Determinants of Psychological Distress (PD) in South Australia
FINAL REPORT

The Assessment of the Determinants and Epidemiology of Psychological Distress (ADEPD) Study

The University of Adelaide
Discipline of Psychiatry

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Disclaimer: The views expressed in the report are those of the authors and not the Minister for Health.
MAIN MESSAGES

- Psychological distress (PD) is experienced by 1 in 10 South Australian adults. It is estimated that it directly affects the life of approximately 151,680 South Australian adults and also indirectly affects family, friends and the community.

- Social determinants were found to be highly associated with PD. Action aimed at reducing inequalities and tackling the social determinants of health, such as improving and overcoming inequalities in education, employment, income and housing conditions is likely to have a positive effect on psychological well-being. The direction of causality is likely to be reciprocal.

- Prevention and intervention should focus on educating both the general public and those who are experiencing PD. This strategy should be combined with prevention and interventions strategies in order to contribute to change. Media informational campaigns are recommended targeted at each group, in addition to implementing programs to improve the social capital and resources of the disadvantaged.

- More individual interventions and facilitated, appropriate access to these services are required, targeted at lower socioeconomic groups, Aboriginal and those with English as a second language.

- Analyses indicate that the K10 functions well as a screening measure of PD.

- Psychological wellbeing is not completely the opposite end of the continuum to PD, and individual factors that promote resilience against PD need to be further examined as these may also improve outcomes.
EXECUTIVE SUMMARY

The Assessment of the Determinants and Epidemiology of Psychological Distress (ADEPD) study aims to provide a comprehensive analysis of the determinants of psychological distress (PD) (and psychological wellness) and mental health in the South Australian population by utilising representative population data from the South Australian Monitoring and Surveillance System (SAMSS) and other sources.

- The **overall prevalence of PD** in SA, between July 2002 and June 2009, was 9.6% (SAMSS data).
- **Comparison of prevalence estimates of PD** from a range of relevant population data sources on a South Australian level, showed that the prevalence of PD ranged from 8.4% (95% CI 7.0–10.1) to 12.9% (95% CI 11.1–14.9). These estimates were consistent with prevalence of PD reported on a national level, with the lowest and highest estimates 9.5% (95% CI 9.1–10.0) and 12.0% (95% CI 11.5-12.5), respectively.
- There has been a downwards **trend in the prevalence of PD** in SA, in both males and females, since 2002.
- **Geographically**, mapping of PD, showing the proportion of respondents with PD within metropolitan and country regions, revealed that increased levels of PD exists in the northern and southern metropolitan regions as well as in some country regions.
- The analysis of **demographic factors** showed that the younger population and females had significantly higher levels of PD.
- Several **socioeconomic factors** were identified as being associated with PD. People with low household income or education levels, living in the lowest SEIFA quintile, or who were unemployed, unable to work, or living in rented accommodation (either
private or housing provided by Housing SA) experienced a significantly higher prevalence of PD.

- **Variables associated with social capital** such as neighbourhood and home safety, control over life decisions and neighbourhood trust were also associated with significant differences in the prevalence of PD.

- **Serious life events** such as loss of a job, death of somebody close, marriage/relationship breakdown, serious illness or injury, financial stress or multiple major life events in the past 12 months were associated with significantly higher prevalence of PD.

- **Health-related factors** were found to be associated with higher levels of PD. Those with self reported, doctor diagnosed chronic conditions (arthritis, asthma, cardiovascular disease, diabetes and osteoporosis) and mental health problems and those utilising health service/s reported significantly higher levels of PD.

- Health related **risk factors** such as high body mass index, current smoking, high cholesterol, high risk alcohol consumption, lack of physical activity and low levels of fruit or vegetable consumption were significantly associated with higher levels of PD.

- **Psychological well-being** measures were evaluated by collecting interview data from a Health Monitor sample of n=1933 people. Correlations indicated that those with high levels of PD had lower levels of wellbeing however these two facets are not necessarily opposite ends of a continuum.

- Respondents with PD were more likely to have **low positive relations, low environmental mastery, low life satisfaction** and **low overall wellbeing**. Some demographic characteristics were significantly associated with an increased likelihood of lower wellbeing in respondents with PD. These characteristics may provide an initial basis for further investigation into what factors influence the wellbeing of
individuals with PD, the potential they may have to shorten the time frame of the PD and the effect it has on other facets of every day functioning which were not explored in this study.

- Results from the K10 were also compared with the PRIME-MD and the Mental Health Inventory (MHI) obtained from the Short Form 36 Version 2. Of those with major depression as determined by PRIME-MD, 62% were classified with PD. The categories No PD and PD were compared to the categories of the PRIME-MD and there was moderate agreement between the two instruments. When using the MHI, 66% of those with depression according to this scale were classified by the K10 with PD. There was substantial agreement between the two measures.

- When the relationship between the MHI and K10 was examined in detail it was determined that the K10 was a better measure of general PD. The results indicate the K10 functions well as a screening measure of PD.

- Results of the consensus development meeting, a process where experts and professionals evaluate the available scientific information on specific issues, revealed that experts in the field of chronic disease agreed that people with chronic disease experience high levels of PD but the relationship is often not well recognised. Positive messages should be promoted regarding resilience as a life skill.

- Numerous publications have resulted from the ADEPD study with the intention of contributing to the development of policy and strategic directions aimed at addressing PD in SA.
# TABLE OF CONTENTS OF MAIN REPORT

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAIN MESSAGES</td>
<td>3</td>
</tr>
<tr>
<td>EXECUTIVE SUMMARY</td>
<td>4</td>
</tr>
<tr>
<td>CONTEXT</td>
<td>9</td>
</tr>
<tr>
<td>IMPLICATIONS</td>
<td>11</td>
</tr>
<tr>
<td>APPROACH</td>
<td>12</td>
</tr>
<tr>
<td>RESULTS</td>
<td>15</td>
</tr>
<tr>
<td>ADDITIONAL RESOURCES</td>
<td>33</td>
</tr>
<tr>
<td>FURTHER RESEARCH</td>
<td>34</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>35</td>
</tr>
</tbody>
</table>
The Assessment of the Determinants and Epidemiology of Psychological Distress (ADEPD) study aimed to provide a comprehensive analysis of the determinants of psychological distress (PD), psychological well-being and mental health in the South Australian population by utilising representative population data from the South Australian Monitoring and Surveillance System (SAMSS) and other sources. The study addressed PD in South Australia as outlined in the State Strategic Plan Objective 2 Improving wellbeing, Target T2.7.²

The specific objectives of ADEPD were:

1. To investigate the relationship between PD/wellness and a range of individual and community-level socioeconomic determinants, including employment status, education, income, housing tenure, social capital, and major life events.

2. To examine the relationship between PD/wellness and a range of health indicators, including conditions such as diabetes, asthma, cardiovascular disease, osteoporosis, arthritis, injury, and mental health, and risk factors and behaviours such as obesity, smoking, physical inactivity, alcohol consumption, nutrition, high blood pressure, and high cholesterol.

3. To determine how the relationships between PD/wellness and social and health determinants differ across gender and age groups, and over time.

4. To examine the patterns of PD for Aboriginal and Torres Strait Islander people in metropolitan, rural and remote South Australia.

5. To study in detail the relationship between PD and self-reported mental health according to different demographic, socioeconomic, and health variables.

6. To examine health service use among those with PD.
7. To collect data to directly compare the associations between the K10 and other instruments, such as the SF-36, and self-reported mental health conditions, in order to link with datasets that contain data other than the K10.

8. To develop consensus among relevant experts about the determinants of PD based on evidence produced from this study.

9. To investigate the implications the findings have for policies and strategies related to PD in South Australia, and to advise on policies, strategies, and new approaches designed to reduce PD in the South Australian community.

PD is an essential concept of the ADEPD study and is measured using Kessler 10 (K10). This is a ten item scale with items based on the level of anxiety and depressive symptoms experienced in the most recent four-week period. Subjects report the frequency of each experience on a five point scale ranging from ‘all of the time’ to ‘none of the time’. Scores on the K10 range between 10 and 50 inclusive. Cut-off scores for low, moderate, high and very high psychological distress are based on the Collaborative Health and Wellbeing Survey, 2000 where respondents with a score of 22 – 50 were classified as having psychological distress were classified as having PD (Table 1).

### Table 1: Definition of PD based on Kessler 10 scores

<table>
<thead>
<tr>
<th>K10 score</th>
<th>Level of PD</th>
<th>Level of PD</th>
</tr>
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<tbody>
<tr>
<td>10 - 15</td>
<td>Low</td>
<td>No PD</td>
</tr>
<tr>
<td>16 - 21</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>22 - 29</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>30 - 50</td>
<td>Very high</td>
<td>PD</td>
</tr>
</tbody>
</table>
Implications
PD has become an important indicator in South Australian health policies. PD is addressed as part of Objective 2, Improving wellbeing in the SA State Strategic Plan\(^2\) and also identified as a performance measure in the SA Health Strategic Plan 2008-2010\(^4\) in the context of reforming mental health. The findings of the ADEPD study deliver valuable insights into determinants of PD and are able to provide information aimed at the development of prevention and early intervention strategies.

- With one in ten adults in South Australia (9.6%) experiencing PD, further policies have to be put in place to **lower the prevalence of PD**.
- Although a downwards trend of PD can be seen during the past seven years, **further monitoring of PD** in future is highly recommended.
- Although PD was found to be associated with various factors, the **causal relationships are not fully understood**, due to a lack of longitudinal studies. Further research is required.
- PD is currently **not well diagnosed or recognised** by health practitioners.
- There are both **short and long term associations** with PD. Major life events such as serious injury, loss of a job, death of somebody close or financial stress may act over short time frames while, for example, chronic diseases may act over long time spans.
- Appropriate **prevention and intervention strategies** are recommended which address both these short and long term impacts. This information should promote positive messages regarding resilience and wellbeing as life skills.
- **Tools for screening of PD** should be developed to be utilised by health professionals, with the focus on the modifiable determinants of PD. These include addressing inequities (where possible) in education levels, income and access to services, effective prevention and treatment of chronic and mental health conditions and lowering of health risk factors.
**Approach**

**Method**

The ADEPD study included 15 research components in three stages (Table 2 and Figure 1).

A literature review was initially conducted followed by the analysis of PD using a variety of data sources in Stage 2. In Stage 3 there is ongoing dissemination of the findings.

**Table 2: Stages of the ADEPD study**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>Preparation including a literature review and accessing data sources</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Analyses of SAMSS and other datasets</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Dissemination and research transfer</td>
</tr>
</tbody>
</table>

**Figure 1: Research components of the ADEPD Study**

1 = (K10) The Kessler PD Scale comprised of 10 questions  
2 = (SF36) Health Status Scale comprised of 36 questions  
3 = (MHI) Mental Health Inventory, a measure of general PD
Data sources

A variety of data sources were utilised for each research component. Most analyses involved the use of SAMSS, but Health Monitor dataset and other datasets were also utilised.

South Australian Monitoring and Surveillance System (SAMSS)

SAMSS is a continuous, monthly, telephone monitoring system that commenced in July 2002 and is conducted by the Population Research and Outcome Studies (PROS) Unit, SA Health. Approximately 600 South Australians of all ages are randomly selected and interviewed by Computer Assisted Telephone Interviewing (CATI) every month in order to monitor population trends in the prevalence of chronic conditions, associated risk factors and other determinants of health. All households in SA with a number listed in the Electronic White Pages (EWP) are eligible for selection in the SAMSS sample. Data are collected every month by a contracted agency and interviews conducted in English. The response rate for SAMSS is approximately 60% to 70% each month. Data are weighted by age, sex, area of residence and probability of selection in the household. Respondents aged 16 and over interviewed between July 2002 and July 2007 (n=27,445) were included in the analysis of most ADEPD research components.

Health Monitor (HM)

The HM is a service provided by the Population Research and Outcome Studies Unit in which an opportunity is provided for health and welfare organisations to gather quality population information by including questions in the state-wide CATI survey conducted approximately three times per year. The Electronic White Pages are used for a random, non-replacement sample of households with the objective of obtaining approximately 2000 interviews. Only one interview is conducted per household. When more than one person aged 18 or over resides in the household, the respondent is the person who was last to have their birthday. In
March 2009 the ADEPD study included the K10 and a series of well-being measures in the survey. In total n=1933 interviews were conducted with a participation rate of 63.4%.

**Health Omnibus Survey (HOS)**

The HOS is a shared cost, ‘omnibus’ survey to facilitate research among the SA community\(^8,9\). Personal interviews are conducted with randomly selected adults (15 years or older). The sample is a multi-stage, systematic, clustered, area sample based on collector’s districts throughout South Australia with a non-replacement sample. Only one interview is conducted per household. Where more than one person aged 15 or older resides in the household, the selected respondent is the person who was last to have a birthday. Up to six separate visits to selected households are made. The K10 and other measures of depression were included in the 2008 HOS which was conducted between September and December. Overall, n=3034 interviews were conducted with a response rate of 62.8%.

**Other Datasets**

Other datasets were used for the “Comparison of PD from various data sources” report\(^10\).
Results

The previously stated objectives of the ADEPD study form the basis for summary of findings.

**OBJECTIVE 1:** To investigate the relationship between PD and a range of individual- and community-level socioeconomic determinants, including age and gender, employment status, education, income, housing tenure, social capital, and major life events.

- In terms of **gender**, the prevalence of PD was significantly higher among females (11.9%) than males (7.9%)\textsuperscript{11}.

- Prevalence of PD decreased with **age**, from 11.4% among those aged 16 to 34 years, to 7.5% among the 65 years and over age group\textsuperscript{11}.

- **Education level.** A significantly higher level of PD was reported among those with low level of education\textsuperscript{11}.

- **Income.** A significantly higher level of PD was reported among those with low gross annual household income\textsuperscript{11}.

- **Socio Economic Index For Areas, Index of Relative Socio-economic Disadvantage (SEIFA IRSD).** There was a significantly higher level of PD among those living in a postcode classified in the lowest, most disadvantaged, quintile\textsuperscript{11}.

- Respondents who were **unemployed or unable to work** were significantly more likely to report higher levels of PD than respondents who were employed (Table 3).
  - Factors such as gender, marital status, household income and number of chronic conditions, were also associated with PD among those who were unemployed or unable to work\textsuperscript{12}.
  - Analysis by age showed that those unemployed or unable to work had significantly higher levels of PD than those employed in all age groups under 65 years. The highest prevalence of PD for these two employment categories was in the 35 to 49 years age group (Table 3)\textsuperscript{12}.
Table 3: Prevalence of PD by employment status and age group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Employed</th>
<th>Unemployed</th>
<th>Unable to work</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 to 34 years</td>
<td>8.5</td>
<td>25.6</td>
<td>46.9</td>
<td>14.0</td>
</tr>
<tr>
<td>35 to 49 years</td>
<td>7.1</td>
<td>37.3</td>
<td>48.4</td>
<td>14.0</td>
</tr>
<tr>
<td>50 to 64 years</td>
<td>6.1</td>
<td>13.4</td>
<td>38.8</td>
<td>10.8</td>
</tr>
<tr>
<td>65 years plus</td>
<td>4.3</td>
<td>0.0</td>
<td>35.5</td>
<td>7.0</td>
</tr>
</tbody>
</table>

* The category ‘Other’ includes those engaged in home duties, students, retired and other.

- **Housing tenure** was a factor found to be associated with PD. Those living in rented accommodation (either private or Housing SA (14.3%)), experienced higher levels of PD compared to home owners/purchasers (Figure 2).

- Multivariate logistic regression indicated that factors such as age, sex, self-rated health status, employment status, the presence of some chronic conditions and marital status were associated with PD among respondents with different types of housing tenure[13].

![Figure 2: Prevalence of PD by housing tenure](image)

- Several **social capital variables** (neighbourhood and home safety, control over life decisions and neighbourhood trust) were also associated with significant differences in the prevalence of PD[11].
There was a significantly lower prevalence of PD among those who feel safe in the home all the time.

There was a significantly lower prevalence of PD among those who are having control over decisions that affect life.

There was a significantly lower prevalence of PD among those thinking that people in the neighbourhood trust each other\textsuperscript{11}.

- Most serious life events such as loss of a job, death of somebody close, marriage/relationship breakdown, serious illness or injury, or financial stress were associated with significantly higher prevalence of PD. The experience of multiple major life events in the past 12 months increased the likelihood of having PD\textsuperscript{11}.

- All five of the chronic conditions studied: arthritis; asthma; osteoporosis; cardiovascular disease and diabetes were independently associated with higher levels of PD. Analyses also showed that the more chronic conditions a person had, the greater the likelihood of reporting PD\textsuperscript{14} (Figure 3).

\textbf{OBJECTIVE 2:} To examine the relationship between PD and a range of health indicators, including conditions such as diabetes, asthma, cardiovascular disease, osteoporosis, arthritis, injury, and risk factors and behaviours such as obesity, smoking, physical inactivity, alcohol consumption, nutrition, high blood pressure, and high cholesterol.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure3.png}
\caption{Prevalence of PD by number of chronic conditions}
\end{figure}
Although the 16 to 34 year age group had the lowest prevalence of chronic conditions, this age group had the highest prevalence of PD associated with having a chronic condition.

Older people reported lower levels of PD than younger people, irrespective of the chronic condition although the prevalence of PD still increased with an increasing number of chronic conditions.

Within each age group, those with two or more chronic conditions had significantly higher levels of PD than those with one or no chronic conditions (Table 4).14

<table>
<thead>
<tr>
<th>Table 4: Prevalence of PD by number of chronic conditions and age group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>16 to 34 years</td>
</tr>
<tr>
<td>35 to 49 years</td>
</tr>
<tr>
<td>50 to 64 years</td>
</tr>
<tr>
<td>65 years plus</td>
</tr>
</tbody>
</table>

Health-related risk factors were significantly associated with higher levels of PD.11 Respondents in all sex and age groups with no risk factors had a significantly lower prevalence of PD. Among respondents aged 16 to 64, those with one or two risk factors had a significantly higher prevalence of PD. Respondents with three or more risk factors, except males aged 16 to 34 years, had a significantly higher prevalence of PD.

Risk factors found to be associated with PD were:

- Body Mass Index (BMI) (significantly higher prevalence of PD among those underweight and obese but not consistent across age and sex groups).
- Smoking status (significantly higher prevalence of PD among current smokers).
- Physical activity (significantly lower prevalence of PD among those with sufficient physical activity).
✓ Alcohol consumption (significantly higher prevalence of PD among non-drinkers and high risk drinkers but not consistent across age and sex groups).

✓ Fruit consumption (significantly lower prevalence of PD among those eating two or more serves of fruit per day).

✓ Vegetable consumption (significantly lower prevalence of PD among those eating two or more serves of vegetables per day).

✓ Cholesterol level (significantly higher prevalence of PD among those reporting high cholesterol)\textsuperscript{11}.

• Those respondents who had experienced a \textit{serious injury} in the last 12 months had a significantly higher prevalence of PD than those who had not. This held true for both males and females and all age groups except those the 65 years and over age group\textsuperscript{11}.

• Findings regarding \textbf{mental health conditions} are summarised in Objective 5.

\begin{quote}
\textbf{OBJECTIVE 3:} To determine how the relationships between PD and social and health determinants differ over time.
\end{quote}

• The overall prevalence of PD among respondents between July 2002 and June 2009 was 9.6%. The prevalence of PD varied \textit{over time} with the highest prevalence (10.7\%) recorded in 2003-04 and the lowest (8.6\%) in 2007-08. There was a significant downward trend over time for males and females (Figure 4)\textsuperscript{15}.  

\[\begin{align*} 
\]
Figure 4: Prevalence of PD 2002 to 2009 by gender

- The prevalence of PD has decreased **over time within age groups**. Those aged 16 to 34 were more likely to have PD than those aged 65 or above (Figure 5).

Figure 5: Prevalence of PD 2002 to 2009 by age

- Based on current prevalence and assuming that all factors remain the same, the **projected prevalence** of PD in 2014, based on a linear prediction of yearly aggregated data, is projected to be 6.5% (4.9% for males and 8.0% for females).
• Aboriginal and Torres Strait Islander (ATSI) people experienced a significantly higher prevalence of PD (Table 5)\textsuperscript{11}.

• Among males and females of all age groups, the prevalence of PD was significantly higher for ATSI respondents for all applicable age groups (16-34 years, 35-49 years, 50-64 years)\textsuperscript{11}.

Table 5: Prevalence of PD by indigenous status

<table>
<thead>
<tr>
<th>Aboriginal or Torres Strait Islander</th>
<th>% (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>9.9 (9.5-10.2)</td>
</tr>
<tr>
<td>Yes</td>
<td>14.3 (10.5-19.8)</td>
</tr>
</tbody>
</table>

• Small sample sizes in these population surveys, limited further analyses by age and gender by indigenous status, other than stated above\textsuperscript{11}.

• Those with two or more mental health conditions were significantly more likely to report high or very levels of PD compared to those with one or no mental health condition, while those with one mental health condition were also significantly more likely to report PD than those without a mental health condition (Figure 6)\textsuperscript{16}. 
Figure 6: Prevalence of PD by number of mental health conditions

- All four mental health conditions studied: anxiety, depression, a stress related problem and other mental health problems were independently associated with higher levels of PD (Figure 7)\textsuperscript{16}.
• The prevalence of PD by age group increased according to number of mental health conditions. Within each age group, those with no mental health condition had significantly lower levels of PD than those with one mental health condition. Similarly those with one mental health condition had lower levels of PD compared to those with two or more mental health conditions (Table 6).

Table 6: Prevalence of PD by number of mental health conditions and age group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>None</th>
<th>One</th>
<th>Two or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 to 34 years</td>
<td>7.6</td>
<td>30.3</td>
<td>56.6</td>
</tr>
<tr>
<td>35 to 49 years</td>
<td>5.6</td>
<td>26.1</td>
<td>55.2</td>
</tr>
<tr>
<td>50 to 64 years</td>
<td>4.8</td>
<td>26.7</td>
<td>62.5</td>
</tr>
<tr>
<td>65 years plus</td>
<td>4.0</td>
<td>30.8</td>
<td>57.9</td>
</tr>
</tbody>
</table>

• Amongst those with a current mental health condition, respondents who were aged 16-34 years, born outside Australia, UK or Ireland, unemployed, unable to work, or engaged in home duties, smokers or ex-smokers, not undertaking physical activity and who had a chronic condition were significantly more likely to report higher levels of PD.

OBJECTIVE 6: To examine health service use among those with PD.

• Health service utilisation was associated with PD with the greater the number of any health services used in the last four weeks, the higher the prevalence of PD (Figure 8).

• Multivariate logistic regression revealed that factors such as marital status, age, income and number of chronic conditions were associated with PD among those using health services.
OBJECTIVE 7: To collect data to directly compare the associations between the K10 and other instruments, such as the SF-36, and self-reported mental health conditions, in order to link with datasets that contain data other than the K10.

K10 – internal properties and comparison with MHI

- An examination was undertaken of the K10 using data obtained from the 2008 HOS\textsuperscript{18}.

The K10 measured two constructs, anxiety and depression.

- The prevalence of PD in the 2008 HOS was 9.3\% (95\%CI: 8.3\% - 10.3\%), and there was a difference between females and males.

- There were also significant effects associated with age and across a range of other sociodemographic and health conditions. This is in line with the analyses conducted using SAMSS and HM data and summarised elsewhere in this report.

- Results from the K10 were also compared with the PRIME-MD and the MHI (obtained from the Short Form 36 Version 2 (SF36 V2))\textsuperscript{19}.
Of those with major depression as determined by PRIME-MD, 62% were classified with PD. When the two levels of classification of the K10 (no PD vs PD) were compared to the categories of the PRIME-MD, there was moderate agreement between the two instruments (Kappa = 0.57).

When using the MHI, 66% of those with depression according to this scale were classified by the K10 with PD. There was substantial agreement between the two measures (Kappa = 0.63)18.

When the relationship between the MHI and K10 was examined in detail it was determined that the K10 was a better measure of general PD. The results indicate the K10 functions well as a screening measure of PD18.

Comparison of PD using various data sources

The aim of this part of the ADEPD study was to compare prevalence estimates of PD from a range of relevant population data sources in addition to SAMSS. The comparison was on a South Australian as well as on a national level (not including South Australia).

In SA, the prevalence of PD ranged from 8.4% (95% CI 7.0–10.1) to 12.9% (95% CI 11.1–14.9) (Figure 9). When examining the results of other states, the lowest and highest estimates were 9.5% (95% CI 9.1–10.0) and 12.0% (95% CI 11.5-12.5), respectively (Figure 10)10.
**Figure 9: Prevalence of PD from surveys conducted in South Australia**

**Figure 10: Prevalence of PD from surveys conducted in other states**

- Due to various differences in methodology e.g. sample size, time frame, survey design and response rate, comparisons between these findings should be undertaken with care.

  However it appears that SA has comparable levels of PD, both across different surveys conducted in this state and also when compared to other states\(^\text{10}\).
Objective 8: To develop consensus among relevant experts about the determinants of PD based on evidence produced from this study.

- **Consensus development** is a process where experts and professionals evaluate the available scientific information on specific issues, resulting in a consensus meeting. Consensus development was part of the dissemination of results from this project. The short report ‘Chronic conditions and PD in South Australia: Summary of Results’ was used as a stimulus for discussion, which focussed on chronic disease and investigated the relationship between PD/wellness and socioeconomic variables, health indicators, mental health, usage of health service and other mental health instruments.

- Issues for discussion were frequency, diagnosis, effects, prevention and treatment of PD.

- The output of the process provides findings for policies and strategies to reduce PD. The main outcome of the consensus development was a consensus statement, which was agreed by all participants as follows:

**CONSENSUS STATEMENT**

People with chronic disease have PD but the relationship is often not recognised.

The relationship needs to have a higher profile so that appropriate targeting and prevention can be implemented.

It is important to provide appropriate resources which promote positive messages regarding resilience and well-being as life skills.

Further research should utilise quantitative and qualitative research and focus on why some people cope better than others.
**OBJECTIVE 9:** To investigate the implications the findings have for policies and strategies related to PD in South Australia, and to advise on policies, strategies, and new approaches designed to reduce PD in the South Australian community.

- A wide range of publications have been produced as a result of ADEPD which investigate the implication of the findings and will contributed to policy strategies and new approaches all aimed at reducing PD.

**ADDITIONAL OBJECTIVE:** Relationship between PD and psychological wellbeing

The SA Strategic Plan 2004 Objective 2: Improving wellbeing, included the target of reducing psychological distress, and in the 2007 Plan this was expressed as improving psychological wellbeing. This target was rated as showing ‘positive movement’ and ‘on track’ in the 2008 Progress Report, but was still measured in terms of PD⁴.

- In order to explore how psychological wellbeing (PW) might be measured directly, the ADEPD project undertook new data collection using the Health Monitor. The aim was to investigate the usefulness of some standardised self-report tests of psychological wellbeing, to see how South Australians responded to them compared with the well-accepted test of psychological distress, the K10, and to begin a process of searching for demographic and socioeconomic factors associated with PW²¹.

- Respondents completed the K10 and three brief scales to assess aspects of PW: Positive Relations with others, Environmental Mastery, and Satisfaction with Life. The total from these three scales was also computed and used as a measure of Overall Wellbeing. Scales had acceptable internal reliability and factor analyses showed that each measured
just one factor with the exception of Positive Relations which had two components, relationships and communication.

- Relationships between demographic characteristics and respondents PD and PW scores are shown in Table 7.

| Table 7: Summary of demographic characteristics associated with all four scales |
|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 | K10             | Positive relations | Environmental mastery | Satisfaction with life | Overall wellbeing |
| Sex             | x               | x                |                  |                  |                   |
| Age             |                  | x                | x                |                  |                   |
| Household size  | x               | x                |                  | x                 | x                 |
| Area of residence |                | x                |                  |                  |                   |
| Number of children |              |                  | x                | x                 | x                 |
| Country of birth |                |                  |                  |                  |                   |
| Language spoken |                  | x                | x                | x                 | x                 |
| Marital status  |                  | x                | x                | x                 | x                 |
| Education       |                  | x                |                  | x                 | x                 |
| Work status     |                  | x                | x                |                  | x                 |
| Income          |                  | x                | x                |                  | x                 |
| Dwelling ownership |                |                  | x                |                  | x                 |
| Aboriginal Torres Strait Islander | |                  | x                |                  |                   |
| Pension         | x               | x                | x                | x                 | x                 |

- In the great majority of analyses, variables positively associated with PD were negatively associated with PW and vice versa.

✓ PD was associated with being the only adult in the household, speaking a language other than English at home, being divorced or separated, having no educational qualifications beyond secondary school, being unable to work, having a low income, renting one’s accommodation, and being on a pension.

✓ High PW on the other hand was associated with the converse of these variables: living with at least one other adult, being in a stable marital relationship, having a university degree or being a home owner or purchaser.
• **Two exceptions** to this were the following:
  
  ✓ Although being female is associated with higher scores on PD, generally there was no significant gender difference in PW.
  
  ✓ Living in a household with one or more children does not affect the likelihood of scoring higher on PD, but was significantly associated with higher scores for PW.

• The **study of wellbeing** provided initial confirmation of the usefulness of some direct measures of PW, for use in surveys of population health. PW in terms of positive relations with others, a sense of mastery of one’s environment and satisfaction with one’s life, was on the whole associated with the opposite demographic and socioeconomic characteristics to those associated with PD. Results may usefully suggest interventions likely to increase PW as well as reduce PD\textsuperscript{21}.
Publications

Reports from ADEPD

  

  


  

  


**Presentations**


**Publications**


**Additional Resources**

- The power and potential of well-being indicators – Measuring young people’s well-being in Nottingham. ISBN 1 899 407 855, NEF 2004. Weblink: 

Further Research

- **Further monitoring of PD** should be undertaken (see ‘Implications’) with the goal of identifying trends among various subpopulations.

- While cross sectional information can provide direction for effective prevention and treatment of PD, longitudinal studies need to be undertaken in order to understand the causal relationships.

- One of the priorities of further research, utilising both quantitative and qualitative research, should be why some people are resilient under the same circumstances, particularly those exposed to factors which are associated with PD.

- The ADEPD study includes research regarding psychological wellbeing, which supports the theory that psychological wellbeing is negatively correlated to PD. Further research needs to be undertaken examine the relationship between both concepts further.

- Kessler 10 or a similar measurement of distress should be developed to measure PD in children, which is currently not available.
References


2. Government of South Australia (2007). *South Australia’s Strategic Plan 2007*. Available at:  


4. Government of South Australia (2007). *SA Health Strategic Plan 2008-2010*. Available at:  


7. Population Research & Outcome Studies. *Health Monitor Survey*. Available at:  


9. Population Research & Outcome Studies. *Health Omnibus Survey*. Available at:  


