td>30.2</td>
<td>18.4</td>
<td></td>
</tr>
<tr>
<td>Financial hardship (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not pay electricity/gas</td>
<td>16.7</td>
<td>37.0</td>
<td>38.5</td>
<td>43.0</td>
<td>58.6</td>
<td>36.1</td>
<td>21.1</td>
<td>33.7</td>
<td></td>
</tr>
<tr>
<td>Not pay mortgage/rent</td>
<td>8.3</td>
<td>19.2</td>
<td>21.9</td>
<td>18.5</td>
<td>30.8</td>
<td>13.5</td>
<td>10.4</td>
<td>12.2</td>
<td></td>
</tr>
<tr>
<td>Pawned/sold something</td>
<td>5.0</td>
<td>20.3</td>
<td>10.9</td>
<td>16.4</td>
<td>24.2</td>
<td>18.9</td>
<td>7.6</td>
<td>14.5</td>
<td></td>
</tr>
<tr>
<td>Without meals</td>
<td>3.4</td>
<td>18.6</td>
<td>11.9</td>
<td>7.2</td>
<td>15.5</td>
<td>17.8</td>
<td>3.8</td>
<td>7.2</td>
<td></td>
</tr>
<tr>
<td>Without heating</td>
<td>2.3</td>
<td>10.7</td>
<td>6.0</td>
<td>6.6</td>
<td>15.7</td>
<td>13.0</td>
<td>3.7</td>
<td>8.3</td>
<td></td>
</tr>
<tr>
<td>Help from family/friends</td>
<td>15.6</td>
<td>38.0</td>
<td>35.9</td>
<td>34.2</td>
<td>57.9</td>
<td>31.4</td>
<td>19.4</td>
<td>23.9</td>
<td></td>
</tr>
<tr>
<td>Help from welfare/Community</td>
<td>3.0</td>
<td>24.0</td>
<td>9.7</td>
<td>14.7</td>
<td>30.7</td>
<td>19.6</td>
<td>5.8</td>
<td>10.2</td>
<td></td>
</tr>
</tbody>
</table>

the need to sell possessions for cash, and the unemployed and disability groups reported higher rates than PPS recipients on the measure of going without meals. Overall, the three groups experiencing the most elevated levels of hardship were the PPS, the unemployed, and the disability or sickness groups. These results are consistent with findings reported by Bray (2001).

**Prevalence of Mental Disability**

Overall, income support recipients had significantly poorer mental health than non-recipients (see table 2). Fewer than 14 per cent of non-recipients
were identified with a moderate to severe mental disability, compared to around 28 per cent of income support recipients. Thus, many more income support recipients experience limitations in role or activity, significant emotional problems or psychological distress. The prevalence of mental disability was elevated in all client segments, but was highest (close to, or above 30 per cent) in the unemployed, the PPS and the disability or sickness groups. In this latter group, 40.6 per cent of recipients experienced a moderate to severe disability due to mental health reasons. Therefore, unlike the analysis of the National Survey dataset, in which the disability client segment was included within a larger NILF group, this analysis showed that the disability group experiences substantially greater rates of moderate to severe mental disability than all other client segments, including the PPS group. Interestingly, the three groups with the highest prevalence of mental disability were the same groups identified as experiencing the highest levels of financial hardship. Subsequent analyses examined the relationship between these different measures.

Table 2 Prevalence of Moderate to Severe Mental Disability (SF-36 Mental Component Summary Score < 40) Amongst Income Support Recipient and Non-recipient Groups

<table>
<thead>
<tr>
<th></th>
<th>Moderate/Severe Mental Disability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SF-36 Mental Component Summary Score &lt; 40 (Per cent)</td>
</tr>
<tr>
<td>No income support</td>
<td>13.7</td>
</tr>
<tr>
<td>Receipt of income support - overall</td>
<td>28.4</td>
</tr>
<tr>
<td>Payment Types:</td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>27.9</td>
</tr>
<tr>
<td>Student</td>
<td>19.9</td>
</tr>
<tr>
<td>Parenting Payment Partnered</td>
<td>22.7</td>
</tr>
<tr>
<td>Parenting Payment Single</td>
<td>29.0</td>
</tr>
<tr>
<td>Disability or sickness</td>
<td>40.6</td>
</tr>
<tr>
<td>Mature-aged</td>
<td>22.8</td>
</tr>
<tr>
<td>Other</td>
<td>22.8</td>
</tr>
</tbody>
</table>

Table 3 presents the estimated prevalence rates and odd ratios from the previous study (reported for total mental disorders – anxiety, depressive or substance use disorders, and the measure of moderate to severe mental disability from the SF-12 MCS score) together with those for the matching client segments from the current analysis (with the disability, mature-aged and other client segments combined into a NILF category). The first thing to note, comparing the disorder and disability results from the National Survey data, is that moderate to severe disability was less prevalent than disorder. This may indicate that the symptoms of some people who screened positive for a mental disorder had a less profound effect on their ability to undertake daily activities (e.g., Henderson, et al., 2001; Melzer, et al., 2003). Analysis of the National Survey data showed the prevalence of mild disability was more common in the PPS and other client segments compared to the NILF group (Butterworth, 2003b). However, the results could also indicate that the measures of disability within the SF scales did not capture
fully the types of impairment associated with some disorders (e.g., substance-use disorders).

Table 3  Prevalence and Odds Ratios for Mental health Disorder and Severe or Moderate Mental Disability from the National Survey and HILDA Survey

<table>
<thead>
<tr>
<th>National Survey of Mental Health and Wellbeing</th>
<th>HILDA Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate/Severe Mental Disability</td>
<td>Moderate/Severe Mental Disability</td>
</tr>
<tr>
<td>Total Mental Disorders</td>
<td>SF-12</td>
</tr>
<tr>
<td>Per cent</td>
<td>Odds Ratio</td>
</tr>
<tr>
<td>No income support *</td>
<td>18.7</td>
</tr>
<tr>
<td>Unemployed</td>
<td>33.7</td>
</tr>
<tr>
<td>Student</td>
<td>30.2</td>
</tr>
<tr>
<td>Parenting Payment Partnered</td>
<td>20.9</td>
</tr>
<tr>
<td>Parenting Payment Single</td>
<td>45.2</td>
</tr>
<tr>
<td>NILF</td>
<td>29.8</td>
</tr>
</tbody>
</table>

* Reference group.

Secondly, the comparison of the prevalence results for the disability measures across surveys shows the National Survey results are somewhat lower than the figures from the HILDA Survey across all segments, with the exception of the student group. While this is an important finding, the odds ratios for the HILDA Survey and National Survey data enable comparison of results after taking baseline differences into account. These odds ratios confirm the broad similarity across datasets. Compared to the National Survey, the HILDA Survey results identify a somewhat greater level of moderate to severe mental disability among the unemployed group and lower rates of mental disability among students, relative to the prevalence rates for non-recipients. Interestingly, the results for the PPP group were almost identical (taking into account the generally elevated results in the HILDA Survey). This is contrary to expectations that the inclusion of Family Allowance only recipients in the National Survey analysis would underestimate the disadvantage within this group.

Considered from another perspective (focusing on levels of income support receipt rather than levels of mental disability), the data indicate that 20.1 per cent of the Australian working age population receive some form of income support payment (data not presented). This figure is broadly consistent with administrative data. However, the data also show that 33.2 per cent of working age Australians with a moderate to severe disability due to mental or emotional problems are in receipt of income support payments. Only about one quarter (27.7 per cent) of these are recipients of DSP or sickness allowance. Thus, there is substantial mental disability across income support payments. These findings suggest that targeting income support recipients for prevention and intervention programs provides a potentially effective strategy to reach a significant proportion of the population with mental health problems, complementing broad population approaches.
**Multivariate Results**

Table 4 shows odds ratios with 95 per cent confidence intervals associated with each of the income support client segments from the four steps of a sequential logistic regression model. The first model presents the results of simple logistic regression analysis, with each category of income support recipient compared to the non-recipient group (represented by a series of seven dummy coded variables). Compared to the data in table 3, these results cogently demonstrate how the prevalence of mental disability within the disability and sickness group is masked if this group is included in the broader NILF group. The odds ratio for the disability group was 4.3, compared to less than two for the mature-aged and ‘other’ client segments. The F statistic for the adjusted Wald test, \( F(7,467) = 32.04, \ p < .001 \), demonstrates the significance of the model.

At the second step, the variables associated with demographic characteristics (age, gender, partnered status, rental housing, school completion) were added. A Wald test comparing the new and previous model demonstrates the significance of the contribution of the demographic variables to the model; \( F(7,467) = 12.59, \ p < .001 \). Inspection of the odds ratios in table 4 shows that the inclusion of these measures did account for some of the association between the client segments and mental health, including much (65 per cent) of the PPS group. Nonetheless, compared to non-recipients, each income support recipient category, apart from the student segment, remained significantly associated with mental disability.

The three dummy-coded variables representing the four levels of physical disability (none, mild, moderate and severe) were added at the third step and their presence in the model was significant; \( F(3,471) = 27.92, \ p < .001 \). The inclusion of physical disability substantially reduced the association between the disability or sickness category of income support recipients and the probability of mental disability. However, once again, all groups apart from the student segment were significantly associated with mental disability.

At the final step, we included the seven variables representing financial hardship. The inclusion of these variables significantly improved the model; \( F(7,467) = 28.59, \ p < .001 \). Further, with the inclusion of these measures, many of the categories of income support receipt were no longer significantly associated with mental disability. That is, after controlling for demographic characteristics, physical disability and experience of financial hardship, there was no longer an unexplained increased probability of mental disability amongst the student, PPP, PPS, and ‘other’ income support client segments. While these covariates did account for much of the associative strength of the remaining categories of income support recipients, receipt of unemployed, disability or sickness, and mature-aged payments remained significantly associated with mental disability.
Table 4  Simple and Adjusted Odds Ratios and 95 Per Cent Confidence Intervals from Sequential Logistic Regression Analysis for the Association between Income Support Status and the Moderate to Severe Mental Disability

<table>
<thead>
<tr>
<th></th>
<th>Simple Logistic Regression</th>
<th>Controlling for Demographic Characteristics</th>
<th>Previous Model and Controlling for Physical Disability</th>
<th>Previous Model and Controlling for Financial Hardship</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
<td>95% CI</td>
<td>OR</td>
<td>95% CI</td>
</tr>
<tr>
<td>No income support*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>2.43</td>
<td>1.94 – 3.04</td>
<td>2.03</td>
<td>1.61 – 2.56</td>
</tr>
<tr>
<td>Student</td>
<td>1.56</td>
<td>0.97 – 2.53</td>
<td>1.30</td>
<td>0.79 – 2.14</td>
</tr>
<tr>
<td>Parenting Payment Partnered</td>
<td>1.96</td>
<td>1.33 – 2.87</td>
<td>1.85</td>
<td>1.25 – 2.76</td>
</tr>
<tr>
<td>Parenting Payment Single</td>
<td>2.57</td>
<td>1.92 – 3.44</td>
<td>1.55</td>
<td>1.14 – 2.11</td>
</tr>
<tr>
<td>Disability or sickness</td>
<td>4.30</td>
<td>3.43 – 5.39</td>
<td>4.12</td>
<td>3.20 – 5.30</td>
</tr>
<tr>
<td>Mature-aged</td>
<td>1.85</td>
<td>1.34 – 2.57</td>
<td>1.95</td>
<td>1.35 – 2.82</td>
</tr>
<tr>
<td>Other</td>
<td>1.86</td>
<td>1.25 – 2.76</td>
<td>1.59</td>
<td>1.03 – 2.46</td>
</tr>
</tbody>
</table>

* Variables are age, gender, partnered status, rental housing, and school educational achievement.  
* Reference group.
4. Conclusions

There is growing recognition of the importance of mental health for the economic, social and human capital of society, and the relevance of mental health for policies in the areas of social welfare, employment, education, the legal system, prisons, housing, trade and industry, and finance (Jenkins, 2001). Using large, population-based surveys to examine the prevalence and the social and economic consequences of mental health problems among income support recipients can improve understanding of characteristics and barriers. Such understanding is a first-step in the identification of customer needs and the development of more appropriate and better-targeted policy responses.

The current study has replicated and confirmed the findings of Butterworth (2003a, 2003b), who estimated income support client segments from demographic characteristics and reported receipt of government pensions or payments as main source of income. We have demonstrated higher rates of mental health problems among income support recipients compared to non-recipients. Overall, over 28 per cent of income support recipients experienced a moderate to severe mental disability (impaired functioning, substantial psychological distress or emotional problems) compared to about 14 per cent of non-recipients. The elevated rates of mental disability were present across each of the seven client segments examined in this analysis, but were highest among the disability and sickness group, the Parenting Payment Single group, and the unemployed group. This replication provides vital evidence for policy analysts. It demonstrates the robustness of the previous findings and confirms the generality of the conclusions.

The pattern of results obtained in the current study using the SF-36 MCS scores were similar to those obtained by Butterworth (2003b) using the SF-12 MCS measure. The primary focus of the previous analysis, however, was on the diagnostic measures from the CIDI, which provide an indication of the prevalence of clinical mental disorders (depression, anxiety disorders and substance-use disorders).

As well as replicating the previous results using a different measure of mental health, the current study has overcome a number of limitations in the National Survey analysis. For example, the analysis of the National Survey examined a grouping of NILF payments, as it was not possible to separately identify or estimate recipients of different categories of payments such as disability and mature-age payments. The use of the HILDA Survey data enabled these groups to be identified and separately examined. This was an important feature of the current analysis as we showed that there were significant differences in the prevalence of mental disability across these groups. We found very high rates of mental disability amongst recipients of disability and sickness payments. This result was consistent with expectations as administrative data shows that around 25 per cent of DSP recipients report psychiatric or psychological conditions as their main disabling condition (FaCS, 2002b), and this does not take account of potential co-morbidity with physical disorders.
The current study also examined measures of financial hardship. Together with demographic characteristics and presence of physical disability, the experience of financial hardship accounted for the elevated rates of mental disability experienced by recipients in the PPS, PPP, student and other groups. That is, the level of mental disability experienced by recipients of these payment types is no greater than what would be expected given these characteristics.

It is interesting that, even after controlling for these factors, receipt of unemployment payments, disability or sickness payments, or the mature-aged payments remained associated with elevated levels of mental disability. The current results demonstrated that financial hardship was significantly associated with mental health, but also suggested that other factors need to be considered in future research to more fully explain the relationship between mental health and receipt of income support. For example, unemployment research has examined the latent benefits of employment (e.g., time structure, defined social role, social interaction) and recent research (e.g., Creed and Macintyre, 2001; Waters and Muller, 2003) has shown that latent and financial factors are both important predictors of psychological distress.

A number of limitations in Butterworth’s (2003a; 2003b) National Survey analysis have been addressed in the current analysis using the HILDA Survey data. The current results have also confirmed the validity of the previous research. The National Survey analysis remains important as the diagnostic information provides detailed insight into the nature of the mental disability experienced by income support recipients. It enables, for example, understanding of the different pattern of disorders experienced by different client segments (such as the elevated levels of substance-use disorders among unemployed clients and the high rates of anxiety disorders experienced by lone mothers). Understanding the different types of disorders likely to be experienced by different client segments may help to implement appropriate service delivery strategies to most effectively meet the needs of clients. The National Survey also provides access to information on co-morbidity of disorders, specific symptom measures and some additional information on possible causal factors. Analysis of the National Survey dataset, for example, made it possible to investigate the association between the elevated levels of physical and sexual violence and mental disorders amongst lone mothers, providing an important insight into the nature of disadvantage within this group (Butterworth, 2004). The National Survey also enables analysis of health service use, which is important when seeking to identify and address service gaps.

A limitation of the current paper is that we did not explore the issue of causation between mental illness and income support receipt. We have argued that this is not essential for this descriptive analysis as, regardless of the cause, the presence of a mental disability is likely to be a barrier to employment for income support recipients and, as such, requires policy consideration. However, it is also true that understanding the causal pathways and the influences on, and of mental health is important and is a
key aspect of our future research plans. A related issue is potential concern about the results being contaminated by responsive endogeneity. That is, it could be argued that, compared to those in work, people in receipt of income support payments may exaggerate or report poorer health (including mental health) to justify their lack of labour-force connection. However, there is a substantial literature demonstrating the validity and clinical utility of the SF-36. Further, while the SF-36 is a self-completion question, it should not be confused with simple measures of self-reported health. The SF-36 is a collection of items focused on specific functional limitations, restrictions and experienced symptoms. Many researchers contend that such measures are much more objective and less subject to justification than simple self-report health measures (e.g., Dwyer and Mitchell, 1999; Cai and Kalb, 2004).

While the pattern of results across surveys was similar, the prevalence of moderate to severe disability identified in the National Survey was somewhat lower than that obtained in the HILDA Survey, with the exception of the student client group. These differences may be due to methodological issues. For instance, Ware, et al. (1994) reported that, although the SF-12 (as used in the National Survey) correlates highly (between 0.93 and 0.97) with the SF-36, it is less precise and expected to yield less reliable estimates of MCS scores. However, the difference between survey results may also be due to differences in the context and physical settings in which the surveys were administered. For example, the National Survey included many instruments to measure experience of mental health problems. The survey instruments used in the National Survey, including the SF-12, were administered face-to-face to respondents by trained interviewers. In contrast, the HILDA Survey collected data on a much broader range of issues, including economic and subjective well-being, labour market dynamics and family dynamics, with a more restricted focus on health and well-being. As such, the context provided by the other questions, as well as the ordering of questions, may have had a different effect on respondents to the HILDA Survey compared to respondents of the National Survey. Furthermore, the SF-36 was included in the HILDA Survey as a self-completion questionnaire. Nevertheless, the similarity in the pattern of results between the two surveys provides confidence of the robustness of the findings.

Given that the results are entirely consistent with expectations, showing that income support recipients have poorer mental health than those not receiving payment, some may consider the results to be trivial and unimportant. However, if this were the case, we wonder why has so little attention been paid to mental health in the context of welfare research and practice? While associated with substantial disability, common mental disorders are readily treatable and many researchers argue that the costs of identification and treatment are substantially less than the productivity gains that can be achieved (e.g., WORC, 2001). We have demonstrated that the burden of common mental disorders falls disproportionately upon income support recipients, and is dispersed across the range of payment types. That is, it is not limited to those in receipt of recognised disability payments.
We contend, therefore, that considering mental health and psychological wellbeing may provide insight and strategies to better understand and address labour-force barriers, the experience of hopelessness/despondency and welfare dependence, the apparently intractable attitudes and behaviours of some job seekers, as well as broader family and intergenerational effects. This has implications for the design of programs of assistance and the strategies adopted to promote employment and other positive outcomes for income support recipients.

In conclusion, we have demonstrated that income support recipients experience substantial impairment due to poor mental health. Thus, mental health is likely to be a barrier to increased levels of social and economic participation and an important factor to consider during policy design, service delivery and evaluation. Through better screening and assessment, training of service delivery staff, and the delivery of appropriate services and assistance, steps can be taken to better address people’s barriers to participation, and to build resilience and personal capacity. This will not only promote positive outcomes for the individual, but will facilitate the achievement of broader government participation objectives.

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