Part A: The Report

“The Wellbeing of Australians – Quantity and Quality of Sleep”

Robert A. Cummins
Jacqui Woerner, Melissa Weinberg, James Collard
Linda Hartley-Clark, Charini Perera, and Krystine Horfiniak
School of Psychology, Deakin University

Australian Centre on Quality of Life
Deakin University, 221 Burwood Highway
Melbourne, Victoria 3125, Australia

**Table of Contents**

Executive Summary ........................................................................................................................................... xii  

1. **Introduction** ........................................................................................................................................... 1  
   1.1. Understanding Personal Wellbeing ................................................................................................. 1  
   1.2. The Survey Methodology .................................................................................................................. 4  
   1.3. Presentation of results and type of analysis ...................................................................................... 4  
   1.4. Internal Report Organisation .............................................................................................................. 4  
   1.5. Glossary of Terms ............................................................................................................................... 5  

2. **Personal and National Wellbeing Over Time** ..................................................................................... 6  
   2.1. A Comparison Between Survey 26 and Survey 27 ......................................................................... 6  
   2.2. Personal Wellbeing Index .................................................................................................................. 7  
   2.3. Personal Wellbeing Domains ............................................................................................................ 11  
   2.3.1. Standard of Living ......................................................................................................................... 12  
   2.3.2. Health ......................................................................................................................................... 14  
   2.3.3. Achieving in Life ............................................................................................................................ 16  
   2.3.4. Relationships ............................................................................................................................... 18  
   2.3.5. Safety .......................................................................................................................................... 20  
   2.3.6. Community ................................................................................................................................... 22  
   2.3.7. Future Security ............................................................................................................................... 24  
   2.3.8. Religion/Spirituality ....................................................................................................................... 26  
   2.3.8.1. The strength of Spiritual/Religious Satisfaction using the no-gating data .............................. 27  
   2.3.8.2. The performance of the Personal Wellbeing Index at different levels of Spiritual/Religious .... 28  
   2.3.8.3. Changes in the value of the Personal Wellbeing Index due to Spiritual/Religious inclusion ...... 29  
   2.4. Life as a Whole ................................................................................................................................ 30  
   2.5. Summary of the Changes in Personal Wellbeing ........................................................................... 32  
   2.6. National Wellbeing Domains ............................................................................................................ 34  
   2.6.1. Economic situation ....................................................................................................................... 34  
   2.6.2. State of the Natural Environment in Australia ........................................................................... 36  
   2.6.3. Social Conditions in Australia .................................................................................................... 39  
   2.6.4. Government in Australia .............................................................................................................. 41  
   2.6.5. Business in Australia .................................................................................................................... 44  
   2.6.6. National Security .......................................................................................................................... 46  
   2.7. Life in Australia .................................................................................................................................. 48  
   2.8. Australian Wellbeing Summary ........................................................................................................ 51  
   2.9. Likelihood of a Terrorist Attack ........................................................................................................ 54  
   2.9.1. Satisfaction with Safety and Terrorist Attack Probability ............................................................. 59  
   2.9.2. State/Territory Comparisons using Cumulative Data .................................................................. 59  
   2.9.3. State/Territory Comparisons Over Time ..................................................................................... 60  
   2.10. Composition of the Personal Wellbeing Index ............................................................................... 61  
   2.11. Normative Data ............................................................................................................................... 61  
   2.11.1. Normative Data from Individual Scores .................................................................................... 61  
   2.11.2. Normative Data using Survey Mean Scores as Data (N=26) ....................................................... 65  
   2.11.3. Relationships Between the Indices and Their Domains (survey mean scores as data) .............. 65  

3. **Household Income** ................................................................................................................................. 72  
   3.1. Survey 26 vs. Income-Specific Normal Range .................................................................................. 74  
   3.2. Domain-Level Profiles for individual income groups ....................................................................... 74  
   3.2.1. Domain Sensitivity to Income ....................................................................................................... 78  
   3.3. Income Group Averages vs. Generic Normal Ranges ....................................................................... 80  
   3.3.1. Personal Wellbeing Index .............................................................................................................. 80  
   3.3.2. Domain Averages vs **Generic** Normal Ranges for Domains .................................................. 82  
   3.3.3. National Wellbeing Index ............................................................................................................ 84  
   3.4. National Wellbeing Domains .......................................................................................................... 85  
   3.4.1. Terrorist Attack Probability .......................................................................................................... 85  
   3.5. Changes in Income Categories Over Time ........................................................................................ 86  
   3.5.1. Changes in responding to the income question ............................................................................ 86
3.5.2. Personal Wellbeing Index ........................................................................................................... 86
3.5.3. Changes Over Surveys Within Domains .................................................................................... 87
3.6. Demographics .................................................................................................................................. 89
3.6.1. Income and Gender ......................................................................................................................... 89
3.6.2. Income and Age .............................................................................................................................. 90
3.6.2.1. Income x Age x Gender ............................................................................................................. 91
3.6.3. Income and Household Composition .......................................................................................... 92
3.6.3.1. Income x Household Composition x Gender ............................................................................. 94
3.6.3.2. Composition of the lowest income group: Household Composition x Age (26-55y) .......... 94
3.6.4. Income and Relationship Status ................................................................................................. 95
3.6.4.1. Income x Relationship Status x Gender .................................................................................... 96
3.6.4.2. Composition of the lowest income group in terms of Relationship Status and Age ............ 97
3.6.5. Income and Work Status ............................................................................................................. 98
3.6.5.1. Income x Work Status x Gender ............................................................................................... 99
3.6.6. Composition of the lowest income in terms of Age and Work Status ........................................ 99
3.7. Regression of PWI Domains against Life as a Whole ................................................................. 100
3.8. Testing Homeostasis ....................................................................................................................... 101
3.8.1. Wellbeing Variation Within Income Groups using Combined Survey Data ............................. 101
3.8.2. Differential Personal-National Income Sensitivity .................................................................. 103
3.9. Normative Values ........................................................................................................................... 104
3.9.1. Normative Data for Individual Scores ......................................................................................... 104
3.9.2. Normative Data for Group Means ............................................................................................. 105
3.9.3. Average Income Ranges Over Time ........................................................................................... 106

4. Gender ............................................................................................................................................... 113
4.1. Survey 26 vs. Gender-Specific Normal Ranges ............................................................................ 113
4.2. Gender Group Averages (cumulative data) vs. Generic Normal Ranges ................................. 115
4.3. Gender Differences Over Time .................................................................................................... 117
4.3.1. Personal Wellbeing Index ........................................................................................................... 117
4.3.2. Homeostasis ............................................................................................................................... 117
4.3.3. Personal Wellbeing Domains .................................................................................................... 119
4.3.3.1. Standard of Living ................................................................................................................... 119
4.3.3.2. Health ..................................................................................................................................... 120
4.3.3.3. Achieving in Life ..................................................................................................................... 120
4.3.3.4. Relationships .......................................................................................................................... 121
4.3.3.5. Safety ...................................................................................................................................... 122
4.3.3.6. Community ............................................................................................................................. 123
4.3.3.7. Future Security ......................................................................................................................... 123
4.3.3.8. Spiritual/Religious .................................................................................................................. 124
4.3.4. Domain Stability Across Surveys x Gender ............................................................................. 124
4.3.5. National Wellbeing Index ......................................................................................................... 126
4.3.6. National Wellbeing Domains .................................................................................................. 126
4.3.6.1. Economic Situation .................................................................................................................. 127
4.3.6.2. Natural Environment .............................................................................................................. 127
4.3.6.3. Government ............................................................................................................................. 128
4.3.6.4. National Security .................................................................................................................... 128
4.3.7. Life as a Whole and Life in Australia ......................................................................................... 129
4.3.8. Likelihood of a Terrorist Attack ................................................................................................ 130
4.4. Gender and Demographics .......................................................................................................... 131
4.4.1. Gender and Age .......................................................................................................................... 131
4.4.2. Gender x Age: Domains ............................................................................................................ 132
4.4.2.1. Standard of Living .................................................................................................................. 132
4.4.2.2. Health ..................................................................................................................................... 133
4.4.2.3. Achieving in Life ..................................................................................................................... 133
4.4.2.4. Relationships .......................................................................................................................... 134
4.4.2.5. Safety ...................................................................................................................................... 134
4.4.2.6. Community ............................................................................................................................. 135
4.4.2.7. Future Security ........................................................................................................................ 135
4.4.2.8. Spiritual/Religious .................................................................................................................. 135
4.5. Gender and Household Composition ........................................................................................... 136
### Table of Contents Continued

4.5.1. Gender x Household Composition x Age ................................................................. 137
4.5.1.1. Sole Parents ........................................................................................................... 137
4.5.1.2. Lives Alone ........................................................................................................... 138
4.5.1.3. Other Adults ........................................................................................................ 138
4.6. Gender and Relationship Status .................................................................................... 139
4.6.1. Gender and Relationship Status x Household Composition ............................................ 139
4.6.1.1. Married .................................................................................................................. 140
4.6.1.2. Divorced .............................................................................................................. 140
4.6.1.3. Never Married ..................................................................................................... 141
4.7. Gender x Work Status .................................................................................................... 142
4.7.1. Gender x Fulltime Work Status x Survey ................................................................. 144
4.8. Gender x Age x Work Status ......................................................................................... 145
4.8.1. Gender x Age x Employed (Full-time) ...................................................................... 145
4.8.2. Gender x Age x Unemployed ................................................................................... 146
4.9. Normative Data Based on Individual Scores ................................................................. 147
4.9.1. Personal Wellbeing Index ......................................................................................... 147
4.9.2. Age Norms (individual scores) .................................................................................. 148
4.9.2.1. Male Norms x Age ............................................................................................... 148
4.9.2.2. Female Norms x Age .......................................................................................... 148
4.10. Normative Data based on Survey Mean Scores ............................................................. 150
4.10.1. Personal Wellbeing Index and Domains ................................................................. 150
4.10.2. Normative: Gender x Age (survey mean scores) .................................................... 151

5. Age ........................................................................................................................................ 157
5.1. Survey 26 vs. Age-Group Specific Normal Ranges ......................................................... 157
5.1.1. Life as a Whole .......................................................................................................... 159
5.1.2. National Wellbeing Index ......................................................................................... 160
5.1.3. Government x Survey (youngest vs oldest groups) .................................................... 161
5.1.4. Life in Australia ........................................................................................................ 162
5.1.5. Terrorist Attack Likelihood and Strength of Conviction .............................................. 162
5.1.5.1. Percent Who Consider an Attack Likely ................................................................. 162
5.1.5.2. Strength of Conviction ......................................................................................... 163
5.2. Age-Group Averages vs. Generic Normal Range ........................................................... 164
5.3. Age-Group Differences Over Time ................................................................................ 165
5.3.1. Age x Surveys ........................................................................................................... 165
5.3.1.1. The Oldest Group .................................................................................................. 167
5.4. Age x Demographics .................................................................................................... 168
5.4.1. Age and Household Composition ............................................................................. 168
5.4.2. Age and Relationship Status .................................................................................... 170
5.4.3. Age and Work Status ............................................................................................... 172
5.5. Normative Data Generated from Individual Scores ....................................................... 177
5.5.1. Normative Domain Scores (raw data from individuals) ............................................ 178
5.6. Normative Data Generated from survey mean scores ................................................... 178

6. Household Composition .................................................................................................... 183
6.1. Data Distribution ............................................................................................................ 183
6.2. Introduction to Sections 6.3 and 6.4 ............................................................................. 183
6.3. Survey 24 vs. Specific Normal Ranges for Household Composition ............................... 183
6.3.1. Personal Wellbeing and Domains ............................................................................ 184
6.3.2. National Wellbeing and Domains ............................................................................ 185
6.3.3. Life as a Whole and Life in Australia ...................................................................... 186
6.3.4. National Survey-Specific Aspects: Terrorist Attack ................................................ 187
6.4. Comparisons With Generic Normal Ranges for Household Groups ............................... 188
6.4.1. Personal Wellbeing Index ......................................................................................... 188
6.4.2. Personal Domains ..................................................................................................... 189
6.4.2.1. Live Alone vs. Generic Normal Range (combined data) ........................................ 190
6.4.2.2. Live with Partner vs. Generic Normal Range (combined data) .............................. 190
6.4.2.3. Sole Parent vs. Generic Normal Ranges ................................................................ 191
6.4.2.4. Partner and Children vs. Generic Normal Ranges .................................................. 191
6.4.2.5. Live with Parents vs. Generic Normal Ranges x People who live with their Parents 192
Table of Contents Continued

6.4.2.6. Other Adults vs. Combined Survey Mean Scores ................................................................. 192
6.4.2.7. Partners in the Presence and Absence of Children ............................................................... 193
6.4.2.8. Living with Partner Only vs. Children Only (Sole Parent) ..................................................... 194
6.4.3. National Wellbeing Index – Generic Normal Range ................................................................. 194
6.5. Combined Household Composition and Marital Status ............................................................. 195
6.5.1. Income x Household Composition x Marital Status ............................................................... 196
6.5.1.1. Living Alone x Marital Status x Income .............................................................................. 196
6.5.1.2. Sole Parent x Relationship Status x Income ...................................................................... 197
6.5.1.3. Partner plus Children x Relationship Status x Income ....................................................... 198
6.6. Household Composition x Work Status ...................................................................................... 199
6.6.1. Household Composition x Unemployment .............................................................................. 199
6.6.1.1. Household composition x Unemployment x Income (PWI) ................................................ 199
6.6.2. Living Alone x Work Status .................................................................................................... 200
6.6.3. Sole Parents x Work Status .................................................................................................... 200
6.6.4. Sole Parents x Part-time Work Status x Income .................................................................... 201
6.6.5. Live Alone x Part-time Work Status x Income ..................................................................... 202
6.7. Changes in Survey Composition Over Time .............................................................................. 203
6.8. Regressions ................................................................................................................................. 203
6.9. Specific Normative Ranges for Household Composition Groups ............................................ 205
6.9.1. Specific Norms using Data for Individuals ............................................................................ 205
6.9.2. Household-specific Normative Ranges for Household Composition Groups .................. 207

7. Marital Status .................................................................................................................................. 212
7.1. Data Distribution .......................................................................................................................... 212
7.2. Introduction to the Chapter ......................................................................................................... 212
7.3. Survey 25 vs. Specific Normal Ranges for Marital Status ......................................................... 212
7.3.1. Personal Wellbeing ................................................................................................................ 212
7.3.2. National Wellbeing ................................................................................................................ 214
7.4. Marital Status Averages vs. Generic Normal Ranges ................................................................. 215
7.4.1. Life as a Whole ......................................................................................................................... 219
7.4.2. Life in Australia ...................................................................................................................... 219
7.5. Marital Status x Full-Time Work Status .................................................................................... 220
7.6. Part-time Work Status ................................................................................................................ 221
7.6.1. Volunteering .......................................................................................................................... 221
7.6.2. Part-time Study ....................................................................................................................... 222
7.7. Marital Status x Full Time Work Status x Income ..................................................................... 223
7.7.1. Divorced .................................................................................................................................. 223
7.7.2. Never Married ....................................................................................................................... 224
7.8. Regressions of Personal Wellbeing Index Domains Against Life as a Whole ......................... 224
7.9. Normative Scores ....................................................................................................................... 225
7.9.1. Normative Ranges from Individual Values ............................................................................ 225
7.9.2. Normative Ranges form Survey Mean Scores ....................................................................... 225

8. Work Status ...................................................................................................................................... 230
8.1. Survey 26 Compared with Work-Group Specific Normal Ranges ........................................... 231
8.1.1. Personal Wellbeing Index ....................................................................................................... 231
8.1.2. National Wellbeing Index ....................................................................................................... 234
8.2. Work Group Averages Against Generic Normal Ranges .......................................................... 237
8.2.1. Personal Wellbeing Index ....................................................................................................... 238
8.2.2. Work Status: Full-time only vs. Full-time plus Part-time Volunteer ....................................... 241
8.3. Work Status Groups within Demographic Characteristics ....................................................... 242
8.3.1. Unemployed x Household Income ......................................................................................... 242
8.3.2. Looking for Work Personal Wellbeing Index ......................................................................... 245
8.3.3. Looking for Work: Employed (PWI and Domains) ................................................................. 245
8.3.4. Full-Time Employment Status x Gender .............................................................................. 247
8.3.5. F/T work group plus P/T status .............................................................................................. 247
8.4. Regressions .................................................................................................................................. 248
8.5. Demographic Changes Over Time for the Full Sample ........................................................... 249
8.6. Normative Data ............................................................................................................................ 251
8.6.1. Normative Data Based on Individual Scores ......................................................................... 251
8.6.2. Normative Data Based on Survey Mean Scores ................................................................. 251

9. Life Events .......................................................................................................................... 255

9.1. Occurrence of Personal Life Events ................................................................................. 255
9.1.1. Frequency of Life Events ............................................................................................. 255
9.1.2. Happy vs. Sad Events .................................................................................................. 256
9.1.2.1. Happy Events .......................................................................................................... 257
9.1.2.2. Sad Events .............................................................................................................. 257
9.1.3. Gender and Life Event Frequency .............................................................................. 258
9.1.4. Life Event Frequency x Age ...................................................................................... 261
9.1.5. Income and Life Event Frequency ............................................................................. 262
9.2. Perceived Intensity of Life Events .................................................................................. 262
9.2.1. Event intensity x PWI ............................................................................................... 263
9.2.2. Event intensity x PWI x Gender .............................................................................. 263
9.2.3. Household Income and Life Event Intensity .............................................................. 264
9.2.4. Income x Intensity x Happy/Sad event ................................................................. 264
9.2.5. Gender and Life Event Intensity .............................................................................. 265
9.2.6. Age and Life Event Intensity .................................................................................... 265
9.3. Days of the Week ........................................................................................................... 266

10. Sleep ..................................................................................................................................... 269
10.1. Hours of sleep ............................................................................................................... 269
10.1.1. Hours of sleep x Gender ............................................................................................ 271
10.1.2. Hours of sleep x Age ............................................................................................... 271
10.2. Time to fall asleep ......................................................................................................... 272
10.3. Waking during the night ............................................................................................... 272
10.4. Feeling refreshed ........................................................................................................... 272
10.5. Remembering your dreams ......................................................................................... 273
10.6. Bad dreams and nightmares ....................................................................................... 274
10.7. Frequency of bad dreams and nightmares ................................................................. 274
10.8. Intensity of bad dreams and nightmares ..................................................................... 275
10.9. Night shifts ..................................................................................................................... 275
10.10. Duration since last night-shift .................................................................................... 276

Appendix A1. Previous Reports on the Australian Unity Wellbeing Index ............................. 279

Acknowledgement
We thank Ann-Marie James for word processing this document. All analyses in this Report were performed by Jacqui Woerner, Melissa Weinberg, James Collard, Linda Hartley-Clark, Charini Perera and Krystine Horfiniak
Index of Tables

Table 2.1: Means and standard deviations of the 26th and 27th survey ................................................................. 6
Table 2.2: The Reliability of Survey 1 (PWI and domains) ....................................................................................... 32
Table 3.1: Income Frequency (Survey 26) ................................................................................................................ 72
Table 3.2: Rank Order of Domains (combined data) ............................................................................................... 79
Table 3.3: The Cost of Each PWI Increment ........................................................................................................... 81
Table 4.1: Domain Changes >2.0% Between Adjacent Surveys within each Gender ........................................... 125
Table 4.2: Range (2SD) of Personal Wellbeing Mean Scores over Surveys, 1-26 .................................................. 150
Table 6.1: Regressions: Live alone and never married (combined data) ............................................................ 203
Table 7.1: Regressions: Marital Status (Combined data) ......................................................................................... 224
Table 8.1: The relationship between shared variance and the negativity of the downward extension group- specific normal range .................................................................................................................. 248
Table 8.2: Demographic Changes in percentage of Full-time Work Status Over Time ........................................ 249
Table 8.3: Demographic Changes in percentage of Part-Time Work Status Over Time ....................................... 250
Table 8.4: Demographic Changes in Looking for Work ......................................................................................... 250

See Part B for Appended Tables.
Index of Figures

Figure 2.1: Personal Wellbeing Index................................................................. 7
Figure 2.2: National Wellbeing Index................................................................. 9
Figure 2.3: Satisfaction with Standard of Living................................................ 12
Figure 2.4: Satisfaction with Health................................................................. 14
Figure 2.5: Satisfaction with What you are Currently Achieving in Life.............. 16
Figure 2.6: Satisfaction with Relationships..................................................... 18
Figure 2.7: Satisfaction with How Safe you Feel............................................. 20
Figure 2.8: Satisfaction with Feeling Part of Your Community......................... 22
Figure 2.9: Satisfaction with Future Security.................................................. 24
Figure 2.10: Satisfaction with Religion/Spirituality.......................................... 26
Figure 2.11: Satisfaction with Spiritual/Religious vs. Personal Wellbeing Index (combined sample)............. 27
Figure 2.12: Spiritual/Religious vs. Relationships x Future Security (Personal Wellbeing Index).................. 28
Figure 2.13: Satisfaction with Life as a Whole.................................................. 30
Figure 2.14: Satisfaction with Economic Situation in Australia....................... 34
Figure 2.15: Satisfaction with State of the Natural Environment in Australia........ 36
Figure 2.16: Satisfaction with Social Conditions in Australia.......................... 39
Figure 2.17: Satisfaction with Government in Australia................................... 41
Figure 2.18: Satisfaction with Business in Australia........................................ 44
Figure 2.19: Satisfaction with National Security............................................. 46
Figure 2.20: Satisfaction with Life in Australia............................................... 48
Figure 2.21: Survey 26 PWI and Domains vs. Domain Normal Ranges Based on Survey Mean Scores (N=26)........................................................................ 51
Figure 2.22: Survey 26 NWI and Domains vs. Domain Normal Ranges Based on Survey Mean Scores........ 51
Figure 2.23: Percentage who think a terrorist attack is likely.......................... 54
Figure 2.24: Strength of Belief in a Terrorist Attack....................................... 54
Figure 2.25: Likelihood of terrorist attack (combined survey 9-26)..................... 55
Figure 2.26: Likelihood of Attack x PWI Showing 2SD around the Mean........... 56
Figure 2.27: Personal Wellbeing Index x Attack Probability x Life Events ............ 58
Figure 2.28: State/Territory Comparisons using Combined Data using Combined Data (Personal Wellbeing Index)........................................................................ 59
Figure 2.29: State x Grouped Surveys (Personal Wellbeing Index)..................... 60
Figure 2.30: Frequency Distribution of Personal Wellbeing Index.................... 61
Figure 2.31: Frequency Distribution of ‘Life as a Whole’.................................... 62
Figure 2.32: Normative Range for Individual Data: Personal Wellbeing Index.... 62
Figure 2.33: Normative Range for Individual Data: National Wellbeing Index..... 63
Figure 2.34: Normative Range for Life as a Whole and Life in Australia........... 63
Figure 2.35: Life as a Whole vs. Life in Australia: Survey Means...................... 64
Figure 3.1: Surveys 24 and 23 vs Income-Specific Normal Range (PWI)............. 74
Figure 3.2: $15K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains)......................... 74
Figure 3.3: $15-30K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains).................... 75
Figure 3.4: $31-60K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains).................... 75
Figure 3.5: $61-$100K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains).................. 76
Figure 3.6: $101-$150K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains)............. 76
Figure 3.7: $151-$250K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains)............. 77
Figure 3.8: $251-$500K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains)............. 77
Figure 3.9: >$500K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains).................... 77
Figure 3.10: The Influence of Household Income to create differences within the Personal Domains (combined data)............................................................................... 79
Figure 3.11: Income and the Personal Wellbeing Index (combined surveys)........ 80
Figure 3.12: The cost of purchasing a percentage point of personal wellbeing.......... 81
Figure 3.13: Standard of Living vs Generic Normal Range for Standard............... 82
Figure 3.14: Health vs Generic Normal Range for Health.............................. 82
Figure 3.15: Achieving vs Generic Normal Range for Achieving..................... 83
Figure 3.16: Relationships vs Generic Normal Range for Relationships............... 83
Figure 3.17: Safety vs Generic Normal Range for Safety.................................. 83
Figure 3.18: Community vs Generic Normal Range for Community................... 84
Figure 3.19: Future Security vs Generic Normal Range for Future Security........... 84
Figure 3.20: Income x Business satisfaction (combined data)............................ 85
Executive Summary

Introduction

The Australian Unity Wellbeing Index monitors the subjective wellbeing of the Australian population. Our first survey was conducted in April 2001 and this report concerns the 27th survey, undertaken in April 2012. Our previous survey had been conducted six months earlier in September. This intervening period corresponded to the 4th year of the Labor Government, elected in November 2007. It was also marked by an increasing apprehension at the unstable international financial situation, with serious problems in Europe. The Australian economy, however, appeared stable.

The share market had been stable for a couple of years, at a level well below its peak before the financial crisis. However, unemployment remained at about 5% and for those people with jobs, many were better-off financially due to cuts in interest rates, and so, in mortgage repayments.

Each survey involves a telephone interview with a new sample of 2,000 Australians, selected to represent the geographic distribution of the national population. These surveys comprise the Personal Wellbeing Index, which measures people’s satisfaction with their own lives, and the National Wellbeing Index, which measures how satisfied people are with life in Australia. Other items include a standard set of demographic questions and other survey-specific questions. The specific topic for Survey 27 is the consequence of sleep patterns on wellbeing.

The Theory

The theoretical framework for the interpretation of data is the theory of Subjective Wellbeing Homeostasis. This proposes that each person has a ‘set-point’ for personal wellbeing that is internally maintained and defended. This set-point is genetically determined and, on average, causes personal wellbeing to be held at 75 points on a 0-100 scale. The normal level of individual set-point variation is between about 60-90 percentage points. The provision of personal resources, such as money or relationships, cannot normally increase the set-point on a long term basis due to the genetic ceiling. However, they can strengthen defences against negative experience. Moreover, for someone who is suffering homeostatic defeat, the provision of additional resources may allow them to regain control of the wellbeing. In this case the provision of resources will cause personal wellbeing to rise until the set-point is achieved.

We propose that low levels of personal resources, such as occasioned by low income or absence of a partner, weakens homeostasis. If personal challenges such as stress or pain exceed resources, homeostasis is defeated, and subjective wellbeing decreases below its normal range.

The Analyses

All data have been standardized to a 0-100 range. Thus, the level of wellbeing is referred to in terms of percentage points. Reference is also made to normative ranges. These have been calculated for the Personal Wellbeing Index in terms of the whole data-set that combines data across all surveys (see Appendix 2). Norms have also been calculated separately for each of the Personal Wellbeing Index domains. They have also been calculated for gender, age groups, income, marital status, household composition, and work-status groups. These norms are presented at the back of their respective chapters. All of the reported trends are statistically significant.

Dot point summaries are provided at the end of each Chapter.
The Results

NOTE: For the first time in the history of the index, not one domain in either the Personal or the National Wellbeing Index changed between Surveys 26 and 27. Consequently, none of the results have changed significantly and all of the descriptions given in Report 26.0 also apply for Report 27.0. Because of this, the descriptions below have all been reproduced from Report 26.0. However, for anyone wanting to see the detailed effects of the new data on the cumulative results, all of the results tables contained in the appendices have been updated with the new data.

The only chapter to be completely revised concerns the special survey topic for Survey 27.0, which is ‘Sleep’. These new results are presented in Chapter 10 of the Report and a summary is provided below.

Personal Wellbeing Index:

The Personal Wellbeing Index has gradually decreased during the 24 months since Survey 22 in September 2009. Its current value of 75.5 remains marginally higher than the survey average of 75 points.

The first occasion it reached this value coincided with the Athens Olympics in August 2004. This was an unusual survey since data were collected over the Olympic period, meaning that the national elation at the amazing success of our athletes at these games, no doubt added to the value of the Personal Wellbeing Index. The high levels of the last four surveys probably reflect the sense of relief that Australia escaped the recession and that people’s savings and superannuation funds remain secure, continued low unemployment, low levels of inflation, and the breaking of the drought. There may also be an element of positive downward comparison against countries that have not been so lucky.

Over all the surveys, it is notable that the Personal Wellbeing Index is so stable. The survey mean scores have varied by just 3.1 points. Moreover, the change from one survey to the next has been 1 point or less except for 4 of the 24 adjacent surveys. These occasions have been S1-S2 (September 11), S11-S12/S12-S13 (Sydney Olympics) ,S14–S15 (Second Bali bombing), and S20-S20.1 (Victorian Bush Fires). The Personal Wellbeing Index is currently 1.9 points above its level at Survey 1, which is significant.

The level of population wellbeing remain close to its average level.

National Wellbeing Index

The National Wellbeing Index has fallen by a significant 2.3 points in the six months since Survey 25 to 60.4 points. It is now among the lower scores for this index, being only 3.7 points below its maximum (64.1 points). It remains 4.6 points higher than it was in Survey 1 (55.8 points).

Historical: The National Index, like the Personal Wellbeing Index Figure 2.1 started from a very low initial value in April 2001. The reason for this low value is not known. What is apparent is that the National Wellbeing Index is more volatile than the Personal Index due to the relatively low level of homeostatic control. Its range is 7.9 points from April 2001 (S1:55.8) to September 2009 (S22: 64.1 points).

Overall, the National Wellbeing Index is also at close to its average level.

Terrorist Threat

Among the people who consider a terrorist attack likely ‘in the near future’, the strength of their belief has fallen to its lowest level yet recorded.
Strong beliefs in the likelihood of an attack are associated with low personal wellbeing. The people who regard the likelihood of such an attack as 9/10 or 10/10 have below normal wellbeing. This finding raises the issue of the benefits and disadvantages of Government warnings concerning the possibility of terrorist attacks on Australia.

Since people who regard such an attack as highly likely have lower than normal wellbeing, there is a clear downside to issuing national terrorist alerts.

Special Survey Topic

Sleep

1. There appears to be a relationship between average hours of sleep and PWI, such that PWI increases with increasing hours of sleep. This is true until 10 hours of sleep, at which point PWI falls below the normal range. Not surprisingly, PWI is most affected for people who sleep 4 hours or less in a 24 hour period.

2. Under challenging sleep conditions, female wellbeing is less affected than it is for males. Whereas the wellbeing of females who sleep 4 hours or less lies below the normal range, for males this amount of sleep is linked to a further 10 point detriment, taking their wellbeing down to very low levels indeed. While this same pattern is evident for people who sleep 10+ hours, the gender difference is not significant.

3. In general, the longer it takes to fall asleep, the lower a person’s wellbeing. This decrement is apparent in people who take 11 minutes or more to fall asleep, but they remain within the normal range. People who take an hour or longer to fall asleep (20.28% of the sample) have a PWI that is below the normal range, and significantly lower than all other groups.

4. The PWI scores are highest for people who sleep through the night without waking (12.4%) or who wake just once (34.0%). People who wake more often have lower wellbeing, however, they remain within the normal range until they wake up five times or more in a night (6.2% of the sample). The wellbeing of people who wake up five times or more in a night is significantly lower than those who only wake up once or not at all.

5. Of those people who remember their dreams, those who report bad dreams or nightmares have lower wellbeing, but it just remains in the normal range. This difference is significant for every domain, but largest for Community and Future Security.

6. Most people who remember their bad dreams have them only rarely (44.44%), and their wellbeing is unaffected. However, people who report that they have bad dreams once a week (9.04%) or more often (5.04%) have wellbeing below the normal range.

Demographic Influences

Household Income:

1. The PWI for all income groups is within its income-specific normal range.

2. Personal wellbeing consistently and significantly rises with income up to $101-150K. The 7.0 point gain over this range is associated with a change in wellbeing from below to well above the normative range. The further rise in SWB becomes non-significant at $101-150K but resumes at $251-500K.

3. The cost of increasing happiness increases with income. One additional percentage point of wellbeing for someone with a household income of $101-150K is an additional $111,000.

4. Income has the largest effect on the domain of satisfaction with Standard of Living. It has no systematic influence on satisfaction with Community Connection.
5. The personal wellbeing of people aged 26-55 years is highly sensitive to low income.
6. Between the ages of 36-55 years, low income is associated with lower wellbeing for males than for females.
7. (a) Household incomes under $30,000 combined with the presence of children, on average, takes wellbeing below the normal range.
   (b) For people who also have a partner, wellbeing enters the normal range at $31-$60K. The wellbeing of sole parents enters the normal range only at an income of $61,000-$100,000.
8. Males who live alone have lower wellbeing than females who live alone. Moreover, whereas females enter the normal range at an income of $15-30K, males require three times as much ($100-150K).
9. The negative effects of separation and divorce on wellbeing can be reduced by a decent household income. However, both groups remain below the normal range even at a household income of $101-150K.
10. Married males and females have a very similar level of wellbeing. However, for the people who have divorced, those with the lowest income both genders have equivalently depressed wellbeing. Then, the rising income advantages females far more than males. At $101-150K females have entered the normal range while males have not.
11. The wellbeing of people engaged in Fulltime home/family care is highly income dependent, from below normal at less than $30,000 to above normal at more than $60,000.
   People who are unemployed enter the normal range at $101-150K.
12. Unemployment has a stronger detrimental effect on the wellbeing of unemployed males than females at all levels of household income.

   Happiness is bought at discount by people who are poor. For people with a household income <$15,000, an additional $6,000 buys an extra point of wellbeing. At a household income of $151-250K it requires an additional $333,333. However, due to ceiling effects, whether this increase can actually be achieved is uncertain.

Gender:
1. The male Personal Wellbeing Index remains within its normal range, as do most domains. The exceptions are Health, which lies below its range, and Achieving which is at the bottom. This is the second consecutive survey to show this pattern of low scores in these two domains.
   The female Personal Wellbeing Index and all domains fall within their normal ranges. As with males, Health is low.
2. Using the combined data, the 1.0 point higher PWI for females is caused by their higher values on the two interpersonal domains of relationships and community.
   Since interpersonal relationships are a major key to resilience, these differences may go some way to explaining why females are more resilient than males in such situations as unemployment and living alone.
3. The 1.0 point higher PWI for females is survey-dependent. There is no systemic gender difference over the five year period Survey 14 to Survey 22. However, the higher scores for females has again been evident in the past 5 surveys.
4. Male health satisfaction remains low. Female satisfaction has not statistically changed over these surveys.
5. Relationships shows a significant interaction between gender and survey. It seems possible that the sense of threat over surveys 2 (September 2001) to 12 (August 2004) increased the level of relationship satisfaction for both genders, but more so for females than males. Over the period of Surveys 13 (May 2005) to 22 (September 2009) the satisfaction of females returned to Survey 1 baseline, while the satisfaction of males shows a gradual rise. In Survey 23 female satisfaction showed a sudden rise which has been maintained.

6. The only personal domain to be mainly lower for females is safety. This dropped lower following September 11 for females but not for males. These differences were maintained up to October 2007 (S18). Since then the gender differences have been unpredictable.

7. Both genders showed rising satisfaction over the course of these surveys up to S22, but since then both have fallen. Males tend to score higher than females showing that the Personal Wellbeing Index difference is not due to gender response bias.

8. Satisfaction with the Economic Situation in Australia recovered to its pre-recession levels in September 2009 (S22), but it has now returned to low levels for both genders.

9. Satisfaction with the natural environment has been maintained at unprecedented levels for both genders. This may be a consequence of both climate-change denial and the breaking of the drought in most of Australia.

10. Gender differences in personal wellbeing only emerge at 26-35 years of age. They then progressively decrease up to 56-65 years and then increase once again. The reason for this is not understood.

11. The gender difference in satisfaction with relationships is most pronounced in the youngest groups. Males have lower satisfaction than females.

12. Males who live alone have lower personal wellbeing than females.

13. Female wellbeing does not significantly differ between full-time employed and full-time home care. Male wellbeing is higher for full-time employment than full-time home care.

14. Since Survey 9, the wellbeing of male fulltime workers has differed unpredictably on three occasions.

15. Unemployment has a more devastating effect on the wellbeing of males than on females.

16. In terms of the lowest margin of the normal distribution, the risk of depression (scores <50) is highest in males aged 36-55 years and females aged 46-55 years.

While females had higher wellbeing from Survey 1 to 13, there was no systemic gender difference over the five year period Survey 14 to Survey 22. However, the early higher scores for females has again been evident in the past 4 surveys.

Age:

1. All PWI values within Survey 26 lie within their age-specific normal ranges and very close to the values for the previous Survey 25.

2. Satisfaction with Safety is currently high for all ages.

3. (a) Satisfaction with Environment remains high and may be a consequence of wide-spread rains across the continent together with the climate-change sceptics gaining media dominance.

   (b) Satisfaction with Government falls with age and is below their normal range for all groups older than 36 years

4. This shows the contrast between the youngest and oldest groups. During most of the Howard-era, the oldest group showed higher satisfaction with Government, but this has now dissipated, with the S26 result being the lowest on record. The youngest group, in contrast, showed lower
satisfaction during the Howard-era, and generally higher under Labor, but this has now fallen to its second lowest level.

5. The U-shaped pattern across age groups, that is characteristic of the Personal Wellbeing Index, is shared by only two of its domains (Standard and Future Security). It is interesting that standard is highest at the age when household income is lowest. This exemplifies the difference between objective and subjective data. Elderly people adapt to their generally modest, but stable, financially circumstances.

6. After the PWI being significantly different between the youngest and oldest groups over Surveys 2-16, the youngest group has sustained its rise to be statistically no different from the oldest group. The reason for this change is not known.

7.1 The reason for the overall dip in middle-age is the low wellbeing of the people who do not have a partner. The people living with their partner show no such age-related change.

7.2 In their middle age, people who do not live with a partner are at risk of low wellbeing. However, these disadvantages disappear after 66 years of age.

7.3 Living with your children as a sole parent from 66 years and older is good for your wellbeing.

8. The average wellbeing of married people varies by 2.6 points across the age-range. The wellbeing of people who are divorced varies by 5.7 points, is lowest at 36-45, and never enters the age-specific normal range.

9. Unemployment has a devastating effect on personal wellbeing beyond 25 years of age.

   Over the past few years, the youngest 18-25 year group have shown a substantial and maintained rise in wellbeing. The reason for this is uncertain.

Household Composition – who people live with:

1. The Personal Wellbeing Index of all groups lies within their specific normal ranges. Among the household composition groups, the highest levels of personal wellbeing are achieved by people living with their partner. The lowest personal wellbeing is found among sole parents. Their low wellbeing puts many of them at risk of depression.

2. People who live alone have a major loss of wellbeing in terms of relationships, health and achieving. The relative lack of buffering caused by poor relationship availability makes the person more vulnerable to life stressors. Thus, minor health issues may seem important due to the lack of a close friend with whom such matters can be discussed.

3. For a couple living together, the presence of children reduces two domains (Standard of Living, Relationships) and enhances one domain (Health). The net result is little difference between these groups in the overall Personal Wellbeing Index. However, since money and relationships are the most important domains for overall wellbeing, the relative deficit in these domains for partners with children may make them less resilient to additional stress, particularly if this is caused by poor health.

4. The advantage of living only with a partner is most obvious in the domain of relationships. Here the two groups are separated by 18.6 points. Couples also have much higher satisfaction with their Standard of Living and Future Security.

   It is notable that the most affected domain for sole parents is relationships rather than Standard of Living, even though most are on very low incomes (see Chapter 3). This is consistent with the view that the most important factor missing from these people’s lives is an intimate relationship with another adult.

5. For people who live alone, those who are married, and widows have above normal range Personal Wellbeing Index.
6. While the Never married, Divorced, and Separated show much the same trajectory with increasing income, widows are very different. Even at the lowest income their wellbeing falls within the normal range. This is mainly due to their older age.

The fact that the Never Married and the other two groups who were previously married (divorced/separated) do not differ indicates the dominating influence of income on their wellbeing. In other words, the commonly reported finding that people who have never married have low wellbeing is primarily a function of their low household income.

It is interesting to note that the divorced and separated groups remain well below the normal range even at $101-150K

7. Being a sole parent is generally harmful to adult wellbeing. A major factor is low household income however it is notable that the divorced single parents do not enter the normal range even at an income of $101-150K

Widows do better than the other three non partnered groups, probably because they are older and are living with adult children.

Sole parents who remain married tend to do better than other sole parents. These people may retain the emotional security of marriage, and even perhaps some instrumental support, even though they regard themselves as sole parents. This group of sole parents constitute 24.8% of all sole parents

8. One key to wellbeing for people who are unemployed is to live with a partner. The presence of children diminishes wellbeing to some extent, but only among low income couples

9. For Sole Parents, part-time work is associated with only marginally higher wellbeing than part-time volunteering. Both groups enter the normal range at $61-100K.

Children, or other dependent family members, drain the financial and emotional resources of their supporting adults. When the family resources are adequate, dependents have little influence on parental wellbeing. When resources are inadequate children place the wellbeing of co-habiting adults at risk.

Marital Status:

1. Most values for the Personal Wellbeing Index in Survey 26 lie within their Marital-status Specific normal ranges. The exception is de facto which lies 0.3 points below. The domain-level analysis shows all except community lie low within their ranges, with health and relationships lying below. No other domain values for any of the other marital status groups lie below their normal ranges.

2. Of all the marital status groups, satisfaction with Government is lowest for the Widows, and has been for the last two surveys.

3. The most advantaged group are Married, having a level of wellbeing that is higher than that of all other groups and 2.4 points above Defacto. The reason for this high wellbeing may be that they are older, wealthier, and that unhappy married people have separated from one another.

Widows have an average level of wellbeing that lies at the top of the normal range. This is despite low income for this group.

People who have never married have a level of personal wellbeing that lies between people who remain married and those who have separated or divorced. However, this is age dependent and is only evidenced by people aged between 26-65 years. Younger and older people who have never married have normal levels of wellbeing. See Chapter 5 for a full discussion.

4. Widows have relatively low health satisfaction. This is probably due to the burden of accumulated medical condition, that yield pain, such as arthritis.
Despite this, their overall wellbeing lies at the top of the normal range. This is due to the compensating effect of high satisfaction in other domains.

5. The fact of full-time employment is not, of itself, able to bring all marital status groups into the normal range. The values for Survey 26 for widows are well below the combined surveys.

6. The negative effect of unemployment on wellbeing is partially buffered through marriage. However, the combination of separation/divorce and unemployment is devastating, yielding one of our lowest group mean scores for personal wellbeing (58.6).

7. Marital status x F/T family care shows the largest range of personal wellbeing (15.9 points) of any marital status comparison. The two groups with partners and widows lie within the normal range. All other non-partner groups are very low indeed, with values that indicate a high probability of depression.

8. Across all groups, part-time volunteers have marginally higher wellbeing than the total comparison group. The largest effect (+4.8 points) is for people who have separated, which is almost sufficient to take them into the normal range. This may represent a novelty effect if more people in this group have recently adopted volunteering due to a recent separation. It is notable that the relative advantage is much reduced for people who have divorced (+2.2 points) and all other groups.

9. For people who are divorced and Fulltime Employed, income has little impact. Even with an income of $101-150K their Personal Wellbeing Index lies only marginally within the normal range. This is interesting since it indicates that above-average household income does not necessarily ensure high wellbeing. However, if these people also have dependents and are single parents, then maybe they need even more income to meet their resource needs.

10. Work status is a more powerful influence on SWB than is household income. Two work-status groups do show a substantial rise with income as people who are unemployed, SWB rises by 14.9 points from <$15K to $101-150. Full-time students show an 8.1 point gain and employed a 7.8 point gain over this same income range.

► The presence of a partner acts as a buffer against negative life experiences. Through this means partners strengthen one another’s personal wellbeing.

Work Status:

1. All group mean scores in Survey 26 are within their own normal range. The normal range for volunteers is so large because each survey only picks up <10 of these people, so the mean scores from each survey are unreliable and show high variation.

2. All values for the PWI and domains are within their full-time employed, specific normal range. Three domains are very low as Health (also low in Surveys 23-25), Achieving and Future Security.

3. The profile of Unemployed for Survey 26, matched against their own normative range, shows the PWI and domains to be generally high.

4. Relative to their own normal range, the full-time retired are within their normal range with the stark exception of Government (-3.8 points).

5. The personal wellbeing of most work-status groups falls in the generic normal range. People who are full-time retired lie above the normal range while people who are unemployed fall below.

6. Even though full-time employed have a level of wellbeing at the top of the generic normal range, both domains that concern associations with other people (Relationships and Community) are low.
7. Full-time retired have personal wellbeing above the generic normal range even though they have lower than normal health satisfaction. This emphasises that measures of subjective health are invalid as measures of overall wellbeing.

8. Full-time students have below-normal satisfaction in both domains that indicate connection to other people (relationships and community). This likely makes students more vulnerable to the effects challenging events. On such occasions, inter-personal relationships will provide a weak buffer.

9. People who are unemployed have lower than normal wellbeing for all domains except safety.

10. Engaging in part-time volunteer work has a marginal relationship with higher wellbeing for people who are unemployed. It does not bring their wellbeing into the normal range.

11. Of those people full-time employed, the 10.0% who are looking for work have lower than normal wellbeing. This is most particularly evident in the domain of Achieving. This domain pattern may be diagnostic of employees who are functioning poorly in their current employment.

12. Whether people who are unemployed are looking for work or not makes no significant difference to their low personal wellbeing. On a domain basis, people not looking for work have higher satisfaction with Achieving and Future Security.

- The low levels of wellbeing associated with unemployment are not significantly ameliorated by either active job hunting or volunteer work.

Life Events:

1. On average, about half of the sample consider that a recent life event, that has happened to them, has made them feel happier or sadder than normal.

2. Immediately following September 11 (S2), prior to the October 07 election (S18), and at Survey 25, a higher than normal proportion of both males and females reported the recent experience of a recent negative personal event. The coincidence of these rises for both genders makes it likely there is some underlying cause, rather than these being random changes.

3. Females are more likely to recall the experience of a sad than a happy event in their lives.

4. Young adults are more likely to report the experience of happy than sad events in their lives. This changes at 36-45 years. At this age and older, people are more likely to report the occurrence of a sad event.

5. As income increases, the frequency of people reporting sad events decreases, and the frequency for happy events increases up to an income of about $251-500K.

6. There is a significant decrease in the experienced intensity of happy events at the highest level of income. This is consistent with expectation from Adaptation Level Theory. Rich people are buying more positive events but experience less relative happiness from each experience.

7. Females experience the intensity of both happy and sad events more strongly than males. This represents a pattern of enhanced emotional responsiveness for females.

8. An investigation into changes in Personal Wellbeing Index across the days of the week detected no systematic effects. This is true irrespective of work-status.

- Females experience the intensity of both happy and sad events more strongly than males. This represents a pattern of enhanced emotional responsiveness for females.
1. Introduction

The Australian Unity Wellbeing Index is a barometer of Australians’ satisfaction with their lives and life in Australia. Unlike most official indicators of quality of life and wellbeing, it is subjective – it measures how Australians feel about life, and incorporates both personal and national perspectives. The Index shows how various aspects of life – both personal and national – affects our sense of wellbeing.

The Index is an alternative measure of population wellbeing to such economic indicators as Gross Domestic Product and other objective indicators such as population health, literacy and crime statistics. The Australian Unity Wellbeing Index measures quality of life as experienced by the average Australian.

The Index yields two major numbers. The Personal Wellbeing Index is the average level of satisfaction across seven aspects of personal life – health, personal relationships, safety, standard of living, achieving, community connectedness, and future security. The National Wellbeing Index is the average satisfaction score across six aspects of national life – the economy, the environment, social conditions, governance, business, and national security.

A considerable body of research has demonstrated that most people are satisfied with their own life. In Western nations, the average value for population samples is about 75 percentage points of satisfaction. That is, on a standardised scale from 0 (completely dissatisfied) to 100 (completely satisfied) the average person rates their level of life satisfaction as 75. The normal range is from 70 points to 80 points. We find the Personal Wellbeing Index to always fall within this range. However, levels of satisfaction with aspects of national life are normally lower, falling in the range 55 to 65 points in Australia.

The first index survey, of 2,000 adults from all parts of Australia, was conducted in April 2001. At the present time a total of 25 surveys have been conducted. The data for this most recent Survey 26 were collected in April 2011. Copies of earlier reports can be obtained either from the Australian Unity website (www.australianunity.com.au) or from the Australian Centre on Quality of Life website at Deakin University (http://www.deakin.edu.au/research/acqol/auwbi/survey-reports/index.php). This report concerns the most recent survey.

The same core index questions, forming the Personal and the National Wellbeing Index, are asked within each survey. In addition we ask two highly general questions. One concerns ‘Satisfaction with Life as a Whole’. This abstract, personal measure of wellbeing has a very long history within the survey literature and its measurement allows a direct comparison with such data. The second is intended as an analogous ‘national’ item. It concerns ‘Satisfaction with Life in Australia’.

Each survey also includes demographic questions and a small number of additional items that change from one survey to the next. These explore specific issues of interest, either personal or national. Such data have several purposes. They allow validation of the Index, the creation of new population sub-groups, and permit further exploration of the wellbeing construct.

1.1. Understanding Personal Wellbeing

The major measurement instrument used in our surveys is the Personal Wellbeing Index (PWI). This is designed as the first level deconstruction of ‘Life as a Whole’ and the manual can be found at http://www.deakin.edu.au/research/acqol/instruments/wellbeing-index/. It comprises seven questions relating to satisfaction with life domains, such as ‘health’ and ‘standard of living’. Each question is answered on a 0-10 scale of satisfaction. The scores are then combined across the seven domains to yield an overall Index score, which is adjusted to have a range of 0-100.
On a population basis the scores that we derive from this PWI are quite remarkably stable. Appendix AI presents these values, each derived from a geographically representative sample of 2,000 randomly selected adults across Australia. As can be seen, these values range from 73.7 to 76.7, a fluctuation of only 3.0 points. How can such stability be achieved?

We hypothesize that personal wellbeing is not simply free to vary over the theoretical 0-100 range. Rather, it is held fairly constant for each individual in a manner analogous to blood pressure or body temperature. This implies an active management system for personal wellbeing that has the task of maintaining wellbeing, on average, at about 75 points. We call this process Subjective Wellbeing Homeostasis.

The proper functioning of this homeostatic system is essential to life. At normal levels of wellbeing, which for group average scores lies in the range 73.7 to 76.7 points, people feel good about themselves, are well motivated to conduct their lives, and have a strong sense of optimism. When this homeostatic system fails, however, these essential qualities are severely compromised, and people are at risk of depression. This can come about through such circumstances as exposure to chronic stress, chronic pain, failed personal relationships, etc.

Fortunately for us, the homeostatic system is remarkably robust. Many people live in difficult personal circumstances which may involve low income or medical problems, and yet manage to maintain normal levels of wellbeing. This is why the Index is so stable when averaged across the population. But as with any human attribute, some homeostatic systems are more robust than others. Or, put around the other way, some people have fragile systems which are prone to failure.

Homeostatic fragility, in these terms, can be caused by two different influences. The first of these is genetic. Some people have a constitutional weakness in their ability to maintain wellbeing within the normal range. The second influence is the experience of life. Here, as has been mentioned, some experiences such as chronic stress can challenge homeostasis. Other influences, such as intimate personal relationships, can strengthen homeostasis.

In summary, personal wellbeing is under active management and most people are able to maintain normal levels of wellbeing even when challenged by negative life experiences. A minority of people, however, have weaker homeostatic systems as a result of either constitutional or experiential influences. These people are vulnerable to their environment and may evidence homeostatic failure. An important feature of our survey analyses is the identification of sub-groups which contain a larger than normal proportion of people in homeostatic failure. These groups need additional resources in order to regain homeostatic control and normal levels of wellbeing.

The influence of homeostasis

The purpose of SWB homeostasis is to maintain the wellbeing of each individual person close to their genetically-determined set-point, which averages 75 points. However, of course, wellbeing fluctuates around its set-point. These fluctuations can be very large if homeostasis is defeated in the presence of an unusually good or bad experience. While such experiences are unusual, when they do occur, people will normally return quite quickly to a level of wellbeing that approximates their set-point once again.

For these reasons, the wellbeing of individuals is normally highly predictable. It is lying within a restricted range around the set-point, called the set-point-range. The homeostatic processes attempt to hold each individual’s wellbeing within this range. Therefore, since there is a normal distribution of set-points around 75, probably between about 60 and 90 points, there is an associated distribution of overlapping set-point-ranges. This explains why the population mean is so predictable. The distribution of scores conforms to the distribution of set-point ranges, and these are genetically determined.
Why, then, does the mean of the survey samples vary from one time to the next? The answer, we propose, is that events which are experienced by the whole population will exert a systematic influence on the wellbeing of the individuals making up the whole sample. These influences will act to cause the wellbeing of each affected individual to be more likely to lie either above or below its set-point. Thus, a national event, such as Olympic success, will exert a systematic influence, such that each person’s wellbeing will be more likely to be found above their set-point than below. In other words, a meaningful national event will systematically change the probability of measured wellbeing being dominated by scores that lie within the upper or lower halves of the set-point-ranges. Moreover, the stronger and more universal the experience, the more likely is each individual level of wellbeing to be found above or below its set-point, and the more the sample average will deviate from 75 points.

So, how much variation in survey mean scores is possible? There are two answers to this. The first involves a catastrophic experience, such as might occur in a sudden financial depression, such as might have happened if the 2007-2009 economic down-turn had continued in Australia. In this event, the average wellbeing of the sample would possibly sink below any approximation of the normal range as a high proportion of the population suffer homeostatic defeat. This, however, will be a most unusual situation and one not yet experienced in the history of these surveys.

The second form of variation in survey mean scores will reflect systematic shifts in the probability of wellbeing being found above or below each set-point, but within each set-point range, and under homeostatic control. The extent of such variation depends on a number of factors as:

(a) The strength and ubiquity of the experience.
(b) The width of the set-point-range. While this remains somewhat speculative, a ball-park figure seems to be about 12 points.
(c) The strength of homeostasis. The influence of homeostasis is to control small fluctuations around the set-point. However, as wellbeing strays further and further from the set-point, homeostatic forces are increasingly unleashed to reign it back. We propose that these controlling forces increase in intensity with distance from the set-point until they lose control and SWB goes into free-rise or free-fall under the control of the experience.

So, given all these suppositions, how much movement is possible while most people’s wellbeing remains under homeostatic control? The answer is uncertain but certainly much less than the full six points on either side of the set-point defining the set-point range. The boundaries of this range demarcate homeostatic failure and so wellbeing would normally be maintained much closer to the set-point.

The total variation of population mean scores to date is 3.1 percentage points, or about 1.5 points on either side of the average set-point. This represents just 25% of the set-point-range. What this indicates is that the mood of the nation normally fluctuates within only a very tight band of values. What is not known is the extent that these small movements indicate anything important about the frequency of psychopathology or changed behaviour at a national level.

**Causal influences**

It is not possible from these cross-sectional data to determine causation of the changes in personal wellbeing between surveys. However, a number of ideas concerning possible sources of influence can be advanced. These are acknowledged in the caption to each figure. It is at least notable that the major changes in the level of the PWI have been associated with major national events. These trends are shown in Figure 2.1.
1.2. **The Survey Methodology**

A geographically representative national sample of people aged 18 years or over and fluent in English, was surveyed by telephone over the period 8th to 22nd September. Interviewers asked to speak to the person in the house who had the most recent birthday and was at least 18 years old. An even geographic and gender split was maintained at all times through the survey. A total of 6,808 calls connected with an eligible respondent and 2,000 agreed to complete the survey. This gives an effective response rate ( completes/(refusals and completes) of 29%. 

The average period of contact with each respondent is nine minutes. All responses are made on a 0 to 10 scale. The satisfaction responses are anchored by 0 (no satisfaction at all) and 10 (completely satisfied). Initial data screening was completed before data analysis.

1.3. **Presentation of results and type of analysis**

In the presentation of results to follow, the trends that are described in the text are all statistically significant at $p<.05$. More detailed analyses are presented as Appendices. These are arranged in sections that correspond numerically with sections in the main report. All Appendix Tables have the designation ‘A’ in addition to their numerical identifier (e.g. Table A9.2).

All satisfaction values are expressed as the strength of satisfaction on a scale that ranges from 0 to 100 percentage points.

In situations where homogeneity of variance assumptions has been violated, Dunnett's T3 Post-Hoc Test has been used. In the case of t-tests we have used the SPSS option for significance when equality of variance cannot be assumed.

The raw data for this and all previous reports are available from our website: http://www.deakin.edu.au/research/acqol/auwbi/survey-reports/index.php

1.4. **Internal Report Organisation**

(a) The new results from this survey are summarised in Table 2.1 (see Chapter 2).

(b) Most Tables are presented as appendices in a separate volume.

(c) Chapter 2 presents a comparative analysis of Personal and National Wellbeing with previous surveys.

(d) Chapters 3-8 present the major groupings of independent (demographic) variables. Within each Chapter, the first section concerns the analysis of all dependent variables listed in Table 2.1. This is followed by analyses of the demographic variables in combination with the Personal Wellbeing Index and other measures.

(e) Chapter 9 concerns Life Events.

(f) Chapter 10 concerns the special topic for this survey which is: Sleep and dreams.

(g) Each Chapter contains a dot-point summary.
### 1.5. Glossary of Terms

**Normal Ranges:** These set the boundaries within which ‘normal’ values will fall. Each range is generated by computing the distance of two standard-deviations on either side of the mean. There are various types of range as:

(a) **Generic normal range for group means:** These are calculated using survey mean scores as data. For example, the generic Personal Wellbeing Index normal range for groups has been calculated using each overall survey Personal Wellbeing Index mean as data, so N for this calculation is the number of surveys.

This is the most commonly employed source of reference in the report. The range reflects the extent of variability between surveys and the 95% probability that any future survey mean will fall within this range. Any group mean score can be compared against this range to indicate the extent of its ‘normality’.

(b) **Specific normal ranges for groups:** These are calculated using the mean scores of specific groups within surveys as data (e.g. people who are retired).

(c) **Generic normal ranges for individuals:** These are calculated using the scores from individuals as data. For example, the generic Personal Wellbeing Index normal range for individuals has been calculated using the Personal Wellbeing Index scores from all of the people involved in the surveys. So N for this calculation is the number of people within all of the combined surveys.

This range reflects the variability between people and the 95% probability that the score from any single person will fall within this range.

(d) **Specific normal ranges for individuals:** These are calculated using the scores from individuals within specific groups as data. Thus, there is a specific normal range for the individuals who are full-time retired, and there is a 95% probability that the score from a retired person will fall within this range.

These normal ranges are found in the appendices at the back of their respective chapters.

**Homeostatically Protected Mood (HPMood):** A genetically-derived individual difference in mood comprising the three affects of Content, Happy and Alert. It accounts for the majority of variance in Subjective Wellbeing.

**Personal Wellbeing Index (PWI):** The Personal Wellbeing Index comprises eight domains rated on satisfaction. All results from the Index are standardized into a scale from 0 to 100.

**Subjective Wellbeing (SWB):** The output from the Personal Wellbeing Index. It measures how satisfied people are with their lives.

**Wellbeing:** An abbreviated form of subjective wellbeing as measured by the Personal Wellbeing Index.
## 2. Personal and National Wellbeing Over Time

### 2.1. A Comparison Between Survey 26 and Survey 27

Table 2.1: Means and standard deviations of the 26th and 27th survey

<table>
<thead>
<tr>
<th>Question</th>
<th>S26 Mean</th>
<th>S26 SD</th>
<th>S27 Mean</th>
<th>S27 SD</th>
<th>Point change from Nov 2011</th>
<th>Significance of change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PERSONAL WELLBEING INDEX</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal domains</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Health</td>
<td>73.07</td>
<td>19.80</td>
<td>73.42</td>
<td>19.30</td>
<td>.352</td>
<td>.572</td>
</tr>
<tr>
<td>3. Achieving</td>
<td>72.60</td>
<td>19.36</td>
<td>72.78</td>
<td>18.54</td>
<td>.183</td>
<td>.763</td>
</tr>
<tr>
<td>4. Personal relationships</td>
<td>79.86</td>
<td>20.81</td>
<td>79.40</td>
<td>20.56</td>
<td>-.462</td>
<td>.485</td>
</tr>
<tr>
<td>5. How safe you feel</td>
<td>80.60</td>
<td>16.91</td>
<td>80.38</td>
<td>17.78</td>
<td>-.211</td>
<td>.702</td>
</tr>
<tr>
<td>6. Community connect</td>
<td>71.77</td>
<td>19.69</td>
<td>71.90</td>
<td>19.18</td>
<td>.129</td>
<td>.835</td>
</tr>
<tr>
<td>7. Future security</td>
<td>70.97</td>
<td>20.49</td>
<td>71.24</td>
<td>19.72</td>
<td>.271</td>
<td>.675</td>
</tr>
<tr>
<td>8. Spiritual fulfilment</td>
<td>78.21</td>
<td>19.22</td>
<td>78.37</td>
<td>19.20</td>
<td>.161</td>
<td>.844</td>
</tr>
<tr>
<td>Life as a whole</td>
<td>77.02</td>
<td>17.41</td>
<td>77.13</td>
<td>16.38</td>
<td>.113</td>
<td>.834</td>
</tr>
<tr>
<td><strong>NATIONAL WELLBEING INDEX</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National domains</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Economic situation</td>
<td>60.03</td>
<td>20.55</td>
<td>60.90</td>
<td>20.43</td>
<td>.869</td>
<td>.187</td>
</tr>
<tr>
<td>2. Environment</td>
<td>64.01</td>
<td>17.36</td>
<td>63.92</td>
<td>17.38</td>
<td>-.099</td>
<td>.859</td>
</tr>
<tr>
<td>3. Social conditions</td>
<td>64.72</td>
<td>17.88</td>
<td>63.88</td>
<td>17.76</td>
<td>-.837</td>
<td>.144</td>
</tr>
<tr>
<td>4. Government</td>
<td>44.48</td>
<td>25.37</td>
<td>45.95</td>
<td>24.65</td>
<td>1.470</td>
<td>.066</td>
</tr>
<tr>
<td>5. Business</td>
<td>60.17</td>
<td>16.99</td>
<td>59.94</td>
<td>27.43</td>
<td>-.237</td>
<td>.749</td>
</tr>
<tr>
<td>6. National security</td>
<td>68.37</td>
<td>19.63</td>
<td>68.28</td>
<td>19.64</td>
<td>-.097</td>
<td>.878</td>
</tr>
<tr>
<td>Life in Australia</td>
<td>81.44</td>
<td>18.52</td>
<td>82.08</td>
<td>17.45</td>
<td>.632</td>
<td>.271</td>
</tr>
<tr>
<td>Terror Attack likely (%)</td>
<td>45.8%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood of attack</td>
<td>60.82</td>
<td>20.16</td>
<td>61.38</td>
<td>18.34</td>
<td>.568</td>
<td>.551</td>
</tr>
</tbody>
</table>

The Major Indices

These results are found in Table 2.1 and discussed in the sections below. Past comparative results between surveys are found in Tables A2.1.2 and A2.1.3. None of the above indices have changed significantly since the previous survey.

Note: The shaded blue area in the subsequent figures shows the generic normal range for survey mean scores.
2.2. Personal Wellbeing Index

Figure 2.1: Personal Wellbeing Index

**Key:**
- **a** = September 11
- **b** = Bali Bombing
- **c** = Pre-Iraq War
- **d** = Hussein Deposed
- **e** = Athens Olympics
- **f** = Asian Tsunami
- **g** = Second Bali Bombing
- **h** = New IR Laws
- **i** = Labor Government Elected
- **j** = Stock market collapse
- **k** = Fires and floods
- **l** = Stock market recovery
- **m** = Labor government re-elected
- **n** = Qld/Vic floods

**Special Surveys:**
18.1: Three months after the change in Government and following several consecutive interest-rate rises.
20.1: Following the Victoria Bush Fires in which 173 people died.

**Note:** In this and subsequent figures, the shaded (blue) area shows the generic normal range of survey means scores for the measure in question (Table A2.22). These blue areas represent two standard deviations around the mean using survey mean scores as data.
The Personal Wellbeing Index has gradually decreased during the 24 months since Survey 22 in September 2009. Its current value of 75.4 remains marginally higher than the survey average of 75 points.

The first occasion the PWI reached a very high value coincided with the Athens Olympics in August 2004. This was an unusual survey since data were collected over the Olympic period, meaning that the national elation at the amazing success of our athletes at these games, no doubt added to the value of the Personal Wellbeing Index. The high levels at Survey 22 probably reflected the sense of relief that Australia escaped the recession and that people’s savings and superannuation funds remain secure, continued low unemployment, low levels of inflation, and the breaking of the drought. There may also be an element of positive downward comparison against countries that have not been so lucky.

Over all the surveys, it is notable that the Personal Wellbeing Index is so stable. The survey mean scores have varied by just 3.1 points. Moreover, the change from one survey to the next has been 1 point or less except for 4 of the 24 adjacent surveys. These occasions have been S1-S2 (September 11), S11-S12/S12-S13 (Sydney Olympics), S14–S15 (Second Bali bombing), and S20-S20.1 (Victorian Bush Fires). The Personal Wellbeing Index is currently 1.8 points above its level at Survey 1, which is significant.

**Historical:** The most obvious trend for the Personal Wellbeing Index is that it rose following September 11 and remained generally higher. Of the 26 surveys conducted since Survey 1, 21 (80.8%) have been significantly higher than this initial value.

It seems that both positive and negative events have acted to raise the wellbeing of the Australian population. In terms of the negative events, it appears that the presence of external threat causes the population wellbeing to rise. This has occurred first followed September 11 and reached its maximum about 6 months after the event. The second occurred immediately following the Bali Bombing and ran into the build-up in tension surrounding the Iraq war. It is possible that the Second Bali Bombing, which substantially increased the perceived probability of a terrorist attack in Australia (see section 2.8) prevented the Personal Wellbeing Index continuing its fall back to the baseline value recorded at that time. In Survey 12, the positive influence of Olympic success also caused personal wellbeing to rise, to an even greater extent than either of the terrorist or war events, as did also the coincidence of economic survival and breaking drought in Survey 22.

In terms of other national influences, Australia was remarkably politically stable over the first six years of these surveys, but quite unstable since then. These changes are described under ‘Satisfaction with Government’.
Section 2 Personal and National Wellbeing Over Time

Figure 2.2: National Wellbeing Index

<table>
<thead>
<tr>
<th>Survey Date</th>
<th>Major events preceding survey</th>
<th>Strength of satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 Apr 2001</td>
<td>a = September 11</td>
<td>55</td>
</tr>
<tr>
<td>S2 Sept 2001</td>
<td>b = Bali Bombing</td>
<td>56</td>
</tr>
<tr>
<td>S3 Mar 2002</td>
<td>c = Pre-Iraq War</td>
<td>57</td>
</tr>
<tr>
<td>S4 Aug 2002</td>
<td>d = Hussein Deposed</td>
<td>58</td>
</tr>
<tr>
<td>S5 Nov 2002</td>
<td>e = Athens Olympics</td>
<td>59</td>
</tr>
<tr>
<td>S6 Mar 2003</td>
<td>f = Asian Tsunami</td>
<td>60</td>
</tr>
<tr>
<td>S7 Jul 2003</td>
<td>g = Second Bali Bombing</td>
<td>61</td>
</tr>
<tr>
<td>S8 Aug 2003</td>
<td>h = New IR Laws</td>
<td>62</td>
</tr>
<tr>
<td>S9 Nov 2003</td>
<td>i = Labor Government Elected</td>
<td>63</td>
</tr>
<tr>
<td>S10 Feb 2004</td>
<td>j = Stock market collapse</td>
<td>64</td>
</tr>
<tr>
<td>S11 May 2004</td>
<td>k = Fires and floods</td>
<td>65</td>
</tr>
<tr>
<td>S12 Aug 2004</td>
<td>l = Stock market recovery</td>
<td>55.8</td>
</tr>
<tr>
<td>S13 May 2005</td>
<td>m = Labor government re-elected</td>
<td>55.8</td>
</tr>
<tr>
<td>S14 Oct 2005</td>
<td>n = Qld/Vic floods</td>
<td>55.8</td>
</tr>
<tr>
<td>S15 May 2006</td>
<td></td>
<td>64.3</td>
</tr>
<tr>
<td>S16 Oct 2006</td>
<td></td>
<td>59.1</td>
</tr>
</tbody>
</table>

Key: a = September 11, b = Bali Bombing, c = Pre-Iraq War, d = Hussein Deposed, e = Athens Olympics, f = Asian Tsunami, g = Second Bali Bombing, h = New IR Laws, i = Labor Government Elected, j = Stock market collapse, k = Fires and floods, l = Stock market recovery, m = Labor government re-elected, n = Qld/Vic floods.
The National Wellbeing Index remains now among the lower scores for this index, being 3.7 points below its maximum (64.1 points). It remains 4.6 points higher than it was in Survey 1 (55.8 points).

**Historical:** The National Index, like the Personal Wellbeing Index Figure 2.1 started from a very low initial value in April 2001. The reason for this low value is not known. What is apparent is that the National Wellbeing Index is more volatile than the Personal Index due to the relatively low level of homeostatic control. Its range is 7.9 points from April 2001 (S1: 55.8) to September 2009 (S22: 64.1 points).

**Note:** No test of significance can be run against Survey 1 due to a different composition of the NWI at that time.
2.3. **Personal Wellbeing Domains**

Table 2.1 shows that only the domain of Future Security has changed (decreased) over the last six months since Survey 26 in September 2011.
How satisfied are you with your Standard of Living?

![Chart showing satisfaction with Standard of Living over time with key events and dates.]

**Figure 2.3: Satisfaction with Standard of Living**

- Strength of satisfaction:
  - Maximum = 79.8
  - Current = 78.4
  - Minimum = 74.5

- Key:
  - a = September 11
  - b = Bali Bombing
  - c = Pre-Iraq War
  - d = Hussein Deposed
  - e = Athens Olympics
  - f = Asian Tsunami
  - g = Second Bali Bombing
  - h = New IR Laws
  - i = Labor Government Elected
  - j = Stock market collapse
  - k = Fires and floods
  - l = Stock market recovery
  - m = Labor government re-elected
  - n = Qld/Vic floods

Survey Dates:
- S1 Apr 2001
- S2 Sep 2001
- S3 Mar 2002
- S4 Aug 2002
- S5 Nov 2002
- S6 Mar 2003
- S7 Jun 2003
- S8 Aug 2003
- S9 Nov 2003
- S10 Feb 2004
- S11 May 2004
- S12 Aug 2004
- S13 May 2005
- S14 Oct 2005
- S15 May 2006
- S16 Oct 2006
- S17 Apr 2007
- S18 Oct 2007
- S19 Apr 2008
- S20 Oct 2008
- S21 May 2009
- S22 Sep 2009
- S23 Apr 2010
- S24 Sep 2010
- S25 Apr 2011
- S26 Sept 2011
- S27 April 2012
Satisfaction with standard of living has not significantly changed in the 30 months since Survey 22 and it remains at a very high level (78.4 points) which is in the upper portion of its normal range. The reason for this continued high level seems likely tied to the recovering economy. The range of scores across all surveys is 5.3 points, between April 2001 (S1:74.5) and September 2009 (S22:79.8).

**Historical:** The values for this domain have generally remained significantly higher than they were at Survey 1, with only two (Survey 4 in 2002 and Survey 15 in 2006) being statistically at the same level as this first survey. Thus, 24/26 (92.3%) of the subsequent survey mean scores are higher than Survey 1.

It is interesting to note that the rise in satisfaction with Standard of Living between May 2006 (S15) and October 2007 (S18) occurred despite a succession of 0.25 point rises in interest rates. It is also interesting to note that the rise in wellbeing from April 2008 (Survey 19) commenced in the face of the continuing economic down-turn.

There were probably two reasons for this. One was that the various economic stimulus packages released by the Government provided households with additional discretionary income. The second was that the poor national economic situation had had a serious negative effect on only a minority of the population. The people adversely affected were those who had lost their job, or who were reliant on interest from shares or other investments for their income. But these people were in a great minority. While a majority of people had lost wealth with the downturn, for the most part their investments were intact and so they felt they could just wait for the economy to recover. And, in the meantime, if they still had a job and a mortgage, and if their wage has not diminished, then they were better off financially than maybe they had ever been due to the decrease in interest rates and, so, their mortgage payment.
2.3.2. Health

How satisfied are you with your Health?

Figure 2.4: Satisfaction with Health

<table>
<thead>
<tr>
<th>Major events preceding survey</th>
<th>Survey Date</th>
<th>Key:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a = September 11</td>
<td>S1 Apr 2001</td>
<td>a = September 11</td>
</tr>
<tr>
<td>b = Bali Bombing</td>
<td>S2 Sept 2001</td>
<td>b = Bali Bombing</td>
</tr>
<tr>
<td>c = Pre-Iraq War</td>
<td>S3 Mar 2002</td>
<td>c = Pre-Iraq War</td>
</tr>
<tr>
<td>d = Hussein Deposed</td>
<td>S4 Aug 2002</td>
<td>d = Hussein Deposed</td>
</tr>
<tr>
<td>e = Athens Olympics</td>
<td>S5 Nov 2002</td>
<td>e = Athens Olympics</td>
</tr>
<tr>
<td>f = Asian Tsunami</td>
<td>S6 Mar 2003</td>
<td>f = Asian Tsunami</td>
</tr>
<tr>
<td>g = Second Bali Bombing</td>
<td>S7 Jun 2003</td>
<td>g = Second Bali Bombing</td>
</tr>
<tr>
<td>i = Labor Government Elected</td>
<td>S8 Aug 2003</td>
<td>i = Labor Government Elected</td>
</tr>
<tr>
<td>j = Stock market collapse</td>
<td>S9 Nov 2003</td>
<td>j = Stock market collapse</td>
</tr>
<tr>
<td>k = Fires and floods</td>
<td>S10 Jan 2004</td>
<td>k = Fires and floods</td>
</tr>
<tr>
<td>l = New IR Laws</td>
<td>S11 May 2004</td>
<td>l = New IR Laws</td>
</tr>
<tr>
<td>m = Labor government re-elected</td>
<td>S12 Aug 2004</td>
<td>m = Labor government re-elected</td>
</tr>
<tr>
<td>n = Qld/Vic floods</td>
<td>S13 Dec 2004</td>
<td>n = Qld/Vic floods</td>
</tr>
<tr>
<td></td>
<td>S14 Oct 2005</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S15 May 2006</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S16 Oct 2007</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S17 Apr 2008</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S18 Sep 2008</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S19 Apr 2009</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S20 Sep 2009</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S21 Apr 2010</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S22 Sep 2010</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S23 Apr 2011</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S24 Sep 2011</td>
<td></td>
</tr>
</tbody>
</table>

Strength of satisfaction

Maximum = 76.0
Current = 73.4
Minimum = 73.1

S1 Apr 2001
S2 Sept 2001
S3 Mar 2002
S4 Aug 2002
S5 Nov 2002
S6 Mar 2003
S7 Jun 2003
S8 Aug 2003
S9 Nov 2003
S10 Jan 2004
S11 May 2004
S12 Aug 2004
S13 Dec 2004
S14 Oct 2005
S15 May 2006
S16 Oct 2007
S17 Apr 2008
S18 Sep 2008
S19 Apr 2009
S20 Sep 2009
S21 Apr 2010
S22 Sep 2010
S23 Apr 2011
S24 Sep 2011
S25 Apr 2011
S26 Sept 2011
S27 April 2012

Figure 2.4: Satisfaction with Health
Satisfaction with health really does not change significantly between surveys and so is a good benchmark to indicate that the data set as a whole is reliable. In this survey (73.4 points) it has not statistically changed since Survey 26 but has risen back into its normal range. It remains not different (-0.2 points) from its level at Survey 1 (73.6 points). There is no obvious cause for the low score at Survey 26 and it may represent a random fluctuation.

**Historical:** This domain rose briefly at March 2003 (S6:Pre-Iraq war) but quickly returned to its original level. It is notable that the level of significance at Survey 6 was marginal ($p=0.02$) and so probably reflects a random fluctuation. While the overall ANOVA between surveys is significant ($p = .006$; Table A 2.1), this is the most stable domain, with a total range between surveys of just 2.9 points. It is evident that satisfaction with personal health is little influenced by either world or national events and this stability is confirmation that the changes recorded in the other domains since Survey 1 are valid. The range of scores is between April 2001 (S26:73.1) and March 2003 (S6:Pre-Iraq war:76.0).


2.3.3. Achieving in Life

How satisfied are you with what you are Achieving in Life?

Figure 2.5: Satisfaction with What you are Currently Achieving in Life

Key:
- a = Athens Olympics
- b = Bali Bombing
- c = Pre-Iraq War
- d = Hussein Deposed
- e = September 11
- f = Asian Tsunami
- g = Second Bali Bombing
- h = New IR Laws
- i = Labor Government Elected
- j = Stock market collapse
- k = Fires and floods
- l = Stock market recovery
- m = Labor government re-elected
- n = QLD/NSW floods
- S1 Apr 2001
- S2 Sept 2001
- S3 Mar 2002
- S4 Aug 2002
- S5 Nov 2002
- S6 Mar 2003
- S7 Jun 2003
- S8 Aug 2003
- S9 Nov 2003
- S10 Feb 2004
- S11 May 2004
- S12 Aug 2004
- S13 May 2005
- S14 Oct 2005
- S15 May 2006
- S16 Oct 2006
- S17 April 2007
- S18 Oct 2007
- S18.1 Feb 2008
- S19 Apr 2008
- S20 Oct 2008
- S20.1 Feb 2009
- S21 May 2009
- S22 Sept 2009
- S23 April 2010
- S24 Sept 2010
- S25 Apr 2011
- S26 Sept 2011
- S27 April 2012

Maximum = 75.0
Current = 72.8
Minimum = 72.2
Achieving in life has not significantly changed in the 24 months since Survey 24, and its current level (72.8 points) remains no different than it was at Survey 1 (73.1 points).

Historical: The wording of this item has changed once. From Survey 1 to Survey 10, satisfaction with ‘what you achieve’ barely changed over the surveys. It was marginally higher at Survey 6 (Pre-Iraq war), and over this period the range of scores was 1.8% between April 2001 (S1:73.2) and March 2003 (S6:Pre-Iraq war:75.0).

In Survey 11 the wording of this item changed from ‘How satisfied are you with what you achieve in life?’ to ‘How satisfied are you with what you are currently achieving in life?’. The reason for this change is to make it more explicit that the question referred to current life rather than to some past aggregation of achievement.

The effect of this word change has significantly reduced the score for this domain. The average value over Survey 1 to Survey 10 is 74.47 (SD=0.45). The average value over Survey 11-Survey 17 is 72.96 (SD = 0.53). So it appears to still be a highly reliable measure that has stabilised about 1.5 points below the original and no different from Survey 1.
2.3.4. How satisfied are you with your Relationships?

![Diagram of Satisfaction with Relationships]

- **Survey Dates and Major Events:****
  - S1 Apr 2001
  - S2 Sept 2001
  - S3 Mar 2002
  - S4 Aug 2002
  - S5 Nov 2002
  - S6 Mar 2003
  - S7 Jul 2003
  - S8 Nov 2003
  - S9 Jan 2004
  - S10 Mar 2004
  - S11 May 2004
  - S12 Aug 2004
  - S13 Oct 2004
  - S14 Mar 2005
  - S15 Jun 2005
  - S16 Aug 2005
  - S17 Oct 2005
  - S18 May 2006
  - S19 Oct 2006
  - S20 Feb 2007
  - S21 Apr 2007
  - S22 Oct 2007
  - S23 Apr 2008
  - S24 Oct 2008
  - S25 Feb 2009
  - S26 Apr 2009
  - S27 Oct 2009
  - S28 Apr 2010
  - S29 Oct 2010
  - S30 Apr 2011
  - S31 Oct 2011

- **Key Events:**
  - a = September 11
  - b = Bali Bombing
  - c = Pre-Iraq War
  - d = Hussein Deposed
  - e = Athens Olympics
  - f = Asian Tsunami
  - g = Second Bali Bombing
  - h = New IR Laws
  - i = Labor Government Elected
  - j = Stock market collapse
  - k = Fires and floods
  - l = Stock market recovery
  - m = Labor government re-elected
  - n = Qld/Vic floods

**Figure 2.6:** Satisfaction with Relationships
Satisfaction with Relationships, has not changed over the past 12 months, falling by a non-significant 0.5 points to 79.4. It is at a level no different than it was in survey 1 (78.2 points). The most sustained trend of increasing satisfaction for this domain began with the lowest level (77.2 points) in February 2008 and peaked at 81.5 points in April 2010, an overall rise of +4.3 points.

Prior to Survey 23 (April 2010), it had been at its highest level on two previous occasions. These were as Survey 7 (Hussein deposed) and Survey 12 (Athens Olympics). Notably, except for the special survey 18.1, its values since then have remained within the normal range and so it may simply reflect random fluctuation.

The range of scores across all surveys is 4.3 points, between February 2008 (S18.1:77.2) and April 2010 (S23:81.5).
2.3.5. Safety

How satisfied are you with how safe you feel?

Figure 2.7: Satisfaction with How Safe you Feel

Survey Date          Major events preceding survey
S1 Apr 2001          a = September 11
S2 Sept 2001         b = Pre-Iraq War
S3 Mar 2002          c = Bush War
S4 Aug 2002          d = Hussein Deposed
S5 Nov 2002          e = Athens Olympics
S6 Mar 2003          f = Second Bali Bombing
S7 Jun 2003          g = Second Bali Bombing
S8 Aug 2003          h = New IR Laws
S9 Nov 2003          i = Labor Government Elected
S10 Feb 2004         j = Fires and floods
S11 May 2004         k = Stock market collapse
S12 Aug 2004         l = Stock market recovery
S13 May 2005         m = Labor government re-elected
S14 Oct 2005         n = Qld/Vic floods
S15 May 2006         o = Labor Government Elected
S16 Oct 2006         p = Statistics
S17 Apr 2007         q = World trade
S18 Oct 2007         r = Data
S18.1 Feb 2008       s = Data
S19 Apr 2008         t = Data
S20 Oct 2008         u = Data
S20.1 Feb 2009       v = Data
S21 May 2009         w = Data
S22 Sept 2009        x = Data
S23 Apr 2010         y = Data
S24 Sept 2010        z = Data
S25 Apr 2011         { = Data
S26 Sept 2011        | = Data
S27 April 2012       } = Data

Strength of satisfaction
Maximum = 81.3
Minimum = 75.2

Table 2.7: Major events preceding survey
Satisfaction with personal safety (80.4 points) has fallen by a non-significant -0.2 points since the last Survey 26. It remains at a very high level, only 0.9 points below its highest level ever (81.3 points in February 2009).

**Historical:** The overall trend of these results, over the whole sequence of these surveys, is that satisfaction with safety is gradually rising. The first major rise in Safety satisfaction followed the defeat of Saddam Hussein in Iraq at Survey 7. This may have been linked to the positive feelings of relief following the defeat of Hussein without unleashing weapons of mass destruction, and subsequently our increasingly strong American alliance. The rise during the Olympics (S12) may have been more due to the overall sense of elevated wellbeing than to specific feelings of greater safety. The further rise is hard to explain. While it is associated with a decreasing proportion of the sample feeling that a terrorist attack is likely, it is also true that terrorist attacks were unthinkable prior to Survey 2.

It is interesting to relate these data on safety to the sense of terrorist threat that is felt by the population. Since Survey 9 (November 2003) we have asked people ‘whether they think a terrorist attack is likely in Australia in the near future’ and, if they say ‘Yes’, we ask about the strength of their belief that such an attack will occur.

These data are combined with the population levels of ‘Satisfaction with Safety’ in Table A2.9. It can be seen that the average level of safety satisfaction correlates negatively with the percentage of people who think an attack is likely \((r = -.65\), which is highly significant) but much less strongly with the strength of belief among those respondents who think an attack likely \((r = -.26\), non-significant). The correlation of -.65 explains about 44% of the variance between these two measures, which is a significant degree of co-variation. Other factors that will be contributing variance to safety are homeostasis, personal circumstances and, quite possibly, the sense of security offered by an effective wellbeing military force and alliance with the USA. The latter influence, exemplified by the rise in safety at Survey 7 (defeat of Hussein) may represent a constant background factor onto which the fluctuations in terrorist attack probabilities are imposed.

One implication of these results is that raising terrorist attack fears through issuing terrorist alerts, harms the safety satisfaction, and thereby compromises the overall wellbeing of vulnerable members of the population. However, the most remarkable feature of this graph of safety satisfaction is its continued rise over the period of these surveys. This is further discussed in Section 2.4.1.
Figure 2.8: Satisfaction with Feeling Part of Your Community
People’s satisfaction in feeling part of their community (71.9 points) has risen non-significantly by +0.1 points since the last survey. It remains close to its highest level yet recorded (73.0 points) at Survey 20.1 (February 2009), immediately following the Victorian bushfires. At that time Satisfaction with Community was 0.3 points higher than it was at the time of the Athens Olympics, and 4.4 points higher than it was in Survey 1. It seems self-evident that this rise was due to the increased sense of community generated by the tragedy of the floods and fires. These events generated an enormous outpouring of sympathy and tangible assistance, which caused the population to experience a heightened sense of belonging to the ‘Australian family’.

It is interesting that this elevated level of satisfaction with community connection has been maintained over the past 2.5 years. The range of scores over the whole survey series is 4.4 points, between April 2001 (S1:68.6) and February 2009 (S20.1:Victorian Fires:73.0).

**Historical:** Apart from the Olympic period elevation (S12), rises are coherently related to times of major conflict or national distress. In the six months following September 11, satisfaction with community connectedness went up from its lowest level in April 2001, and was maintained at this higher level for a further six months. It then fell, but returned to an even higher level in the lead-up to the Iraq war (S6). This higher level was maintained for six months following the defeat of Hussein (S9), then dissipated only to be recharged once again following the second Bali bombing (S14). It then rose to record levels immediately following the Victorian bushfires in February 2009. This pattern is consistent with social psychological theory. A perceived source of threat will cause a group (or population) to become more socially cohesive. However, it must also be noted that the level of safety satisfaction also rose at the time of the Athens 2004 Olympics (Survey 12), and around the period of the election of the new Labor Government (Surveys 18 and 18.1).
2.3.7. Future Security

How satisfied are you with your Future Security?

![Graph showing satisfaction with Future Security over time with key events marked.]

**Key:**
- **a** = September 11
- **b** = Bali Bombing
- **c** = Pre-Iraq War
- **d** = Hussein Deposed
- **e** = September 11
- **f** = Asian Tsunami
- **g** = Second Bali Bombing
- **h** = New IR Laws
- **i** = Labor Government Elected
- **j** = Stock market collapse
- **k** = Fires and floods
- **l** = Stock market recovery
- **m** = Labor government re-elected
- **n** = Qld/Vic floods

**Survey Dates:**
- S1 Apr 2001
- S2 Sept 2001
- S3 Mar 2002
- S4 Aug 2002
- S5 Nov 2002
- S6 Mar 2003
- S7 Jun 2003
- S8 Aug 2003
- S9 Nov 2003
- S10 Feb 2004
- S11 May 2004
- S12 Aug 2004
- S13 May 2005
- S14 Oct 2005
- S15 May 2006
- S16 Oct 2006
- S17 Apr 2007
- S18 Oct 2007
- S18.1 Feb 2008
- S19 Apr 2008
- S20 Oct 2008
- S20.1 Feb 2009
- S21. May 2009
- S22 Sept 2009
- S23 Apr 2010
- S24 Sept 2010
- S25 Apr 2011
- S26 Sept 2011
- S27 April 2012

**Strength of satisfaction:**
- Maximum = 73.2
- Current = 71.2
- Minimum = 68.6
Satisfaction with future security (71.2 points) has risen non-significantly since the previous survey (+0.2 points) and remains mid-range. The range of scores over the whole series is 4.6 points between September 2001 (S2: 68.6) and February 2008 (S18.1: 73.2).

**Historical**: Satisfaction with future security dropped to its lowest level immediately following September 11, and then recovered to move in much the same range up to Survey 15 (May 2006). Since that time it has shown a rising trend. This pattern is very similar to that shown by safety and the explanations are probably similar to those that have been stated for the safety domain. The correlation between the survey mean scores for safety and future security is $r = .71$ (Table A2.13).
How satisfied are you with your Spirituality or Religion?

Figure 2.10: Satisfaction with Religion/Spirituality

Key: a = September 11   e = Athens Olympics   i = Labor Government Elected   m = Labor government re-elected
b = Bali Bombing   f = Asian Tsunami   j = Stock market collapse   n = Qld/Vic floods
c = Pre-Iraq War   g = Second Bali Bombing   k = Fires and floods
(d = Hussein Deposed   h = New IR Laws   l = Stock market recovery

Strength of satisfaction

Maximum = 78.4
Current = 78.4
Minimum = 67.7

New normal range
Surveys 24 to 26

Old normal range
Surveys 16 to 23

78.3
78.1
72.8
66.2
Section 2 Personal and National Wellbeing Over Time continued

The 8th Personal Wellbeing Index domain ‘How satisfied are you with your spiritual fulfilment or religion’ was included for the first time in Survey 16 (October 2006). In Survey 17 this was changed to ‘How satisfied are you with your spirituality or religion?’ Over this initial period of 8 surveys (Survey 16: October 2006 to Survey 23: April 2010) the values for this domain ranged between 67.7 and 72.5 points (Table A2.16).

In Survey 24 the question was changed again. The previous surveys had asked the question just as for the previous domains, with the opportunity for the interviewer to record ‘No spiritual or religious beliefs’ if that information was volunteered by the respondent. In Survey 24, this item was preceded by a gating item as ‘Do you have spiritual or religious beliefs?’, and only those people who responded ‘yes’ were then asked the satisfaction question. As can be seen, this dramatically changed the average satisfaction level (Table A2.16.1). The values now range from 78.2 to 78.6 points, averaging some 8 points higher than the previous un-gated format. The current value of 78.4 points falls within this very tight 0.4 point range over 4 surveys.

2.3.8.1. The strength of Spiritual/Religious Satisfaction using the no-gating data

These results comprise the combined data from surveys 16 to 23, when no gating question preceded the question of spiritual/religious satisfaction. While 11.6 percent of the combined sample respond that they do not have the Spiritual/Religious experience, another 3.2% responded that they had zero satisfaction with their experience. These are two very different groups of people as seen by matching of the strength of the Spiritual/Religious experience to the Personal Wellbeing Index. This is shown in Table A2.14 and below.

![Figure 2.11: Satisfaction with Spiritual/Religious vs. Personal Wellbeing Index (combined sample)](image)

This figure shows the relationship between the Spiritual/Religious experience and personal wellbeing. These can be summarised as:

1. People who have no spiritual/religious experience (11.2% of the combined samples) have normal levels of wellbeing.

2. People who rate their spiritual/religious experience as providing 0-6 levels of satisfaction have a level of personal wellbeing that lies below the normal range (36.8% of the sample of believers).

3. The Personal Wellbeing Index of the spiritual/religious group does not enter the normal range until people rate their level of satisfaction as 7/10.

The three groups of Spiritual/Religious experience are shown in relation to the Personal Wellbeing Index domains in Table A2.15. From this it can be seen that:
1. There are no significant differences in the Personal Wellbeing Index between people who do, and those who do not have the Spiritual/Religious experience, on any other domain.

2. For all domains, the zero Spiritual/Religious satisfaction group are significantly lower than the other two groups.

Figure 2.12 shows the pattern of the relationship between levels of Spiritual/Religious and the PWI. It also compares this pattern with that of two other domains as Relationships and Future Security (Table A12.4 and Table A12.9).

Figure 2.12: Spiritual/Religious vs. Relationships x Future Security (Personal Wellbeing Index)

It can be observed that the Spiritual/Religious domain behaves differently from the other two domains in this figure. Low scores are less attached to low Personal Wellbeing Index values, and high scores are less attached to high Personal Wellbeing Index values. In other words, the Spiritual/Religious domain is more independent of the Personal Wellbeing Index than the other two domains.

This is consistent with the correlation matrix in Table A2.18.1 which shows the domain to be obviously less strongly connected to ‘Life as a whole’ and to the other seven domains, than the other domains are connected to one another.

Despite this, the Spiritual/Religious domain makes a significant unique contribution of 0.1% to ‘Life as a whole’ (Table A2.18.1) using the combined surveys and yields a stronger result (0.2%) when the gating-question is used (Table A2.18.2). Moreover, the inclusion of this domain does not detract from the contributions of the other domains. A comparison with Table A2.17.1, which displays the regression for the seven domains only, shows that the Spiritual/Religious inclusion does not markedly change the unique contribution of any of the original domains. The maximum fall is -0.4% for Standard but its inclusion does decrease the net unique variance from 14.9 to 13.8% (-0.9%) while increasing the overall variance accounted for (Adjusted R²) from 50.8 to 51.1% (+0.3%).

These results qualify the Spiritual/Religious domain as a component of the Personal Wellbeing Index in Australia.

2.3.8.2. The performance of the Personal Wellbeing Index at different levels of Spiritual/Religious

Tables A2.19 to A2.19.5 show regressions of the original seven domains against Life as a Whole when the data set is restricted to match levels of Spiritual/Religious. The first (A2.19) shows the full data-set. The next shows the data set reduced by eliminating all respondents who scored 0 or 1 on Spiritual/Religious. This process of elimination is repeated through the remaining tables.
It can be seen that this procedure does not substantially change the pattern of domain contributions to LAAW. The explained variance drops from 51.9% (full data set) to 47.7% (Spiritual/Religious 7-10 only), but this probably just reflects the overall reduced variance in the sample.

It can be concluded that the performance of the 7-domain Personal Wellbeing Index is not influenced by different levels of Spiritual/Religious satisfaction.

2.3.8.3. Changes in the value of the Personal Wellbeing Index due to Spiritual/Religious inclusion

The data for the domain of Spiritual/Religious come in two forms. Surveys 16-23 offered no gating option is answering the question. Thus, the people who declared that they did not have this dimension in their life volunteered this information with no prompting. The following surveys, from Survey 24 and onward, did offer a response option by using a prior gating question as ‘Do you have spiritual or religious beliefs? Y/N’. The subsequent item ‘How satisfied are you with your spirituality or religion? was then only asked of the people who had responded in the affirmative.

Tables A2.14 and A2.14.1 show the distributions of the ‘no gating-option’ and the ‘gating-option’ forms of this item. The proportion of people declaring that they did not have a spiritual/religious dimension to their life rose from 11.6% with no-option to 44.2% when the gating option was provided. Surprisingly, when the data are restricted to the people who confirm they have the spiritual/religious dimension in their lives (gating-option), the domain mean for spiritual/religious satisfaction does not significantly change, rising from an average of 75.4 points (no-option) to 75.9 points (gating-option). This is a mystery waiting to be solved.

Due to current uncertainty as to the psychometric performance of this item, the Spiritual/Religious domain is not included in the calculation of the Personal Wellbeing Index for any of the cumulative data or time-series data in this report.
How satisfied are you with your Life as a Whole?

Figure 2.13: Satisfaction with Life as a Whole

Strength of satisfaction

Survey Date

Major events preceding survey

a = September 11
b = Bali Bombing
c = Pre-Iraq War
d = Hussein Deposed
e = Athens Olympics
f = Asian Tsunami
g = Second Bali Bombing
h = New IR Laws
i = Labor Government Elected
j = Stock market collapse
k = Fires and floods
l = Stock market recovery
m = Labor government re-elected
n =

Maximum = 79.1
Current = 77.1
Minimum = 75.2

Figure 2.13: Satisfaction with Life as a Whole
“How satisfied are you with your Life as a Whole?”

Satisfaction with life as a whole (77.1 points) has shown a non-significant increase (+0.1 points) since the previous survey. It remains at a level no higher than Survey 1. This is quite a curious result given the continued strong showing of the PWI.

**Historical:** After the initial rise one year following September 2001 (S3), this global item dropped back 6 months later, only to rise again after the Bali bombing (S5) and during the period of the Iraq war (S6-S7). Then it gradually decreased until, one year after Hussein had been defeated it was no different from Survey 1 again. Since Survey 12 it seems to have stabilized at about 77-78 points which is marginally significantly higher than at Survey 1. The range of scores is 3.9 points between April 2001 (S1:75.2) and August 2004 (S12:Olympics:79.1).
2.5. **Summary of the Changes in Personal Wellbeing**

The level of personal wellbeing in Australia has not changed over the past 24 months and remains at a very high level. The high levels of the last five surveys probably reflect the sense of relief that Australia escaped the recession and that people’s savings and superannuation funds remain secure, continued low unemployment, low levels of inflation, and the breaking of the drought. There may also be an element of positive downward comparison against countries that have not been so lucky.

Looking back over the entire record of the Index (Figure 2.1) it appears that it has mainly varied within a band of just two percentage points, from 74 to 76. There have been three slight variations outside this range. These are the survey run at the time of the Athens Olympics (Survey 12: 76.3 points), Survey 22 (76.3 points) and Survey 24 (76.2 points). It is interesting to reflect on the domains that have fuelled these deviant values for the PWI.

<table>
<thead>
<tr>
<th>Domains</th>
<th>PWI</th>
<th>Standard</th>
<th>Health</th>
<th>Achieving</th>
<th>Relationships</th>
<th>Safety</th>
<th>Community</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveys BELOW the normal range</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>S13</td>
<td>S13/18.1</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Surveys ABOVE the normal range</td>
<td>12/22/24</td>
<td>X</td>
<td>S26</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>S20.1/24</td>
<td>X</td>
</tr>
</tbody>
</table>

In summary of these results:

(a) Only 3 domains (Achieving, Health and Relationships) have registered a value below their normal range. Both of the two relevant surveys, S13 and S18.1, yielded quite low values for the PWI, but S26 is quite normal. There is no obvious reason for these low scores and they likely reflect random variation.

(b) Only one domain (Community) has registered a subsequent value above its normal range, and this has happened twice (S20.1-Fires and Floods, and S24). The reason the latter value is so high is unclear.
Summary of domain changes

Standard (Figure 2.3): Along with several other domains, Standard of Living peaked first at the time of the Athens Olympics (S12, August 2004). Over the next 4.5 years it remained within a 2 percentage point band, but it peaked again at Survey 22 (September 2009) perhaps fuelled by the recovering economy, and has been slowly falling ever since.

Health (Figure 2.4): This domain has failed to show any systematic change over the entire survey sequence. An apparent aberration is S26, which lies below the normal range for this domain.

Achieving (Figure 2.5): This domain has failed to show any systematic change over the entire survey sequence.

Relationships (Figure 2.6): This domain has fallen below its normal range of 4.3 points on two occasions (S13/18.1). Notably, its largest fluctuation between adjacent surveys is 3.2 points between Survey 12 and Survey 13.

Safety (Figure 2.7): This domain has been rising, on average, throughout this series of surveys. The reason for this is uncertain. While the correlation of - .66 with the % of the sample expecting a terrorist attack is interesting (Table A2.9), this cannot explain the full pattern of results. The lowest level of safety was immediately prior to September 11; a time at which the possibility of terrorist attacks in Australia were not even being considered by the general population.

Community (Figure 2.8): This domain has peaked twice, with values above the normal range. The first occasion was Survey 20.1 (February 2009) at the time of the Victorian bushfires, and the second was Survey 24 (September 2010). It seems likely that national horror at the level of bush-fire destruction bonds the community and makes people feel more connected to one another. Over the surveys 21-26 Community has remained at generally very high levels.

Future Security (Figure 2.9): This domain has changed markedly since its nadir in Survey 15, (May, 2006) it rose to unprecedented heights in Survey 18.1 (February 2008) and then plummeted for reasons probably linked to the falling stock market at this time. It has now returned to be mid-range.

It is important to note that the two domains of Safety and Future Security do not measure the same experience. While the mean scores between surveys show a high correlation (.71, Table A2.13), the within-survey correlation, using the scores of individuals (Table A2.17.1) is much lower (.43). It can also be noted that, while Safety remained high over Surveys 15-16 (Table A2.1), Future Security fell to be no different from Survey 1.

Why, then, did population satisfaction with Safety and Security suddenly rise to such heights? It is most unclear, but some co-indicators can be identified.

The reason for the trend of rising satisfaction with safety is uncertain. One possibility is that the continued presence of a ‘terrorist threat’ during this period has given people a heightened sense of safety because the threat has not materialised as an attack on Australian soil. This may give rise to feelings that the anti-terrorist measures, so evident at airports and in the media, are effective. This brings to consciousness a domain of life that is normally of little real consequence to most Australians, and so they have increased positive regard for their safety, instead of the more neutral feelings they held before the threat was evident.

It may also be fuelled by perceptions of competence in the military and the police to deal with difficult situations. In terms of the military, Australian troops are playing an increasingly active role as peacekeepers within the Pacific region, with troops deployed in New Guinea, the Solomon Islands, and East Timore. The Australian police have uncovered terrorist threats and, working with other authorities, successfully prevented a recurrence of the Sydney ‘race riots’ of November 2005. There is also increasing evidence of Islamic integration within Australia and, perhaps therefore, a sense that potential threats are being effectively managed.
2.6. National Wellbeing Domains

2.6.1. Economic Situation

How satisfied are you with the Economic Situation in Australia?

Figure 2.14: Satisfaction with Economic Situation in Australia

Key:
a = September 11  
b = Bali Bombing  
c = Pre-Iraq War  
d = Hussein Deposed  
e = Athens Olympics  
f = Asian Tsunami  
g = Second Bali Bombing  
h = New IR Laws  
i = Labor Government Elected  
j = Stock market collapse  
k = Fires and floods  
l = Stock market recovery  
m = Labor government re-elected  
n = Qld/Vic floods

Strength of satisfaction

Survey Date

Maximum = 70.9  
Current = 60.9  
Minimum = 53.6

Figure 2.14: Satisfaction with Economic Situation in Australia
“How satisfied are you with the Economic Situation in Australia?”

Satisfaction with the economic situation (60.9 points) has risen by a non-significant +0.9 points since Survey 26 and remains well below the level it has been for much of the period of these surveys, between about 64-68 points. It is no longer different from survey 1. This is the most volatile domain. The range of values is 14.9 points, being between April 2001 (S1:53.6) and October 2007 (S18: 70.9 points).

**Historical:** This domain rose significantly from its baseline (S1) immediately following September 11 (S2) and again six months later (S3). This was followed by a sustained and gradual rise up to Survey 18. It then showed a precipitous 12.4 point fall over the 12 month period including Survey 19 (April 2008) and Survey 21 (May, 2009). The reason is almost certainly tied to the major fall in the stock market over this period. It then staged a dramatic recovery back to its normal level.

The domains of Economic Situation and Business in Australia showed an almost continuous rise over the six-year period of these surveys from 2001 to 2007. This run ended in October 2007 with both domains posting significant falls (Economic situation -8.5 points and Business -2.2 points). These may have been influenced by rising interest rates or by popular perceptions of Labor governments in general as poor economic managers. The stock-market collapse in 2008 further enhanced this loss of satisfaction. The turn-around between October 2008 (S20) and May 2009 (S21) may have been initiated by the Government’s various measures to stimulate the economy, most particularly the $900 one-off cash payments to tax-payers and school-age children in March/April 2009. Until this survey, it seemed to have been sustained by the evident economic recovery.
2.6.2. State of the Natural Environment in Australia

How satisfied are you with the state of the Natural Environment in Australia?

Strength of satisfaction

Maximum = 65.5
Current = 63.9
Minimum = 55.8

Key:
a = September 11
b = Bali Bombing
c = Pre-Iraq War
d = Hussein Deposed
e = Athens Olympics
f = Asian Tsunami
g = Second Bali Bombing
h = New IR Laws
i = Labor Government Elected
j = Stock market collapse
k = Fires and floods
l = Stock market recovery
m = Labor government re-elected
n = Qld/Vic floods

Scores above this line are better than S1
Scores below this line are lower than S1

Intense media coverage of global warming
Drought breaks over most of Australia
"How satisfied are you with your state of the Natural Environment in Australia?"

Satisfaction with the state of the natural environment (63.9 points) has fallen by a non-significant -0.1 points since the last survey. It remains very high. The range over all surveys is 8.7 points between October 2006 (S16:55.8) and April 2011 (S25:64.5).

The environmental reality

From Survey 1 in April 2001 to Survey 23 in April 2010, Australia experienced the worst drought in recorded history. This changed in the latter part of 2010. According to a statement issued by the National Climate Centre on 6th October 2010 http://www.bom.gov.au/climate/drought/drought.shtml the following statements represented the reality of the current environmental situation at that time:

1. Australia recorded its wettest September on record in 2010. However, above-average rainfall was largely in the north and the east of the country, missing the southwest corner of WA, which is experiencing its driest start to the year on record and its driest 12-month period on record.

2. The Northern Territory and Queensland had their wettest September on record. New South Wales declared its drought over.

3. The rains in 2010 have only made limited inroads into the serious deficiencies which remain on multi-year time-scales, especially in south-eastern and south-western Australia and south-east Queensland. These continue to affect water supplies; to alleviate these would require above average rainfall for a sustained period.

4. Rainfall has been below average across much of southwest and southeast Australia since 1997, whilst central and southern parts of the Murray-Darling Basin have experienced below average rainfall since 2002. These long-term deficiencies have taken place against a background of well above average temperatures, including Australia's warmest decade on record.

The NCC statement on 6th April 2011 records:

All states and territories recorded above median rainfall in March 2011. Australia as a whole recorded its wettest March on record, as did Queensland and the NT, with many areas receiving highest on record rainfall for the month. Eastern parts of WA also recorded above average rainfall with a large area in the inland east Kimberley receiving highest on record totals for the month. However, the southwest of the state was again below average in March, the tenth driest March on record for the region.

In summary, except for a small portion of Western Australia, the drought is over.

Historical record of satisfaction with the natural environment: The record of satisfaction with the environment in Figure 2.15 shows little correspondence with the objective record. Prior to Survey 16 this domain was very stable, fluctuating by only 3.0 points over the time-series, even though the drought was steadily deepening over this period. While the level of satisfaction did occasionally move to be significantly higher than Survey 1, the reasons were not clear. Most likely these single changes mirrored fluctuations in the National Wellbeing Index overall, rather than anything directly attributable to the environment.

This pattern changed dramatically between May 2006 (Survey 15) and October 2006 (Survey 16) when satisfaction fell by 3.1 points, to a level below the normal range, as it was at that time. Satisfaction then remained significantly below its value at Survey 1 for at least the next six months, up to Survey 17. Then in October 2007 (Survey 18) it returned to be no different from Survey 1 once again. This is the only domain to have fallen significantly below the level of Survey 1 values in any survey.
The cause of this fall in satisfaction is both remarkable and attributable. In the period prior to Survey 16, Al Gore’s film ‘An Inconvenient Truth’ had been released and widely discussed in Australia. Moreover, in the few months prior to Survey 16 the media had repeatedly featured ‘global warming’ and the various doomsday scenarios. This negative publicity, backgrounded by the continuing drought, caused people to feel less satisfied with the natural environment.

This decreased level of satisfaction is interesting for two reasons. First, it is one of the few times we have been able to link a change in a particular domain to a national phenomenon (negative publicity). Second, it reinforces the separate performance of objective and subjective variables. The actual state of the natural environment had not changed discernibly between Survey 15 and Survey 16.

It is also interesting that this lower satisfaction lasted somewhere between 6-12 months. However, sometime within this period, people generally adapted to the negative information and it lost its power to influence satisfaction with the environment.

During 2008 the levels of satisfaction returned to their previous level, but during the following year, in 2009, the ‘Environment change sceptics’ gained media ascendancy. Their claims, that the evidence for human-induced climate change was false, was a message many people wanted to hear. The following Survey 22, in September 2009, reflected their renewed hope as sudden increase in satisfaction with the natural environment.

The summer of 2009/2010 was mild over much of Australia; very different from the searing heat and bushfires experienced a year earlier. This seemed to reinforce the sceptics’ message. Then, as stated earlier, by Survey 24 in September 2010, the rains had come and most of Australia was mainly drought-free for the first time in a decade. Thus, satisfaction with the environment has remained at very high levels ever since.

In summary, these changes in satisfaction reflect two major influences. First is personal experience of the natural environment, making people more likely to believe global warming when they experience hot and dry conditions. Second, their attitudes also reflect the dominant media message, but the strength of this influence seems highly dependent on both the prevailing conditions and the passage of time.

People are readily influenced by media reports carrying information supporting their personal views or experience. Thus, when the environment is hot and dry, a dooms-day message of global warming is taken to heart. However, because pessimistic thoughts are potentially damaging to personal wellbeing, people adapt to such information, and the message loses its capacity to change attitudes. Helping to counter pessimistic thoughts are the views of climate-change sceptics. They offer optimism, and so their views are embraced because positive views support personal wellbeing. It is unfortunate that the duration of the sceptics’ influence cannot be determined from the current data because of the breaking drought. What is clear, however, is that people have a high capacity to adapt to both changes in their experienced environment and to media messages about the environment. So all such influences on environment satisfaction are short-term.

The weakest effect on satisfaction with the natural environment is the actual trend data showing global warming and the long-term consequences of such change. Thus, public opinion concerning the state of the natural environment should not be used by policy-makers for the planning of any long-term goals.
2.6.3. Social Conditions in Australia

How satisfied are you with Social Conditions in Australia?

Strength of satisfaction

Maximum = 65.7
Current = 63.9
Minimum = 59.3

Key:

a = September 11
b = Bali Bombing
c = Pre-Iraq War
d = Invasion of Iraq

Key:
e = Athens Olympics
f = Asian Tsunami
g = Second Bali Bombing
h = Stock market collapse
i = Labor Government Elected
j = Qld/Vic floods
k = Fires and floods
l = Stock market recovery
m = Labor government re-elected
n = Qld/Vic floods

Introduction of new anti-union Industrial relations laws

Figure 2.16: Satisfaction with Social Conditions in Australia
“How satisfied are you with Social Conditions in Australia?”

Satisfaction with social conditions (63.9 points) has fallen by a non-significant -0.8 points over the past six months. It remains at one of its highest recorded levels. The range of values is 4.6 points between April 2001 (S1:59.3) and April 2010 (S23:65.7).

**Historical:** Looking over the whole record, the rise in satisfaction with social conditions, evident following September 11 (S2), was sustained up to May 2006 (Survey 15), after which it fell back to be no different from Survey 1 for a period of at least 6 months. It is possible that this lower satisfaction with social conditions reflected the new Industrial Relations laws that came into effect shortly before Survey 15. This effect dissipated in less than 12 months, with satisfaction returning to its previous levels.

Since Survey 16 (October 2006), the rise in satisfaction with social conditions has been sustained. The cause of this rise is uncertain.
2.6.4. Government in Australia

How satisfied are you with the Government in Australia

Figure 2.17: Satisfaction with Government in Australia
“How satisfied are you with Government in Australia?”

Satisfaction with Government (45.0 points) has risen by a non-significant +0.5 points over the past six months to remain close to its lowest level yet recorded. It is now -7.6 points below its lowest level under the Howard Government (52.6 points, Survey 16), just before electoral defeat. It is 16.5 points below its highest level of 61.5 (Survey 19, April 2009) just 3.0 years ago.

**Historical:** Over Surveys 1-18, Prime Minister Howard led the Liberal Party to successful re-election in both November 2001 and October 2004. During this period, satisfaction with government recorded its highest level of 58.8 points immediately following September 11 (Survey 2, September 2001) and its lowest level at Survey 16 (52.6 points). The 2.7 point fall over the 18 month period prior to electoral defeat, from Survey 13 to Survey 16, is significant.

At the time of Survey 18 (October 2007) it was looking as though a change of Government was likely at the November 2007 election, and indeed this transpired. Kevin Rudd became the new Labor Prime Minister. Satisfaction with Government rose in anticipation of his election by a significant 2.1 points between Surveys 17 to 18, and a further 5.4 points between Surveys 18 and 19. This took the total 12-month rise, from April 2007 to April 2008, to 7.5 points.

The high level of satisfaction with government was sustained over two years, from the anticipation of change (Survey 18, October 2007) to two years into the period of office (Survey 22, September 2009). Following this, the levels of satisfaction crashed to their current record-lows.

**Possible causes of satisfaction changes:** Satisfaction with Government appears to rise in times of national threat. The literature describes this phenomenon as a ‘Rally round the flag’ effect. This probably explains the high satisfaction with Government in September 2001 (Survey 2) as a direct result of the September 11 attacks. A similar, but more muted rise is evident in the Bali bombing (Survey 5) survey, and again following the overthrow of Hussein (Survey 7). The ‘rally effect’ involves a perceived external threat causing satisfaction with Government (authority) to increase.

The pre-Iraq war situation (Survey 6) was different. While this situation constituted a threat to Australia, in so far as there were fears of Weapons of Mass Destruction being unleashed in Iraq and perhaps elsewhere, Australian troops were committed to fight in the front-line. This involvement divided the nation, with 23% in favour and 53% opposed to the war (Report 6.0). Perhaps because of this division, the rise in satisfaction with Government did not materialise. Moreover, the subsequent rise at S7 may represent an increased satisfaction for a quite different set of reasons, which involve relief at no deaths among the Australian troops at that time and the bolstered American alliance.

It is interesting that none of these rises associated with external threat are sustained over more than three months and that the substantial rise in national wellbeing occasioned by the Olympics was not reflected in Satisfaction with Government.

When the Rudd government was elected in November 2007, it performed various activities that greatly pleased the electorate. These included signing the Kyoto Protocol, delivering an apology to Indigenous Australians for the stolen generations, dismantling the previous government's industrial relations legislation, withdrawing the remaining Iraq War combat personnel, reforming the healthcare system, and holding the "Australia 2020 Summit".

These popular acts were, however, followed by a series of other activities that displeased the voters and Labor parliamentarians. They included a botched aspect of the economic stimulus package that involved the installation of unsafe roof insulation, an advertising war with the miners over a proposed Resource Super Profits Tax, and the deferral of the Carbon Pollution Reduction Scheme. When it became clear that he had lost the support of his party, Rudd stepped down as Prime Minister on 24 June 2010 and the Labor party elected Julie Gillard in his place.

The federal election in October 2010 produced a hung parliament and only after 17 days of negotiation with independent members, did Gillard secure the numbers to form government on the 7th September.
It seems clear from the low levels of satisfaction since Survey 22 (September 2009), that the later behavior of the Rudd government, the manner of his replacement, and the subsequent formation of a minority government, greatly harmed the voters’ perception of government. Most recently, the introduction of an unpopular ‘carbon tax’ may have added to the Government’s negative image.
How satisfied are you with Business in Australia?

Figure 2.18: Satisfaction with Business in Australia
“How satisfied are you with Business in Australia?”

Satisfaction with Business (59.9 points) has fallen by a non-significant -0.3 points since the previous survey. It is now lower than at any time during the 2008-2010 economic crisis. The total range of values is 10.0 points between September 2001 (S2:55.4) and April 2010 (S23:65.4 points).

Historical: Satisfaction with both Business and the economy may have increased following September 11 because the doomsayers were proved wrong. The attacks did not, as had been widely predicted, drive the global economy into recession. Moreover, the Australian economy has performed better than expected over the entire period of these surveys, with very little impact of the global recession that so severely affected business in many other countries.
How satisfied are you with National Security in Australia

Figure 2.19: Satisfaction with National Security
“How satisfied are you with National Security in Australia?”

Satisfaction with national security (68.3 points) has not changed significantly since the previous survey. It remains at one of its highest levels. It is interesting to note that this high level has been maintained despite the surge in ‘boat people’ arriving as illegal immigrants in Australian waters. While these events may remind Australians that our boarders are not completely secure, they do not seem to impact on the sense of national security. The range of values is 13.6 points between September 2001 (S2:57.3) and April 2008 (S19: 70.9)

**Historical:** The dramatic rise of 4.6 points from Survey 2 to Survey 7 probably reflects recovery from a low-point induced by the September 11 attacks, the strengthened American alliance, and the lack of terrorist events in Australia. However, this was eclipsed by the 6.4 point rise over the 18 month period between October 2006 (Survey 16) and April 2008 (Survey 19). It is notable that this rise parallels the rise in Satisfaction with Government. However, over all of the surveys, the mean scores of these two national domains are not significantly correlated with one another ($r = .43$, Table A2.13).

This leaves open the question of why there was such a surge in satisfaction with this domain over the period 2006-2009. There are two obvious contenders as:

(a) The diminishing threat from terrorism. Over the period 2006-2008 the proportion of our sample expecting a terrorist attack ‘in the near future’ dropped from around 60% to 40% and this level may represent a stable baseline (Figure 2.23). However, this does not explain the rise in satisfaction with national security following the First Bali Bombing (Figure 2.19).

(b) The arrival of illegal immigrants by boat. This started to become a significant problem for Australia around the turn of the millennium. Whereas in 1997/8 only 157 people arrived by boat, two years later (1999/2000) the numbers had swelled to 4,175. The Howard Government responded to this threat by instigating increasingly harsh penalties for arrivals, which were internationally publicised and were associated with a reduced number of new arrivals. The Labor Government, elected in November 2007, was known to have a more humane attitude. Moreover, conditions in Sri Lanka and Afghanistan continued to deteriorate, and new arrivals increased once again. The rise in the number of boat people has continued during the past year or so. While this could, perhaps, be partially responsible for the fall in National Security from October 2008 to May 2009, it obviously cannot explain the continuing high levels of satisfaction with National Security.
2.7. Life in Australia

How satisfied are you with Life in Australia?

Figure 2.20: Satisfaction with Life in Australia

Key:
a = September 11
b = Bali Bombing
c = Pre-Iraq War
d = Haitian Earthquake

e = Athens Olympics
f = Asian Tsunami

i = Labor Government Elected
j = Stock market collapse

k = Fires and floods
l = Stock market recovery

m = Labor government re-elected
n = QLD/NSW floods
“How satisfied are you with Life in Australia?”

Satisfaction with life in Australia (82.1 points) has shown a non-significant increase of +0.6 points since the last survey. It remains at a high level and well within its normal range. This may well be due to the fact that Australia has weathered the economic storm so well and people are contrasting Australia with other countries that have not been so lucky. The range of scores is 15.2% between April 2001 (S1:69.7) and May 2009 (S20:85.3).

**Historical:** This domain rose consistently from April 2001 (Survey 1) to March 2002 (Survey 3) and has since remained fairly stable and high. The major change occurred between S2 and S3, when the level of satisfaction rose by 10.9 points. Since then it has remained very substantially higher than it was at Survey 1.

Of all the personal and national measures, ‘Life in Australia’ has shown the strangest behaviour. Over the first three surveys it increased by around 15 points and has since remained quite stable. The reason for this early rise between April 2001 and March 2002 is not known. However, it is notable that it involves both Survey 1 and Survey 2, thereby giving credibility to the initial survey.
Summary of changes in National Wellbeing since April 2011

Neither the Personal nor the National Wellbeing Index has changed since the previous survey.

While the personal wellbeing index remaining steady over the past 24 months is a reflection of Australians’ continuing overall satisfaction with their lives, it is notable that satisfaction with business is lower than it was during the midst of the Global Financial Crisis. This is so despite economic measures indicating a more stable economy at present than back in 2008-2010 when satisfaction with both business and the economic situation was higher.

This may indicate that financial performance and economic outcomes are not the only criteria utilized to assess the state of business. Similarly, satisfaction with the economy and government are lower than at the height of the Global Financial Crisis (GFC), despite other indicators showing a stable economic situation in Australia overall, especially when compared to other countries.

It is this point of international context that may explain the drop in satisfaction level with business, government and the economy. It is surprising that years after the GFC, when indicators show that the economy is healthier and more stable than it was during the midst of the crisis, people’s satisfaction with business, the government and the economy is lower. While national indicators may not fully explain the drop in these domains, a quick look at the global situation may begin to give us a hint about why these levels have changed.

The continuing economic crisis abroad and the public’s reaction to it have been consistently in media outlets for the last 12 months at least. And while Australia has remained relatively stable in that same period, there has been increased attention on business misconduct, economic problems and governments’ reaction to public outrage. Media coverage of events such as the riots in London, the Murdoch scandal and protests in the Middle East and Wall Street may have contributed to a projection of international situations onto a domestic context that is vastly different from what is occurring abroad.

This analysis may lead us to infer that while Australians’ overall wellbeing remains high as it has been historically, it is not only affected by direct experience but also mediated by the perception of the global situation. In short, Australians may be affected by the global state of affairs even when the situation at home is seemingly stable.
2.8. **Australian Wellbeing Summary**

[This section has not been updated since Survey 26 due to the lack of difference with Survey 27]

A summary of the changes in population wellbeing is shown in Figure 2.21 below. In this figure, the vertical lines show the generic normal range for the Personal Wellbeing Index (Table A2.21) and for each domain. The cross and circle indicate the strength of satisfaction in Surveys 25 and 26 respectively.

**Figure 2.21: Survey 26 PWI and Domains vs. Domain Normal Ranges Based on Survey Mean Scores (N=26)**

It can be seen that the Personal Wellbeing Index lies close to the top of its normal range, as do also the domains of Standard, Safety, Community and Future Security. The other domains lie close to their normal mean except Health, which is again very low for the second survey in a row, and below its normal range.

This differential domain responses are important in indicating that the changes are not occurring at random. This is evidenced by those domains that do not change, such as the Health and Achieving domains in the Personal Wellbeing Index. Other domains seem to change in a manner over which shows at least the possibility of causality. Satisfaction with Standard of Living and Future Security have conspicuously risen during the period of economic recovery.

**Figure 2.22: Survey 26 NWI and Domains vs. Domain Normal Ranges Based on Survey Mean Scores**
The National Wellbeing Index has fallen to lie towards the bottom of its normal range. All domains lie within their normal range except Government which is far below range.

Satisfaction with the Natural Environment fell over a period of one year with the public perception of climate change as a reality. However, over the past two years the ‘climate change deniers’ have gained ascendancy in the media and the drought has broken. Both factors together may well be the reason for the continued high levels of satisfaction.

Other, speculative comments on these domain changes are as follows:

**Threat Events**

International events that are either nationally threatening (terrorist threats or war) can enhance personal and national wellbeing. Moreover, they involve much the same set of domains as:

Enhanced satisfaction with material conditions (Standard of Living, Social Conditions, Natural Environment, Business and Economy). The purpose of this, in terms of a threat response, may be to encouraging satisfaction with the living environment that requires defending. The alternative would be to leave the living environment for somewhere else, but for most people this is not a realistic option due to issues of personal investment.

Enhanced satisfaction with the other people who share the environment under threat (personal relationships and feeling connected to the community) and with the leaders of these people (Government). The increased strength of these connections means people feel they are not alone in facing the threat and that they have worthy leaders.

Enhanced satisfaction with general issues of safety (personal safety, future security, national security). If the source of threat is to be approached and met, with the aim of defending the living environment, then it is necessary that people have confidence in their own survival as a consequence of such action.

**Domain exceptions**

While most of the 13 domains are accounted for in the above description, one domain (Health) shows no reliable change as a consequence of these national and international events. There are various possible reasons for the stability of this domain as follows:

1. The sense of personal health could be under competing forces. In a threat situation, it could be adaptive to have a heightened sense of one’s own powers to defend oneself, and this would be expected to cause an increased satisfaction with health. However, perceived health may be more chronically under threat than the other domains. Practically everybody has some source of health concern and, thus, the homeostatic devices that maintain health satisfaction are already working over time, such that another source of external threat has little additional impact.

2. The perceptions of personal health may be driven more by comparisons with other people than the other domains. That is, the most obvious systematic changes in health, on a population basis, are due to age. Thus, given such obvious differences between age-groups, perhaps people judge their health against their age-cohort rather than using an internal standard. The result of such comparisons, if this is true, would be a dominant reference for health satisfaction (age-cohort) that would attenuate the influence of other external influences.
Section 2 Personal and National Wellbeing Over Time continued

**Nationally Enhancing Events**

While both threat and enhancement events caused wellbeing to rise, the cause of each rise should be different. The preceding description is based on a sociobiological interpretation of an adaptive response to threat. The rise in wellbeing due to nationally enhancing events has no such adaptive links and is more simply explained in the personal pride of being part of a winning team.

There are likely to be two major differences between these two event types. First, the threat event should be longer lasting. It may be adaptive to maintain a sense of threat for a long period after the event, thereby maintaining the alertness to detect a new source of harm and the resources to deal with it. Enhancement events, on the other hand, are likely to be far more transitory. The fact of the team’s success is soon submerged within the caldron of current life realities. This is consistent with the data shown in Report 12.0 at the time of the Athens Olympics.

The second difference is in the domains that are responsive. The Olympic enhancement event had no effect on the following domains:

- **Health:** This may be for the reasons already described.
- **Achieving:** The grand achievements of others is a double-edge sword. The reflected glory is tempered by an upward-comparison against lower personal achievement.
- **Natural environment:** This is not a domain that involves connection to other people.
- **Government:** The achievements are those of the athletes, not of the leaders.

**Regional disasters**

Survey 20.1 was conducted at the tail-end of savage bushfires in Victoria that claimed 173 lives. This regional disaster generated an out-pouring of grief and sympathy from across Australia, and was associated with a significant rise in the Personal Wellbeing Index. This was led most conspicuously by the domain of Community but all other personal domains showed an upward trend.

**Prospect of a change in Government**

Survey 17 was held at a time when a new and credible contender for the position of Prime Minister had appeared and satisfaction with Government in the preceding survey showed an all-time low. The polls at this time showed a real sense that the control of the Government could change to the Labor party at the forthcoming election later in the year. This represented the strongest potential challenge to the Government since its time in office, which spans the series of these surveys from Survey 1 to Survey 17.

It is notable that the domains most positively affected over this period were been safety and security. It is possible that this is a consequence of the voters having the prospect of two good candidates. One is the steady and reliable incumbent and the other a well-equipped challenger who offers the prospect of limited change. That the population would be well served by any election outcome and may be a source of security.

**Conclusion**

While this explanatory account is stronger in some respects than in others, and suffers from the inevitable post-hoc nature of the arguments, it does appear to have some degree of cohesion. But perhaps the most important observation is at least some of the significant changes that have been observed, and the lack of change in some domains, clearly indicates that these patterns are not due to random variation.
2.9. **Likelihood of a Terrorist Attack**

Figure 2.23 shows the percentage of respondents in each survey (since Survey 9) who think that a terrorist attack in Australia is likely in the near future. As markers of such attacks, the first Bali Bombing occurred prior to Survey 5 (November 2002), which was one year prior to the start of this record. The Second Bali Bombing occurred in October 2005, just before Survey 14.

The data for Survey 22 were collected over the period of the September 11 anniversary. At that time it was assumed that the 12.9% increase in the number of people who considered an attack likely over the previous survey was a ‘September 11’ effect, indicating how perceptions can be changed by exposure to relevant information. However, the subsequent Surveys 23 and 24, where data were also collected over the anniversary period, showed similar results, so this explanation now seems untenable. The reason for the jump in sensitivity to the possibility of an attack is not known. What is evident, however, is the very slow rate of habituation. The current value of 38.7% is the same as it was in May 2009, some 3 years ago.

Figure 2.23: Percentage who think a terrorist attack is likely

Figure 2.24: Strength of Belief in a Terrorist Attack

Figure 2.23 shows data drawn only from the people who consider a terrorist attack likely (e.g. the percentage who said ‘Yes’ in each survey). These people are asked to rate the strength of their belief...
that such an attack will occur (Table A2.1). The mean scores representing the strength of their belief for each survey are shown.

As can be seen, the strength of this belief has fallen to a low level. However, the following observations can be made:

1. Proportion of people expecting an attack (Figure 2.23).

One year following the first Bombing (Survey 9) 64.1 of the sample thought an attack to be likely. One year following the second bombing (Survey 16) the percentage of such people (61.9) was 2.2% lower. Moreover, 2 years after each event the figures are 59.7% (Survey 12) and 49.4% (Survey 18) a difference of 10.3%. It is evident that more people are adapting faster to the second bombing in terms of its perceived threat to Australian security. This is as expected. However, in the 4 years since Survey 18, the proportion seems to have stabilized at approximately 40-50%, with no further systematic habituation.

2. The strength of belief shows the reverse pattern (Figure 2.24). One year following the first Bombing (Survey 9) the mean strength of belief was 64.6 points. This is 3.3 points less than the equivalent period (Survey 16) following the second Bombing. The same pattern is shown two years after each event (Survey 12: 62.6 points vs. Survey 18: 66.5 points) with a 3.9 point higher estimation after the second bombing. Thus, at each of these time intervals, the second bombing produced fewer people who regarded a future attack likely but with stronger convictions.

The explanation for these changes may lie with the threshold belief strength people require to answer ‘Yes’. That is, there is likely to be some minimal level of belief strength (say 6/10) that causes people to say ‘Yes’ an attack is likely.

Then, assuming that the average strength of belief will decrease over time, fewer people will meet the threshold for a ‘Yes response, and so the proportion of the sample responding in this way will progressively decrease. However, since the ‘Yes’ responders have a supra-threshold strength of belief, the belief strength within this group will decrease only marginally over time.

While this explanation is consistent with the data pattern following each attack, it does not explain why the threshold for the ‘Yes’ response is higher after the Second Bali Bombing. This change, however, could be explained through adaptation. That is, repeated exposure makes people less responsive.
Using the PWI mean scores in Table A2.3, the correlation between the perceived likelihood of a terrorist attack and personal wellbeing is -.82 (p<.01). This is the statistic that would normally be reported, but it is quite misleading. It implies that there is a simple, progressive decrease in SWB as the perceived likelihood of an attack increases. This is quite wrong as can be shown by some additional calculations and thought.

The correlation of .82 shows that 66.6% of the variance in SWB can be explained by perceived attack probability. However, this estimate is exquisitely sensitive to the extreme values as follows.

Only 0.5% of the combined sample have answered ‘Yes’ on this basis of an estimated attack probability of 1/10. Their inclusion is problematic. Not only do most people require a higher level of probability before answering ‘Yes’ but their Personal Wellbeing Index of 77.4 points is also anomalous, being 0.7 points above the normative range. Thus, their inclusion powerfully influences the correlation. If the correlation calculation includes all probabilities 1-8, the \( r = -.606 \) (36.7% explained variance) whereas if the calculation omits those extreme values and includes the probabilities 2-8, then \( r = -.345 \) (11.9% explained variance). Thus, an alternative interpretation of these results is as follows.

People who rate the probability as 1/10 are anomalous and should be removed from the analysis. Then, over the range of probability from 2/10 to 8/10 personal wellbeing does not reliably change. Thus, for most of the probability range, believing there is a probability of a terrorist attack has no measurable effect on wellbeing. This changes at a probability estimate of 9 or 10/10. These people who consider an attack very likely comprise 15.8% of the sample and are mainly responsible for the high overall linear correlation. If the correlation calculation includes values 2-10 then \( r = .742 \) explaining 55.1% of the variance.

It is therefore evident that the -.74 correlation has been generated by the distributional extremes and cannot be validly used to indicate a progressive negative influence of one variable upon the other. This is perfectly consistent with homeostasis theory, such that personal wellbeing is being actively managed. Only at the extreme levels of perceived probability is there evidence of a damaging influence of attack beliefs on wellbeing.

Figure 2.26 shows the two-standard deviation range of the Personal Wellbeing Index for each level of attack likelihood using the scores of individuals (Table A2.3). The interpretation of this figure is as follows:
1. The 50 point level marks the transition from positive satisfaction (above) to negative dissatisfaction (below). Since we propose on the basis of homeostatic theory, that people normally have a positive level of SWB, all values should normally lie above 50 points.

2. The mean and standard deviation of the Personal Wellbeing Index has been calculated for each sub-group representing a level of perceived likelihood of an attack. The lower margin of the distribution for each sub-group has been calculated as the mean – (2 x SD). To be consistent with (1) above, this lower margin should lie above 50 points.

3. Over the likelihood estimations ranging from 3 (30% probability) to 8 (80%), the lower margin of each distribution approximates 50 points and the upper margin approximates 100 points.

4. The actual value for the Personal Wellbeing Index is determined by the following two influences:
   
   (a) A genetically determined set-point range. On average this set point is 75 and the magnitude of the range is about 12 points. Ranges can be set higher or lower than this but will be (approximately) equally distributed throughout the ‘attack likelihood’ sub-groups.

   (b) The probability of someone, at any moment, providing a response that represents the top or the bottom of their range depends on their current state. That is, normal fluctuations in their current experience will influence Personal Wellbeing within a 12 point range.

5. Within any survey there will be a small group of people who are being unusually positively influenced by their circumstances. These people will not only record a high Personal Wellbeing Index but will also, as a consequence, be more likely to record a low probability of attack. It is well known that one consequence of high SWB is the perception of low levels of risk.

6. As perceived levels of ‘attack likelihood’ rise from very low values (1-2) the assessment of probability is not simply a function of SWB level, but reflects a cognitive assessment based on personally-held information. Thus, over the range 3-8, there is no systematic relationship between such assessment and the likelihood the location of SWB within each normal range. As a consequence, the distribution of SWB is normal between the attack probabilities of 30-80%.

7. At a perceived probability of 90% the influences change as follows:
   
   (a) People who are under the influence of a sad experience, see their world darkly, and will be more likely to perceive a high risk of attack. They will, as a consequence, tend to cluster in the high risk categories.

   (b) Because of their recent experience they are likely to provide a Personal Wellbeing Index that represents the bottom of their set-point range.

   (c) Some of these people will be suffering homeostatic-defeat and will experience SWB below their set-point-range. This is unlikely to be caused by the perception of an imminent attack. More likely, their prior depressed condition causes them to regard the risk of an attack, and no doubt other negative events, as high.

   (d) The inclusion of such people in the highest ‘attack likelihood’ groups causes the group SWB mean to fall and the group variance to increase. Depressed people are, however, in a minority. The majority of people recording 9-10 likelihood are doing so because of a cognitive assessment and experiencing normal levels of SWB within their set-point-ranges.

   (e) A consequence of the above is that as the group mean falls, the group variance demonstrates a larger change downward than upward due to the increasingly negatively-skewed nature of the SWB distribution. This pattern can be clearly seen in Figure 2.26.
In order to investigate these predictions, Figure 2.27 has been prepared from Table A2.7.

Figure 2.27 depicts the Personal Wellbeing Index of people characterized in two separate ways (Table A2.7). First by whether they have recently experienced a happy or sad event (or no event). Second by their perceived probability of a terrorist attack. Values <20% probability are omitted since the number of cases is too small to be reliable.

Taking the ‘no event’ group first, it can be seen that all levels of attack probability failed to shift Personal Wellbeing Index outside the normal range. Thus, even when people perceived an attack as 100% certain their Personal Wellbeing Index remained just within the normal range. This surely indicates that such perceptions are not able, of themselves, to defeat SWB homeostasis. The total range of values for the Personal Wellbeing Index for this group is 2.8 points.

In contrast, the people who recall having recently experienced a happy event lie at the top or above the normal Personal Wellbeing Index range. The range of values spans 3.3 percentage points, from 78.7 to 75.4. This may represent people with high set-points who are pre-disposed to recall happy events and to optimistically regard the probability of a terrorist attack as low. The perception of a high risk of attack may take their SWB towards the bottom of their set-point range, but this level still represents the middle of the normal range for the general population.

The range of Personal Wellbeing Index values for the happy event group (3.3 points) is 0.5 points higher than the range (2.8 points) for the no-event group. This is likely due to the short-term effect of high-impact happy events taking the PWI above its normal range, and therefore adding variance. However, the progressive effect of the perceived probability of a terrorist to decrease SWB within each group’s set-point-ranges is the much the same for both.

The pattern of change for the ‘sad event’ group has two interesting characteristics as:

(a) The range of values is 6.2 points, which is about double that of the other two groups.

(b) The value of the PWI does not systematically decrease with increasing attack probability estimates of 20 to 80/100. All values remain around 70 points. Then, at higher levels of probability (9 and 10), the PWI falls.

This is highly relevant because we have argued elsewhere, on theoretical and empirical grounds, that 70 points represents the level that is most vigorously defended by the homeostatic system. Thus, the interpretation of these ‘sad event’ data is as follows. These people have naturally low set-point-ranges. This gives them a less positive view of their life which, in turn, makes them more likely to recall sad events and to perceive threat. As a consequence, their homeostatic system is working harder to maintain SWB and, at a perceived threat of 90-100%, the system fails. At a mean Personal
Wellbeing Index of 66.1 points a higher-than-normal proportion of the people will be experiencing symptoms of depression.

2.9.1. **Satisfaction with Safety and Terrorist Attack Probability**

As a point of validation, it would be expected that there would be some degree of correlation between changes between surveys in satisfaction with safety and the perceived probability of a terrorist attack. These data are presented in Table A2.9. With only 17 survey mean scores to work with the one-tail criterion for significance is $r = .48$. Thus, the actual correlations with safety (percentage who think an attack likely = -.65; strength of belief = -.26). Only the former is significant. There are several reasons for this as:

1. The fear of a terrorist attack is not the only factor influencing the population’s sense of safety.
2. Only a minority of people with strong convictions that an attack is highly likely and with a low set-point will be driving this relationship (see Figure 2.27).

It is also notable that the correlation between the percentage of the sample who think an attack is likely and the strength of their belief is .38. This is convergent validation for the two measures between surveys.

2.9.2. **State/Territory Comparisons using Cumulative Data**

Table A2.10 shows the mean Personal Wellbeing Index score for each State and Territory using the combined data (N = 51,591). The results are shown below.

Statistical tests of significance show that VIC, SA, QLD > NSW, WA. However, it is important to note that these differences, while significant due to the large number of cases, are very small, with the maximum difference between States of only 1.2 points. So an important perspective onto these results is that the means for all states and territories fall well within the normal range (73.6 – 76.5 points).
2.9.3. **State/Territory Comparisons Over Time**

The comparisons in Figure 2.29 are derived from Tables A2.11 and A2.12. Apart from the first survey which stands alone, all other consecutive surveys have been combined. This is necessary in order to have sufficient numbers of respondents in each analytic cell to stabilize the patterns of change. Unfortunately the numbers of respondents from Tasmania, ACT and NT are too small to be reliable, and so have not been included. These small numbers come about because our sampling for each survey is based on a proportional basis relative to the geographic distribution of population across Australia.

What is evident from this pattern of change is that the five States were not different from one another at the time of the first survey. Following this, while the average for each survey tended to rise, the rate of rise was slowest in WA and NSW. However, by Surveys 21/22 (May/Sept 2009) all of the states had a level of SWB that was higher than the first survey and no different from one another. This result achieves significance for VIC and NSW due the larger cell sizes in those two states.

**Conclusions**

Our preferred explanation for this general rise in wellbeing following September 11 is that the sense of an external threat caused people to become more socially cohesive. This elevated their satisfaction with the domains of Relationships, Community connectedness and Safety. Satisfaction with Standard of Living also rose. This sense of threat was then maintained by the First Bali Bombing and the start of the war with Iraq. It is not clear why wellbeing in WA failed to also consistently rise at the time of these events.

It is also evident that WA is the most volatile state in terms of wellbeing over time. This is not simply due to the small numbers of respondents since this number is higher than SA. One possible reason may be that WA has a more heterogeneous population than the other states, due to the massive influx of new workers to service the mining industry. It is possible that the number of respondents is insufficient to reliably represent the WA population in each survey such that each average shows high variability.
2.10. Composition of the Personal Wellbeing Index

Tables A2.17 and A2.18 show the regression of 7 and 8 domains respectively on Life as a Whole. This is the criterion test for a domain – that to be included in the Personal Wellbeing Index it must make a unique and significant contribution to Life as a Whole.

It can be seen that in Survey 26 (Table A2.17) all of the original seven domains except Safety make a significant unique contribution. This pattern is maintained for the combined surveys using either the 7-item (Table A2.17.1) or 8-item versions (No response option A2.18.1 and with response option (Table A 2.18.2).

According to Homeostasis Theory, there are two sources of variance causing the domains to share variance with life as a whole as follows:

(a) Homeostatically Protected Mood is an individual difference that causes all of these variables to share variance. This is because the different set-points for individuals within a sample exert a systematic level of positive mood which, in turn, influences the resting level of satisfaction with all of the variables.

(b) The people who have a level of SWB < 60 comprise many who are experiencing homeostatic defeat. In such cases, the control of their satisfaction level has shifted from homeostasis (HPMood) to the agent causing homeostatic defeat. When this condition is experienced, it will exert a stronger source of systematic variance than HPMood.

Unusually, in Survey 26.0, the inclusion of Spiritual caused all eight domains to make a unique contribution (Table A2.18) with Safety having a negative relationship. This may be a random result.

2.11. Normative Data

Two forms of normative data can be generated as follows:

(a) The scores of individuals can be combined. The variance of the resulting statistic will indicate the degree of variation between individuals.

(b) The mean scores of surveys can be combined. The variance from this procedure indicates the extent to which each measure varies between surveys and the range indicates the normative band of values which should include the mean of any general population group.

2.11.1. Normative Data from Individual Scores

The distribution of values on the 0-10 response scale is given below for the Personal Wellbeing Index using the aggregate data from all surveys S10-S26 (N=34,804, Table A2.5).
Section 2 Personal and National Wellbeing Over Time continued

The important feature of this Figure is the highly regular normal distribution that involves all of the intermediate scale values. This is strong evidence to support the use of a 0-10 scale. It is also notable that a total of 4.4% of the combined sample fall below 50 points. The value of 50 points is critical in that scores below this are indicative of a high risk for depression.

This is confirmed in the next Figure that shows the frequency of responses to the single item ‘How satisfied are you with your life as a whole?’ (Table A2.4, N=53,653).

As can be seen, the distribution is again highly regular, once more reinforcing the reliability of the 0-10 scale. The proportion of people scoring <50 is also very similar to the proportion derived from the Personal Wellbeing Index.

**Personal Wellbeing Index and Domains (data from individuals)**

Normative ranges calculated from the sources of individuals are taken from Table A2.20. Each range represents two standard deviations on each side of the mean. It can be seen that while the range of the Personal Wellbeing Index almost exactly matches the range of positive wellbeing (50-100), the range for the domains consistently exceed these boundaries. The fact that the Personal Wellbeing Index almost perfectly covers the range of positive wellbeing is an empirical-theoretical match. The highest degree of variability is given by Relationships, which extends over 84.9 percentage points, and Spiritual, which extends over 96.6 points.

These normative are highly stable, with the variation being no more than 0.1 percentage point from the calculations using the previous data set.
Section 2 Personal and National Wellbeing Over Time continued

National Wellbeing Index and Domains (individual scores)

These values come from Table A2.20.

![National Wellbeing Index and Domains](image)

Figure 2.33: Normative Range for Individual Data: National Wellbeing Index

These values are all highly stable. The ranges are generally larger than for personal wellbeing and the largest is for Government which is 97.4 percentage points. It is notable that the range of the National Wellbeing Index (58.4 percentage points) is larger than that of the Personal Index (49.7). Moreover, the National Wellbeing Index range does not cover the top 9.3% of the positive range, and the extension of the range magnitude has mainly occurred from the bottom. This is consistent with the idea that distal (national) life aspects are under less homeostatic control, and more cognitive control, than proximal (personal) life aspects (Cummins, et al., 2003).

Life as a Whole and Life in Australia (individual scores)

![Life as a Whole and Life in Australia](image)

Figure 2.34: Normative Range for Life as a Whole and Life in Australia

The ranges and mean scores of these two variables are very similar (Table A2.19).

This does not fit with theory. Here, the distal variable (life in Australia : 82.5) is being rated as higher than the proximal variable (Life as a whole : 77.8), which is against theory. However, it was not always so as the Figure below shows.
It is evident that the ordering of the means was consistent with proximal-distal theory prior to, and immediately following, September 11. Then, six months following September 11 (S3), satisfaction with life in Australia increased by an astonishing 11.0 percentage points and it has remained within a 3.6 point range ever since (81.3 to 84.9 points).

It seems that the September 11 terrorist attacks caused Australians to think more positively about their country. It also caused them to think more positively about themselves, but the change here is less marked, as homeostasis would predict.

Interestingly, however, these two distributions are related to one another. A correlation coefficient applied to the mean scores of each variable across the surveys yields $r = .67$, $p < .001$ (Table A2.13). Thus, when the population as a whole think more positively about themselves, they also think more positively about life in Australia, but the latter is more responsive in measurement terms.

Table A2.8.1 shows the distribution of Life as a Whole matched to the distribution of the Personal Wellbeing Index, and Table A2.8 shows the distribution of the Personal Wellbeing Index matched to the distribution of life as a whole. The correlation between these two measures is quite modest using individual scores ($r = .67$) which means they share only 42.3% of their variance. There are many more people scoring very low on life as a whole than on the Personal Wellbeing Index.
2.11.2. *Normative Data using Survey Mean Scores as Data (N=26)*

See Table A2.21 and Figure 2.21

2.11.3. *Relationships Between the Indices and Their Domains (survey mean scores as data)*

The correlation matrix showing the relationship between the survey mean scores for the Personal Wellbeing Index, National Wellbeing Index and their constituent domains is shown in Table A2.13. The crucial information in understanding this table is that the correlations do not involve raw data from individuals within surveys. If this was the case then all of the values would be positive, reflecting the power of the SWB set-point to influence all domains in the same direction.

Instead, the data used for these correlations are the mean scores from surveys. Thus, the correlations are a measure of the extent to which these sample mean scores vary together between surveys. The following observations pertain:

1. In terms of the Personal Wellbeing Index domains (top-left quadrant of Table A2.13), the correlations are mainly positive and significant, showing that the domains tend to move together between surveys. This is interesting in showing that there must be some common force for change in domain satisfaction that is experienced at the level of the whole sample. This could be sampling bias, such as if the samples differed markedly in the ratio to high to low income households, or it could be some common experiential variable, such as national elation at Olympic success. These possibilities require further analysis for their resolution.

Some domains, on the other hand, are showing a high level of independent variation between surveys. These include Health, where only 1/6 of the correlations with other domains is significant, and Achieving with only 3/6 significant. All other domains have 4/6 significant correlations with other Personal Wellbeing Index domains.

It is interesting to note that, even though Health is generally unrelated to the movement of the other domains, it is strongly tied to Achieving in Life (r = .58), sharing 33.6% of the variance. It is not clear why this link occurs.

2. The extent of co-variation between the National Wellbeing Index domains (bottom-right quadrant of Table A2.13), is generally much weaker than for the Personal Wellbeing Index domains. This is predicted from homeostasis theory on the basis that they refer to more distal targets, and so contain less HPMood. Indeed, all six domains contain just 3 significant links to another domain compared with 11 for the 7-item version of the PWI.

Of these correlations within the NWI, one of the most interesting is absence of any significant correlation between satisfaction with government and any other domain, either national or personal.

3. In terms of the cross-correlations between the PWI and NWI, it is clear that they tend to move together (r=.66).
Dot Point Summary for the Wellbeing of Australians

[Neither the Personal Wellbeing Index nor the National Wellbeing Index has changed since the last survey in September 2011. As a consequence, the results below, reproduced from the previous Report 26.0, remain unchanged]

1. The Personal Wellbeing Index has gradually decreased during the 30 months since Survey 22 in September 2009. Its current value of 75.4 remains marginally higher than the survey average of 75 points.

<table>
<thead>
<tr>
<th>Survey Date</th>
<th>Major events preceding survey</th>
<th>Strength of satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 Apr 2001</td>
<td>a = September 11</td>
<td>76.7</td>
</tr>
<tr>
<td>S2 Sep 2001</td>
<td>b = Bali Bombing</td>
<td>73.7</td>
</tr>
<tr>
<td>S3 Mar 2002</td>
<td>c = Pre-Iraq War</td>
<td></td>
</tr>
<tr>
<td>S4 Sep 2002</td>
<td>d = Hussein Deposed</td>
<td></td>
</tr>
<tr>
<td>S5 Mar 2003</td>
<td>e = Athens Olympics</td>
<td></td>
</tr>
<tr>
<td>S6 Sep 2003</td>
<td>f = Asian Tsunami</td>
<td></td>
</tr>
<tr>
<td>S7 Mar 2004</td>
<td>g = Second Bali Bombing</td>
<td></td>
</tr>
<tr>
<td>S8 Sep 2004</td>
<td>h = New IR Laws</td>
<td></td>
</tr>
<tr>
<td>S9 Mar 2005</td>
<td>i = Labor Government Elected</td>
<td></td>
</tr>
<tr>
<td>S10 Sep 2005</td>
<td>j = Stock market collapse</td>
<td></td>
</tr>
<tr>
<td>S11 Mar 2006</td>
<td>k = Fires and floods</td>
<td></td>
</tr>
<tr>
<td>S12 Sep 2006</td>
<td>l = Stock market recovery</td>
<td></td>
</tr>
<tr>
<td>S13 Apr 2007</td>
<td>m = Labor government re-elected</td>
<td></td>
</tr>
<tr>
<td>S14 Oct 2007</td>
<td>n = Qld/Vic floods</td>
<td></td>
</tr>
<tr>
<td>S15 May 2008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S16 Oct 2008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S17 Apr 2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S18 Oct 2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S19 May 2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S20 Apr 2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S21 Sep 2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S22 Apr 2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S23 Sep 2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S24 Apr 2012</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Special Surveys:
18.1: Three months after the change in Government and following several consecutive interest-rate rises.
20.1: Following the Victoria Bush Fires in which 173 people died.

Note: In this and subsequent figures, the shaded (blue) area shows the generic normal range of survey means scores for the measure in question (Table A2.22). These blue areas represent two standard deviations around the mean using survey mean scores as data.
2. The National Wellbeing Index has fallen by a significant 2.3 points in the 12 months since Survey 25 to 60.4 points. It is now among the lower scores for this index, being only 3.7 points below its maximum (64.1 points). It remains 4.6 points higher than it was in Survey 1 (55.8 points).

3. Satisfaction with health really does not change significantly between surveys and so is a good benchmark to indicate that the data set as a whole is reliable. In this survey (73.4 points) it has not statistically changed since Survey 26 but has risen back into its normal range. It remains not different (-0.2 points) from its level at Survey 1 (73.6 points). There is no obvious cause for these low scores.
4. Satisfaction with personal safety (80.4 points) remains at a very high level, only 0.7 points below its highest level ever (81.3 points in February 2009).

5. People’s satisfaction in feeling part of their community (71.9 points) has risen non-significantly by +0.1 points since the last survey. It remains close to its highest level yet recorded (73.0 points) at Survey 20.1 (February 2009), immediately following the Victorian bushfires.
6. Satisfaction with the economic situation (60.9 points) has risen by a non-significant +0.9 points since Survey 25 and remains below the level it has been for much of the period of these surveys, between about 64-68 points. It is no longer different from survey 1.

7. Satisfaction with the state of the natural environment (63.9 points) has fallen by a non-significant -0.1 points since the last survey and remains very high. The recent high levels are likely a consequence of the breaking drought and the dominance of climate-change sceptics in the media.
8. Satisfaction with Government (46.0 points) has risen by a non-significant +1.5 points over the past six months to remain at its lowest levels yet recorded. It is now -6.6 points below its lowest level under the Howard Government (52.6 points, Survey 16), just before electoral defeat. It is 15.5 points below its highest level of 61.5 (Survey 19, April 2009) just 3.0 years ago.

9. Among the people who consider a terrorist attack likely ‘in the near future’, the strength of their belief has fallen to its lowest level yet recorded.
10. People who regard the probability of a terrorist attack as 9 or 10/10 (15.2% of the total sample) have lower than normal wellbeing.

People who regard a terrorist attack as very likely have low wellbeing.

11. Statistical tests of significance show that VIC, SA, QLD > NSW, WA. However, it is important to note that these differences, while significant due to the large number of cases, are very small, with the maximum difference between States of only 1.2 points. So an important perspective onto these results is that the means for all states and territories fall well
3. Household Income

NOTE: Due to the absence of change in any of the personal or national variables in Table 2.1, Chapter 3 has not been updated from Report 26, with the exception of Section 3.3.1. The revised values for Survey 27 are, however, provided in Appendix 3.

We ask: “I will now give you a number of categories for household income. Can you please give me an idea of your household’s total annual income before tax. Please stop me when I say your household income category.”

Table 3.1: Income Frequency (Survey 26)

<table>
<thead>
<tr>
<th>Cumulative</th>
<th>Survey 26</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumulative (Survey 7-26)</td>
<td>% of respondents to this question</td>
</tr>
<tr>
<td>Less than $15,000</td>
<td>3,618</td>
</tr>
<tr>
<td>$15,000 to $30,000</td>
<td>6,324</td>
</tr>
<tr>
<td>$31,000 to $60,000</td>
<td>8,977</td>
</tr>
<tr>
<td>$61,000 to $100,000</td>
<td>7,582</td>
</tr>
<tr>
<td>$101,000 to $150,000</td>
<td>5,669</td>
</tr>
<tr>
<td>$151,000 to $250,000</td>
<td>1,489</td>
</tr>
<tr>
<td>$251,000 to $500,000</td>
<td>337</td>
</tr>
<tr>
<td>$500,000 or more</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>34,096</td>
</tr>
</tbody>
</table>

The data in Table 3.1 are derived from Tables A3.1 and A3.2. The three categories $151-250K, $250-500K and $500K+ were introduced for the first time in Survey 17. It can be seen that the sample for Survey 26 is wealthier than the running average. This trend started being noticeable from Survey 16. The reason is the continued rise in wages. However, since these rises do not reflect increased buying power, due to the matching rise in the cost of living, they are unlikely to systematically bias the whole sample over time. It does mean that people who remain in the lowest income categories have progressively less purchasing power. This should be a progressively negative influence on their wellbeing over time.

As background to the data in this chapter, annual gross incomes are currently as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>&lt;$15,000</th>
<th>$15,000-$30,000</th>
<th>$31,000+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age pension (September 2011)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- single</td>
<td>17,914</td>
<td>27,008</td>
<td></td>
</tr>
<tr>
<td>- couple</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youth allowance (September 2011)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(16-24y)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Single, away from home</td>
<td>10,106</td>
<td>13,239</td>
<td></td>
</tr>
<tr>
<td>- Single with children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Partnered with children</td>
<td>22,188</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment (September 2011)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(‘New Start’)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Single, with no children</td>
<td>12,347</td>
<td>13,359</td>
<td></td>
</tr>
<tr>
<td>- Single with children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Partnered with children</td>
<td>22,292</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum full-time wage (July 2010 --before tax) [$15.00/hr]</td>
<td>29,635</td>
<td>36,400</td>
<td></td>
</tr>
<tr>
<td>Median full-time wage (July 2006)</td>
<td></td>
<td>66,820</td>
<td></td>
</tr>
<tr>
<td>Median household income (2007-2008)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average full-time adult total earnings (August 2010)</td>
<td>68,224</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average adult total earnings (F/T and P/T) (August 2010)</td>
<td>51,064</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Social Security [http://www.centrelink.gov.au/]
* Minimum national minimum-wage/pages/default.aspx
* http://en.wikipedia.org/wiki/Median_household_income_in_Australia_and_New_Zealand
From the above it is notable that the only people within the social security system who have an income < $15,000 are single people who are below retirement age. Other people in this income category may be poorly-paid people in family businesses or other low-income, self-employed people.

When people live with another adult, household income from social security moves into the next income bracket of $15,000-$30,000. This is highly significant for the interpretation of results between these first two categories, since the presence of a partner has a substantial effect to facilitate wellbeing (see Chapter 7). Thus, determining the cause of the below-normal wellbeing experienced by people with household incomes < $15,000 is confounded by (at least) the lack of a partner, disability, unemployment, and single parenthood.

In this light it is somewhat surprising that SWB only rises by about two percentage points as income changes from < $15K to $15-30K (see Figure 3.11).

The income category of $15-30K contains a very mixed group. It includes people on all types of welfare payment who are living with at least one other person. It also includes people living alone who are full-time employed on a low wage or on an age pension. It is not until the income bracket reaches $31-60K that most people on welfare are excluded. Even here, however, it is quite possible for someone on welfare to be living with another person who has a higher income, or to be living in a shared household with other adults.

The influence of these various factors can only be determined by the break-down of data into sub-groups. This is being progressively achieved within this chapter as the combined data-set becomes large enough to support the reliable analysis of these sub-groups.

**Chapter construction**

The results for Household Income are presented in three sections. The first compares Survey 26 against normative ranges generated from Household Income data. That is, income specific normative ranges are generated by using the mean scores of each income group over past surveys as data. This section therefore allows the Survey 26 data to be compared with the average of similar past data.

The second section described each Household Income group averaged across all surveys compared to generic normal ranges. For example, the average of the $15-30K respondents over all surveys is compared to the generic normal range for groups. This comparison shows how, on average, each income group compares against general population averages.

The third section compares the average income groups within demographic characteristics.
### 3.1. Survey 26 vs. Income-Specific Normal Range

Personal Wellbeing Index. The data below are taken from Table A3.1 (Survey 26) and A3.35-37 (normative data). The intention of this figure is to show the Personal Wellbeing Index in Survey 26 (X) compare to the previous survey 25 (O) and to income-specific normal ranges. The highest income group ($500K +) has a wide normal range due to small and unreliable cell sizes.

![Figure 3.1: Surveys 24 and 23 vs Income-Specific Normal Range (PWI)](image)

All income groups are within their normal range.

### 3.2. Domain-Level Profiles for individual income groups

These results come from Table A3.1 (Survey 24) and Tables A3.35-A3.37 for the income group specific normal ranges.

![Figure 3.2: $15K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains)](image)

For Survey 25 the PWI mean and all domains lie within their normal ranges.
Figure 3.3: $15-30K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains)

For Survey 25 the PWI mean and all domains lie within their normal ranges.

Figure 3.4: $31-60K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains)

For Survey 26 the PWI mean and all domains lie within their normal ranges. Two domains as Safety and Community have remained high in the last three surveys.
Figure 3.5: $61-$100K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains)

For Survey 26 the PWI mean lies 0.4 points below its income-specific normal range. The two domains of Health (-1.9 points) and Achieving (-1.0 points) also lie below their normal ranges. Standard, Health, Relationships and Future Security also are very low. Health has remained quite low in its range for the last 4 surveys, and Relationships has remained low for the past 3 surveys. This income group is not doing well.

Figure 3.6: $101-$150K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains)

For Survey 26 the PWI mean and most domains lie within their normal ranges.
Section 3: Household Income continued

Figure 3.7: $151-$250K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains)

All values for Survey 26 lie within their income-specific normal range.

Figure 3.8: $251-$500K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains)

All values for Survey 26 are within their income-specific normal range.

Figure 3.9: >$500K: Surveys 26 and 25 vs Income-Specific Normal Range (PWI and domains)
Section 3: Household Income continued

For Survey 26 the PWI mean and most domains lie within their income-specific normal ranges. However, two domains lie below. One is Standard (-9.6 points) and the other is Relationships which lies marginally below. It should be noted that these values are based on N=6, so are not very reliable.

Summary: In general, domain values for the individual income groups are within their income-specific normal ranges. The group that seems to be in trouble is the $60 - $100K group, with below normal PWI and two domains as Health and Achieving. The other domains of Standard, Health, Relationships and Future Security also are very low.

3.2.1. Domain Sensitivity to Income

Table A3.1 shows comparisons between income levels, for the PWI and domains, for Survey 26. Table A3.3 shows these comparisons across all surveys in a combined table. Table A3.4 shows these comparisons for the combined data set of Surveys 7-26. The following observations can be made:

a. While Table A3.4 shows that the personal domains in Survey 26 generally follow the same pattern as the Index, there are a few exceptions. First, Community shows little systematic sensitivity to household income even though it is sensitive to differences between surveys (see left-margin ANOVA Table A3.3). It is interesting that this is the least personalised (the most distal) of the personal domains and so least likely to be affected by personal demographics.

b. It is notable that, among the Personal Wellbeing Index domains, only two domains as Standard and Achieving shows a significant income x survey interaction (left side of Table A3.3). This has been caused by the changing value of the lowest income group for Standard, and the name change for Achieving, described in Chapter 2 and Section 2.3 below.

c. It might reasonably be expected that Standard of Living would be the domain most sensitive to wealth. (Table A3.4). In fact two domains, Standard and Future, show an increment from $100-150K and $251-500K. The PWI also shows this increment. It is interesting that there is no sign of an increment at the intermediate range of $150-200K. Thus, from an average base of $125,000, the next increment in wellbeing does not occur until household income of $375,000, or three times the income level.

d. While the within-survey comparisons shown in Table A3.3 are quite variable from one survey to the next, their combined results can be used to generate a useful index of relative domain sensitivity to income. This has been done by observing the number of significant income group comparisons within each domain of Table A3.3 and cumulating those across all surveys from Survey 7 to the present. For example, the total number of significant comparisons within Survey 26 for Standard of Living is 11. These results are as follows:

<table>
<thead>
<tr>
<th>The cumulative number of significant income-group comparisons within domains (Surveys 7-26)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>238</td>
</tr>
<tr>
<td>Health</td>
<td>169</td>
</tr>
<tr>
<td>Achieving</td>
<td>116</td>
</tr>
<tr>
<td>Future Security</td>
<td>108</td>
</tr>
<tr>
<td>Relationships</td>
<td>100</td>
</tr>
<tr>
<td>Safety</td>
<td>81</td>
</tr>
<tr>
<td>Community</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>818</td>
</tr>
</tbody>
</table>

This is interesting in demonstrating an enormous degree of difference between the domains in the extent to which they are influenced by household income. Almost half of the influence (49.8%) is provided by the two domains of Standard of Living and Health. The contribution of the others is generally unreliable, being present in some surveys but not others, except for Community which is insensitive to income.
Section 3: Household Income continued

It is notable that ‘community’ is insensitive to income.

f. Another way to observe the domains as differentially sensitive to income, is to study the degree of change in satisfaction from low to high income (Table A3.4).

The percentage point differences in both the PWI and domains between the lowest (<$15K) income group and the group with the highest value is shown below. In most cases the group with the highest value is the $500K+, but exceptions are for Health ($151-250K) and Safety ($251-500K).

Figure 3.10: The Influence of Household Income to create differences within the Personal Domains (combined data)

This is a logical sequence, in that the top four domains can be more easily ‘bought’ than the three lowest. Standard of Living is most obviously related to income, good medical care can also be purchased, people may gain a sense of future security by having a household income that is higher than the average, and relationships are facilitated by wealth. On the other hand, a sense of achieving in life can be unrelated to income and safety is hard to purchase. No matter how much wealth they have, people who feel insecure may not be able to create an environment that makes them feel safe. Finally, connection to community requires personal effort rather than wealth.

These results provide important information for interventions designed to enhance wellbeing. Very often such interventions concentrate on the inter-personal domains, and whether these domains are amenable to change through such interventions, when they are not very amenable to change via wealth, is an interesting issue.

The second point worth noting is that this domain order shows a significant relationship with the contribution of each domain to ‘Satisfaction with Life as a Whole’ (Table A2.17.1).

Table 3.2: Rank Order of Domains (combined data)

<table>
<thead>
<tr>
<th>Points change with income (&lt;$15K to $251-500 or $500+)</th>
<th>Predicting Life as a Whole</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td>β</td>
</tr>
<tr>
<td>----------------</td>
<td>-----</td>
</tr>
<tr>
<td>Standard</td>
<td>14.7</td>
</tr>
<tr>
<td>Health</td>
<td>12.9</td>
</tr>
<tr>
<td>Future</td>
<td>11.9</td>
</tr>
<tr>
<td>Achieving</td>
<td>10.4</td>
</tr>
<tr>
<td>Safety</td>
<td>7.9</td>
</tr>
<tr>
<td>Relationships</td>
<td>10.9</td>
</tr>
<tr>
<td>Community</td>
<td>2.2</td>
</tr>
</tbody>
</table>

The points change come from Figure 3.10.
The Spearman Rank Order coefficient between these two rankings is .637 which is just non-significant (< .05 = .715). This indicates the possibility that the sensitivity of the domains to household income is related to the contribution made by the individual domains to ‘life as a whole’.

### 3.3. Income Group Averages vs. Generic Normal Ranges

#### 3.3.1. Personal Wellbeing Index

The relationship between income and the Personal Wellbeing Index is given for the combined surveys in Table A3.4. The range of the Personal Wellbeing Index across income groups is 9.8 percentage points (Figure 3.11)

The * in Figure 3.11 denote a significant increment in wellbeing from the previous level of income. The exception is the star over the $251-$500 which denotes a difference from the $101-$150 group.

There are five significant increments. The first four cover the income levels above <$15,000. The final of these consecutive increments is at $101-150K, where wellbeing is higher than it was at $61-100K (Table A3.4). To some extent these determinations of significance are a function of the number of respondents and it seems likely that as numbers accumulate in the highest category it will become significantly higher than the $101-150K group. However, the increment from $101-150 to $151-250, 0.8 points, is not large enough to become significant even with a greatly expanded cell size. The next significant increment (2.8 points) is at $251-500K.

These results suggest two conclusions. First, that the capacity of income to reliably raise wellbeing through its use as a defensive resource, does not extend beyond a household income of $100-150K. In Survey 26, 17.2% of households have an income at this defensive level ($101 -150K) and 12.0% of households have an income that is higher (Table A3.2).

These calculations clearly indicate the diminishing returns with increasing household income. At the lowest income level an additional $15,000 buys 2.5 percentage points of wellbeing, or $6,000 per point. From an income of $15-30K, it takes an additional $20,000 to buy one percentage point. The complete calculation of the cost of a percentage-point rise in the Personal Wellbeing Index at each income level as shown in Table 3.3.
### Table 3.3: The Cost of Each PWI Increment

<table>
<thead>
<tr>
<th>Income ($)</th>
<th>$ increment</th>
<th>Points gained</th>
<th>$ per point</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;15 to 15-30</td>
<td>15,000</td>
<td>2.5</td>
<td>6,000</td>
</tr>
<tr>
<td>15-30 to 31-60</td>
<td>30,000</td>
<td>1.6</td>
<td>18,750</td>
</tr>
<tr>
<td>31-60 to 61-100</td>
<td>40,000</td>
<td>1.6</td>
<td>25,000</td>
</tr>
<tr>
<td>61-100 to 101-150</td>
<td>50,000</td>
<td>1.5</td>
<td>33,333</td>
</tr>
<tr>
<td>101-150 to 151-250</td>
<td>100,000</td>
<td>0.9</td>
<td>111,111</td>
</tr>
<tr>
<td>151-250 to 251-500</td>
<td>250,000</td>
<td>0.1</td>
<td>2,500,000</td>
</tr>
<tr>
<td>251-500 to 500+</td>
<td>500,000</td>
<td>0.0</td>
<td>0</td>
</tr>
</tbody>
</table>

One complicating factor in interpreting this table is that at the lowest income levels the samples are over-represented by people who are in some way disabled or disadvantaged. However, the trend of diminishing returns is maintained in higher income groups where such factors are less influential on wellbeing. The exponential nature of the cost of the wellbeing increments is shown in Figure 3.12.

![Figure 3.12: The cost of purchasing a percentage point of personal wellbeing](image)

Two further observations can be made. First, while the extent of significance between income increments (Table A3.35) is N dependent, and therefore likely to change as more people are added to each income category. However, there is no reason to expect this to change the calculations of percentage-point costing above. These rely only on the reliability of each Personal Wellbeing Index mean score. Here the numbers are large enough to be reliable.

The second observation is that these data confirm, as a reasonable approximation, the upper limit of about 81 to 82 percentage points as the maximum for group data Figure 3.11. This is consistent with many other calculations in this report and elsewhere.
3.3.2. Domain Averages vs Generic Normal Ranges for Domains

The data below are taken from Table A3.4 (cumulative means) and Tables A2.21 (generic normative data). The figures that follow show the domains compared with averages for the population.

**Figure 3.13: Standard of Living vs Generic Normal Range for Standard**

Satisfaction with Standard of Living does not reach normal levels until gross household income reaches $31-60K. This is generally the pattern for the other domains also. The rise in satisfaction with income is pretty linear up to $251-500K.

**Figure 3.14: Health vs Generic Normal Range for Health**

Most notable is the ceiling reached at $251-500K, and the decreased health satisfaction at the highest income. This decrease is likely a function of older age within this group.
The gradual rise in Satisfaction with Achieving continues into the highest income group.

The rise in Satisfaction with Relationships reaches a plateau at $101-150K, but then rises again at $500+K. It appears that very high income people find it easy to make good relationships.

The incremental rise in Safety satisfaction does not continue into the highest income group.
All values lie within the normal range and there is no systematic statistical difference between income groups. Satisfaction with Community does not systematically vary with income.

Satisfaction with Future Security continues to increase with income into the highest income group.

**Summary**

In general, the domains continue to show an incremental increase in satisfaction into the highest income group. The domains that fail to show this increase are Health, Safety, and Community which shows no systematic rise with household income.

3.3.3. **National Wellbeing Index**

The NWI is slightly less sensitive to income than the PWI. Using the combined data across surveys, Table A3.5 shows 18 significant differences in the NWI between income categories, while the PWI (Table A3.4) shows 23 such differences. The greater sensitivity of the PWI is in a function of both larger difference between income categories (<$15K to $500: PWI = 9.7 points vs. NWI = 5.9) and also a function of smaller variance (e.g. $251-500K: PWI = 9.9 vs NWI = 12.5).

The higher variance of the NWI is consistent with homeostatic theory. Because the national domains are less saturated with HPMood they show more variation due to cognitive evaluations.
Section 3: Household Income continued

3.4. National Wellbeing Domains

In terms of Survey 26 data alone (Table A3.1), the national domains show a low sensitivity to the effects of income.

When the combined data are analysed (Table A3.5), Business shows the greatest income sensitivity, with 23 significant differences between income categories, as shown in Figure 3.20. The normal range comes from Table A2.21.

![Figure 3.20: Income x Business satisfaction (combined data)](chart)

Key: * denotes that the level of satisfaction is higher than for the previous income bracket

The pattern of change has the same level of sensitivity to income as the Personal Wellbeing Index, in that satisfaction rises up to $101-150K and then plateaus. However it rises significantly again at $250-500K.

3.4.1. Terrorist Attack Probability

We asked people whether they thought there would be a terrorist attack in Australia, in the near future. Those who said yes were asked to rate the strength of their belief (Table A3.1).

In Survey 26, the proportion of people who think an attack likely is higher within the lower income groups.

![Figure 3.21: Income x % Who Think an Attack is Likely (Survey 26)](chart)

The strength of belief does not differ significantly between the income groups (Table A3.1).
3.5. **Changes in Income Categories Over Time**

3.5.1. **Changes in responding to the income question**

Table A3.6.2 shows the response rate to the question on income over the surveys. It can be seen that the usual response rate is about 75-85%, but there have been some surveys where this rate has been much lower. In S5 the rate was 61.9% because we asked a direct question of how much money the household earned, rather than asking people to choose between income brackets.

3.5.2. **Personal Wellbeing Index**

There should be a systematic decrease in wellbeing within the lower income categories over time. This is because, while the margins of the categories are fixed, incomes are constantly rising to counteract inflation. Thus, there should be fewer people in these low income categories over time (assuming constant demographics, such as unemployment rates) and the people remaining are more likely to have some disability or other impairment which reduces both their earning capacity and their wellbeing. Additionally, of course, each income bracket has less purchasing power over time (e.g. $15,000 had more purchasing power in 2001 than it does in 2011).

Table A3.6 shows that the income categories $>60,000 have changed at least once over the survey series as we have adjusted to increasing the number of categories at the top of the income range. This is disruptive to the pattern because each change has expanded the top of the category in question, with the addition to that category of people with higher income than the category previously allowed. The lowest three income categories, however, have remained unchanged.

The first observation from Table A3.6 is that the number of people, from each survey, populating these three lowest income categories has been progressively decreasing. There are now approximately 25% as many people in the lowest category and about half as many in the next two categories as there were when these surveys started. While this is logical for the lowest category, it is not for the other two categories.

The rate of inflation and the indexation of wages over the 10 years of these surveys can not account for these results. Assume inflation at an average about 3% per annum, then a salary would have increased through simple indexation by around $1,000 for a $30,000 salary. This should do no more than to cause an equal number of people to enter and leave the $31-60K category as people move into the bracket from the $15-30K category and move out into the $61-100K category. But this is not evident. Instead, the number of people in the $31-60K category has decreased from around 500 in the first three surveys to around 350 more recently.

This has implications for comparing the overall results of these surveys over time. If the sample is becoming progressively richer in real terms, with relatively more purchasing power, then the wellbeing of the sample should rise over time. And that is what we have found (Table A3.6.1).

Within income categories, however, wellbeing due to the influence of income should be constant between surveys, because the people populating the category have experienced rising income even though their income remains at a low level. This is tested in the figure below.
Table A3.6 provides these results. It is evident that while the wellbeing of the $31-60K people has remained steady, there was a marked decline in the wellbeing of the people with a household income <$15K, until the most recent three surveys. Ignoring these last three values, the fall in wellbeing could be due to two kinds of influence. It could be due to the falling purchasing power of this lowest income bracket. It could also be due to the kinds of people who remain in this bracket as being particularly vulnerable people.

Insight into these two possibilities comes from the results already reported in Figure 3.2 which compares Survey 26 data with the $15K specific normative range. This shows that all domains lie within the normal range. This suggests that the apparently falling trend apparent in Figure 3.22 is not reliable, and that there is no change over time in the proportion of the <$15K income category who are medically and relationally comprised.

The generally stable wellbeing of the lowest income categories over time is confirmed by Table A3.6.1 which groups the data by years. This procedure increases the sensitivity of this particular analysis by increasing the cell sizes. It shows no systematic change over time in the PWI within any of the income categories.

3.5.3. Changes Over Surveys Within Domains

Three domains are shown in Tables A3.7 to A3.7.2. These tables are in pairs, with the first showing the data from each survey, and the second grouping surveys within years. The second table in each pair is the most sensitive to change due to its larger N.

**Standard** (Tables A3.7 and A3.7.1) shows no systematic change over time in either the mean score or within-group variance.

**Health** (Tables A3.7.1.1 and A3.7.1.2) shows no change over time in the lowest income group, but a significant trend of decreasing satisfaction in the next three income groups. There could be several possible reasons for this as:

(a) People with poor health on welfare moving into higher income brackets. While this might be valid for the $15-30K, it would not be true for the $31-60K because the welfare payments are insufficient to reach this range.

(b) People in the lower income ranges can buy less health support and services, so experiencing poorer health. Assuming incomes have kept in step with inflation this seems unlikely.
Section 3: Household Income continued

(c) That they are lower in the income hierarchy. That is, whereas in 2001 some 20% of people were below the $15-30K group, in 2011 it is down to about 5%. This is speculative but people’s positions in work-place hierarchies are known to relate to health.

Relationships (Tables A3.7.2 to A3.7.2.1) shows a decreased satisfaction in all groups up to $61-100K. This could be due to more people with personal difficulties remaining in the <$15K group, and more single, separated and divorced people making-up the lower income groups. That is, people living with their partner are increasingly likely to have a gross household income that exceeds $60,000.
3.6. **Demographics**

3.6.1. **Income and Gender**

The gender distribution of income shows more females in the lower income groupings (Table A3.8). This is mainly a consequence of relative longevity. More females are retired and live in single-pension households.

In terms of Survey 26, both genders show the whole-sample pattern of rising Personal Wellbeing Index with income.

In terms of the combined data the gender differences are shown in Figure 3.23.

![Figure 3.23: Gender x Household Income (combined data)](image)

The shaded income categories indicate a significant gender difference. Females tend to have higher wellbeing at all incomes up to $151-250K. The shapes of these gender-slopes are similar. Both genders show a significant and progressive rise in Personal Wellbeing up to $151-250K. Thereafter, increased income provides a stronger increase in wellbeing for males.

In summary, the higher wellbeing of females over males is evident only up to an income of $151-250K and both genders conform to the incremental wellbeing increase with rising income shown in Figure 3.11.
3.6.2. **Income and Age**

The age distribution of income is provided in Table A3.9 for Survey 26 and Table A3.10 for the combined survey data. The normative age-ranges are taken from Table A5.12.1. Table A3.10 shows a concentration of low income in the groups aged 66+ years. It can also be seen from Figure 3.24 that the most elderly group has the highest level of wellbeing for all income groups. For the low income groups, at least, this indicates a decreased reliance on money as an external resource. These people have a level of personal wellbeing that is much more highly controlled by internal factors.

The following figure comprises the combined data taken from Table A3.10.

![Figure 3.24: Income x Age (combined data)](image)

The most obvious feature of this figure is that low household income is seriously compromising the wellbeing of people aged 26-55. The value of 62.3 points at 36-45 years is extremely low and it is clear that these people are living in situations where personal wellbeing is being severely damaged by their life circumstances. The people in such households clearly require assistance.
It can also be seen that:

(a) The effects of low household income to reduce middle-age wellbeing is evident for the two lowest income groups. At an income of $31-60K wellbeing remains within the normal range for all ages.

(b) There is a clear rank-order of wellbeing that reflects household income. This is pretty well maintained at all ages but is most pronounced in the normal working age-range of 26-65 years. It is much more muted in the 76+ age group.

(c) These results again confirm a ceiling for wellbeing at about 82 points.

3.6.2.1. Income x Age x Gender

These combined data are taken from Tables A3.11 (Males) and A3.12 (Females).

![Income x Age x Gender graph](chart.png)

Figure 3.25: Income x Age x Gender (combined data)

In general it can be seen that the generally higher wellbeing of females is evident. However, there is a curious reversal in the low income groups aged 26-35 years in which females have lower wellbeing than males. This may be due to marital status with more females in this age group being sole parents.
Certainly there are more females (N=79) than males (N=51) in this group. This requires further investigation, however the N is not sufficient to do so at this stage.

### 3.6.3. Income and Household Composition

Table A3.13 shows the results for Survey 26 and Table A3.14 shows the combined data, also presented in Figure 3.26. This shows that the general trend across household composition groups is for increased wellbeing with increased income, but some groups demonstrate this more markedly than others. These differences are caused by a combination of social support and financial demands.

![Figure 3.26: Income x Household Composition: Personal Wellbeing Index (combined Surveys)](image)

The results shown above make three strong points about the management of personal wellbeing as follows:

1. Living with partner in the absence of children is the best option for high wellbeing for incomes up to about $100K. Beyond this income level, the groups tend to converge as the effects of income negate the effects of different living circumstances.

2. The power of income to affect wellbeing depends on the strength of demands and other resources. The group with the best resources and least demands are couples alone. Even at an income of <$15K their wellbeing lies in the normal range, and up to an income of $251-500K their wellbeing rises by only 5.5 points. This contrasts with the single parents, who have the highest demands relative to their income. From <$15K to $151-250K their wellbeing increases by 15.3 points.

3. As further evidence of the positive power of a partner, the wellbeing of parents living with their child enters the normal range at an income of $31-60K. Sole parents do not enter the normal range until they reach an income of $61,000 - $100,000.
This is an important finding because it indicates the crucial relevance of household composition on wellbeing, rather than simply the number of household members. Economists frequently assume that increasing the number of household members puts increased pressure on household resources (true) which then exerts a parallel and negative influence on wellbeing (false). Clearly, was the economists’ position to hold, a sole parent would have higher wellbeing than a household that contained an additional adult. This is not what these data show.

All of these results indicate that the management of personal wellbeing is a function of stressors matched against resources. Income provides one form of resource, and social support provides another. If the relative advantage of the social support provided by another adult exceeds the financial demands required for their maintenance, then their presence will have an overall advantage in terms of wellbeing management. This is what has occurred, and a similar argument can be made in terms of the data on people who live alone. They have a lower level of wellbeing than the people who live only with their partner and their wellbeing does not enter the normal range until their income reaches $101-150.

The sensitivity of the living alone option to income has an important implication for the interpretation of the generally low wellbeing of people who live alone. It is apparent from these data that their level of wellbeing is unlikely to reflect some personality deficit, such as low levels of extraversion. Much more likely is that these people have achieved a level of resource, through an income of $101-150K that enables them to effectively buffer their wellbeing in the absence of a partner.

An alternative explanation is that this group of living alone, high income people, comprises a high proportion who have separated from their partner and who have high extraversion. This however, can be dismissed on two grounds. First, it is more likely that the low income groups would contain a greater proportion of people who have separated. This may occur either by income division following separation or the reliance of one partner on social security. The second reason is that people who have never married show the same sensitivity to rising income (Table A3.18).
3.6.3.1. Income x Household Composition x Gender

These results are shown for males in Table A3.15 and for females in Table A3.16.

Figure 3.27: Income x Household Composition x Gender: Personal Wellbeing Index (combined Surveys)

These results indicate a big gender difference for people who live alone at all incomes at least up to $101-150. Female wellbeing is significantly higher. It is also notable that while female live-alone wellbeing enters the normal range at $15-30K, males require four times as much income ($101-150K) to enter the normal range. This probably attests to the greater engagement of non-sexual relationships by single females than by single males.

For the people living with a partner, these differences virtually disappear.

3.6.3.2. Composition of the lowest income group: Household Composition x Age (26-55y)

These data are presented in Table A3.17. Several of these cells are too small to be reliable. However, the difference between those with and without a partner is marked. Within the 36-45y group the comparison between those living alone (58.2) and those with a partner and children (71.5) is 13.3 points. This is remarkable testimony to the power of relationships over wealth. It also indicates the invalidity of discounting household income by the number of people in the household when studying the effect of income on wellbeing.

Figure 3.28: Lowest Income Groups x Age x Household Composition (Personal Wellbeing Index)
3.6.4. *Income and Relationship Status*

Table A3.18 shows both the results from Survey 25 and also the combined data. The latter are shown in Figure 3.26.

This Figure 3.29 depicts well the separate forces of relationships, age and money to influence wellbeing. The two groups that do the best are Married and Widowed. Both of these groups enter the normal range at the lowest level of income (<$15,000). In contrast, people who are separated or divorced do not achieve the normal range even with an income of $101-150K. People who have never married enter the normal range at $101-150K.

What these results indicate is three routes to achieving a normative level of personal wellbeing. One is through becoming old (see Chapter 4). Another is through a compatible partner. If people are married they can achieve normative status even at the lowest level of household income. If, on the other hand, they do not have a partner, then the external resource of money is an alternative means of achieving normative status (Never Married). In these comparative terms, the presence of a partner roughly equates to about $100,000 per year for people with no partner.
3.6.4.1. Income x Relationship Status x Gender

These data are available for males in Table A3.19 and for females in Table 3.20. Figure 3.30 below shows the combined data.

For people who are married, significantly higher wellbeing of females is evident only in the lowest income.

For the people who have divorced, those with the lowest income both genders have equivalently depressed wellbeing. However, the rising income advantages females far more than males. At $101-150K females have entered the normal range while males have not.

The data for Widows x Gender are shown in Figure 3.31 using results from Tables A3.19 and A3.20.

This shows the expected female advantage in wellbeing at incomes up to $31-60K. Many of these people from both genders would be living alone and this is likely a factor in the lower wellbeing of the males. However, the sudden reversal at $61-100K is unexpected. Perhaps more of the males in this
income group have found another partner. This remains to be tested and, as yet, the numbers are too small to do this.

3.6.4.2. Composition of the lowest income group in terms of Relationship Status and Age

These data are provided in Table A3.21. It is quite surprising to find so many people who are Married (22.5%). A pension should take these people above the <$15K range (see Table 3.1). With the exception of the Married, 26-35 group, all other wellbeing values in this table are low, some of them very low.

![Figure 3.32: Lowest Income Group x Age x Relationship Status (Personal Wellbeing Index)](chart.png)
3.6.5. *Income and Work Status*

These data are found in Table A3.22 for both Survey 26 and the combined results.

Figure 3.33: Income x Work Status (combined data)

Figure 3.33 shows that the most spectacular rise in wellbeing through income is for people who are unemployed. This wellbeing rises by 16.2 points from 60.6 at <$15K to 76.8 at $101-150K.

The fact that fulltime retired have the highest personal wellbeing is at least partly a function of their age. However, it is notable that these people achieve normal or above-normal levels of wellbeing on a household income of $15-30, and that their wellbeing increases by only 7.3 points between <$15K and $151-250K.
3.6.5.1. Income x Work Status x Gender

These data come from Tables A3.23 and A3.24.

There is no reliable difference in the wellbeing of full-time employed males and females at any level of household income. This is not true, however, for people who are unemployed. Females have a higher wellbeing than males at most levels of household income.

3.6.6. Composition of the lowest income in terms of Age and Work Status

These results are from Table A3.25. Few cells contain enough respondents to be reliable. It is notable that 11.2% of this sub-group are full-time employed, yet earning $<15,000 per year. These people must be self-employed. While their wellbeing is low, at age 36-45 years it is 16.2 points higher than people who are unemployed.
3.7. Regression of PWI Domains against Life as a Whole

Tables A3.26-A3.32 show the regressions of the seven Personal Wellbeing Index domains against ‘Satisfaction with Life as a Whole’ across the range of household income. A summary is provided in Table A3.33. The relative proportion of explained and unique variance is shown below:

While the proportion of shared variance accounted for does not change with rising income, the proportion of unique variance accounted for continues to increase up to $250-500K, with a plateau at $151-250K, just as there is for changing SWB with income.

The first conclusion from this is that the Personal Wellbeing Index works well at all levels of household income. The second is that the domains progressively capture rather more unique than shared variance as household income rises, again with the exception of $250-500K. This is shown below where the figure shows unique/shared variance at each level of income.

![Figure 3.36: The Proportion of Unique and Shared Variance by Income](image)

![Figure 3.37: The Proportion of Unique/Shared Variance by Household Income](image)
This indicates that, as income rises, the individual domains play a larger role in explaining the total variance. This is consistent with the progressive release of domains from the influence of homeostatic failure with the provision of an adequate income.

In order to investigate changes in the individual domain contributions ($\beta$) these are plotted below:

![Graph showing domain variance contributions vs income](image)

Figure 3.38: Domain Variance Contributions x Income (combined data)

These results are drawn from Tables A3.26 to A3.32. The really odd feature of these results is provided by the highest income group ($251-500K$). Up to this level all of the domains except Safety contribute unique variance. Then, at this highest level of income the domains of Health, Community and Future Security all fail to provide unique variance, thus leaving only three domains making a significant contribution (Standard, Achieving, Relationship). Of these, the contribution of Standard dominates.

Notably, the overall variance accounted for remains stable at about 50%. So the unique variance contributed by Standard has come at the expense of contributions by Health, Community and Future Security.

### 3.8. Testing Homeostasis

#### 3.8.1. Wellbeing Variation Within Income Groups using Combined Survey Data

The theory of subjective wellbeing homeostasis predicts that the amount of wellbeing variation within income groups will reflect two kinds of influence as:

(a) The distribution of genetic ‘set-points’ of subjective wellbeing. This should be constant across the income groups.
(b) The degree to which the external environment impinges on each person to change their SWB levels. This influence is predicted to be greatest for the most vulnerable groups who are either people with constitutionally weak homeostatic systems (low SWB set-points and a vulnerability to depression) or people whose homeostatic systems are placed under pressure through external events that they cannot objectively control. This latter group will include people who are disabled and people who are elderly.

As a consequence, the theory predicts that the Personal Wellbeing Index will show greater variation within the lowest income groups. This is because money is a flexible resource that can be used to defend people against possible stressors. Since people on low incomes have less access to this resource, they are more vulnerable to the vagaries of their daily environment. Table A3.34 shows the standard deviation of the Personal Wellbeing Index within income groups where the data have been combined across surveys.

![Graph showing variation in Personal Wellbeing Index within income groups](image)

Figure 3.39: Variation in Personal Wellbeing Index Within Income Groups Using Individual Scores (S9-S22)

As shown in Figure 3.39 above, the prediction matches the data. The highest standard deviation (16.3) is found within the lowest income group. This value declines with increasing income until it bottoms-out at $101-150 where it reaches a value of 9.7 and thereafter shows no systematic change. This result is consistent with homeostatic theory. The fall in the standard deviation represented the reducing proportion of people in each sample who are experiencing homeostatic defeat through their economic circumstances.

In summary, these data are consistent with the predictions of homeostatic theory and show that the tail of the distribution is not being systematically further contracted above an income of $101-150K as an average threshold for the avoidance of financially-dependent homeostatic defeat.

These standard deviations at the highest income levels also give possible insight into the range of set-points. That is, if income ceases to be a factor that exerts a significant influence on wellbeing then the variance is, quite possibly, dominated by genetic variation in set-points between the people concerned. However, of course, it can never be a true measure since other influences besides income will be contributing to this variance.

Nevertheless, an approximate calculation is interesting. It can be seen that the minimum standard deviation in Figure 3.39 is 9.8 points. Moreover, this curve downward is clearly exponential, so it is unlikely to ever get below 9.5 points. How much lower could it get if other experientially-influencing factors were eliminated? I would guess not more than 2.5 points at the most. This would leave a ‘natural’ standard deviation of 7.0 points.

The maximum reliable level of wellbeing for groups seems to be about 82 points. Thus, two SDs around this defines a normal range for set-points at about 68-96 points. This approximates the range of 60-90 calculated in Chapter 2.
3.8.2. Differential Personal-National Income Sensitivity

Why is the Personal Wellbeing Index more sensitive to income than the National Wellbeing Index? At first glance this seems the wrong way around. Since the Personal Wellbeing Index is more strongly influenced by homeostatic control on the proximal-distal dimension, it should be least affected by the relative strength of an external resource. The answer to this conundrum will lie within an examination of the means and variances. The data have been drawn from Tables A3.4 and A3.5 in Report 16.0.

Table 3.4: PWI and NWI Change with Income (Individual data: Surveys 7-16) (Retained from Report 16.0)

<table>
<thead>
<tr>
<th>Income Range</th>
<th>PWI Mean</th>
<th>PWI SD</th>
<th>NWI Mean</th>
<th>NWI SD</th>
<th>PWI minus NWI Mean</th>
<th>PWI minus NWI SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$15</td>
<td>71.4</td>
<td>15.7</td>
<td>59.3</td>
<td>17.4</td>
<td>12.1</td>
<td>-1.7</td>
</tr>
<tr>
<td>$15-$30</td>
<td>73.5</td>
<td>13.3</td>
<td>60.2</td>
<td>15.6</td>
<td>13.3</td>
<td>-2.3</td>
</tr>
<tr>
<td>$31-$60</td>
<td>74.6</td>
<td>11.8</td>
<td>61.2</td>
<td>14.2</td>
<td>13.4</td>
<td>-2.4</td>
</tr>
<tr>
<td>$61-$90</td>
<td>76.3</td>
<td>10.7</td>
<td>62.0</td>
<td>13.9</td>
<td>14.3</td>
<td>-3.2</td>
</tr>
<tr>
<td>$91-$120</td>
<td>77.6</td>
<td>9.6</td>
<td>63.3</td>
<td>13.0</td>
<td>14.3</td>
<td>-3.4</td>
</tr>
<tr>
<td>$121-$150</td>
<td>78.1</td>
<td>9.5</td>
<td>62.1</td>
<td>14.0</td>
<td>16.0</td>
<td>-4.5</td>
</tr>
<tr>
<td>$151+</td>
<td>78.6</td>
<td>10.3</td>
<td>64.5</td>
<td>14.1</td>
<td>14.1</td>
<td>-3.8</td>
</tr>
</tbody>
</table>

It is apparent that there are two statistical phenomena causing the Personal Wellbeing Index to be more sensitive to income than the National Wellbeing Index. The mean scores are rising faster and the variance is decreasing more rapidly. The psychological explanation for these changes is as follows.

The Personal Wellbeing Index range is naturally held higher and tighter than the National Wellbeing Index range due to the influence of homeostasis. At the lowest incomes, additional variance is added to the Personal Wellbeing Index range by individuals in homeostatic failure. As the income rises, money used as an external buffer reduces the proportion of the sample in homeostatic failure, such that the mean rises and the SD falls, up to $91-$120K when the range effectively stabilizes.

It is interesting to note how this Personal Wellbeing Index range has changed. Using two standard deviations around the mean (Table A3.32), at <$15,000 it is 38.9 to 102.9 points, while at $151,000+ it is 57.9 to 99.3 points. It is notable that the reliable change has occurred at the bottom of the range and that the $151+ range probably represents an approximation of the potential normative set-point range in the population (58-99 points).
**NORMATIVE DATA FOR INCOME**

### 3.9. Normative Values

#### 3.9.1. Normative Data for Individual Scores

Normative data can be created by pooling individual scores within income brackets. The results below are drawn from Tables A3.34.

![Figure 3.40: Personal Wellbeing Index Normative Range Calculated from Individual Scores](image-url)

It can be seen that there is very little variation at the top of each range (6.4 points). Two standard deviations above the group mean approximates the 100.0 ceiling for each calculation. The bottom of each range, however, is far more volatile, and changes by 23.0 percentage points between the lowest and the highest income bracket. These relative changes are consistent with the use of money as a resource to avoid homeostatic defeat. The major change at the bottom of the range occurs over the income span <$15K to $31-60K (12.7 points). Income increments from $61K to $251-500K add another 10.5 points to the bottom of the range.

The reason for this disparity between the changes of the top and bottom of the ranges is that, while the standard deviation in challenging circumstances symmetrically expands around the group mean, as the group mean falls it drags both ends of the distribution with it. Hence, as the top tends to rise due to increased SD, and also tends to fall due to the reduced mean. These two forces approximately balance one another. The bottom of the ranges, on the other hand, show a degree of change that is additive of the changes to both the SD and falling mean. This makes the changes to the bottom of each distribution a more sensitive indicator of change than the mean score.

The most important aspect of these distributions is the proportion of people lying below a satisfaction strength of 50. Other research (Cook & Cummins, 2004) shows that individuals below this level are at high risk of depression. The level of each vertical bar that lies below the 50 indicates the proportion of that group at risk of depression. Thus, the income brackets lying below $31,000 contain a sizeable proportion of people at high risk of depression. These data also indicate that a strategy for increasing mental health in the Australian population is to increase the income of the people on low incomes.
3.9.2. **Normative Data for Group Means**

The normative data for groups are provided by the survey mean scores (Tables A3.35 to A3.37. When these survey mean scores are used as data they can yield a mean and standard deviation. The mean, of course, will closely approximate the group means calculated from individual scores as above. The standard deviation is more interesting. It reflects the degree to which the income group has varied across the surveys. The result is shown in Figure 3.41.

![Figure 3.41: Personal Wellbeing Index Normative Range Calculated from Survey Mean Scores](image)

The bars in Figure 3.41 indicate the PWI normal range for each income group calculated as two standard deviations around the mean. It is evident that the lower and higher income brackets show more between survey variation than the $31-60 and $61-90 groups. Both are probably caused by the relatively low N for each survey making each survey mean score less reliable, and, so, more variable.

![Figure 3.42: Correspondence Between the Whole Sample Normative Range and the Income Specific Normative Range (Combined surveys)](image)

The data for Figure 3.42 are drawn from Tables A3.35 to A3.37. The income-specific normative ranges are for groups and based on survey mean scores corresponding to each income range. It can be clearly seen how the base of the range stabilizes at $100K up to $250-500K, while the top of the range continues to increase. This is consistent with the idea that at an income of $100K few people are...
homeostatically defeated by matters financial. The increase in the top of the range represents the increasing probability that people can experience the upper portion of their set-point range. However, at >$500K the base of the range drops sharply, probably indicating serious health concerns in some of the very elderly people at this income level.

It is notable (from Table A3.34) that 30.6% of the combined survey data come from people with incomes <$31,000 and 40.7% from people with household incomes >$60,000. Thus, in terms of income alone, about one third of the population have a level of household income that exposes them to a high probability of below-normal wellbeing, while about one third have a level that provides a high probability of above normal wellbeing.

3.9.3. Average Income Ranges Over Time

The average household incomes have been drawn from Table A3.38 (cumulative data) and the caption to that table indicates the basis of this calculation.

The following matters can be noted:

1. The average household incomes for Survey 26 are considerably higher than the running average. This simply indicates the rise in average incomes over time.

2. The gender disparity is very evident both for the running average and for both surveys. This is due in large-part to the higher proportion of elderly women than men in the samples.
The greatest change has occurred in the youngest group and the least change has occurred in the oldest.

Figure 3.45: Household Structure

The greatest change has occurred for Partner plus Children, while the least has occurred for Sole Parents.

Figure 3.46: Relationship Status

The greatest change has occurred for Never Married, reflecting the young age of this group, and the least change has occurred for Widows.
Conclusion

The highest growth in household income has occurred for the generally wealthy groups, the least change has occurred for the poorest groups (Sole parents, widows, people aged 76+ years, and unemployed).
Dot Summary Points for Household Income:

1. The PWI for all income groups is within its income-specific normal range.

2. Personal wellbeing consistently and significantly rises with income up to $101-150K. The 7.0 point gain over this range is associated with a change in wellbeing from below to well above the normative range. The further rise in SWB becomes non-significant at $101-150K but resumes at $251-500K.

3. The cost of increasing happiness increases with income. One additional percentage point of wellbeing for someone with a household income of $101-150K is an additional $111,000.

4. Income has the largest effect on the domain of satisfaction with Standard of Living. It has no systematic influence on satisfaction with Community Connection.
5. The personal wellbeing of people aged 26-55 years is highly sensitive to low income.

6. Between the ages of 36-55 years, low income is associated with lower wellbeing for males than for females.
7. (a) Household incomes under $30,000 combined with the presence of children, on average, takes wellbeing below the normal range.
(b) For people who also have a partner, wellbeing enters the normal range at $31-$60K. The wellbeing of sole parents enters the normal range only at an income of $61,000-$100,000.

8. Males who live alone have lower wellbeing than females who live alone. Moreover, whereas females enter the normal range at an income of $15-30K, males require three times as much ($100-150K).

9. The negative effects of separation and divorce on wellbeing can be reduced by a decent household income. However, both groups remain below the normal range even at a household income of $101-150K.
10. Married males and females have a very similar level of wellbeing. However, for the people who have divorced, those with the lowest income both genders have equivalently depressed wellbeing. Then, the rising income advantages females far more than males. At $101-150K females have entered the normal range while males have not.

11. The wellbeing of people engaged in Fulltime home/family care is highly income dependent, from below normal at less than $30,000 to above normal at more than $60,000.

People who are unemployed enter the normal range at $101-150K.

12. Unemployment has a stronger detrimental effect on the wellbeing of unemployed males than females at all levels of household income.
4. Gender

NOTE: Due to the absence of change in any of the personal or national variables in Table 2.1, Chapter 4 has not been updated from Report 26, with the exception of Section 4.3 The revised values for Survey 27 are, however, provided in Appendix 4.

The sample for Survey 26 comprised 985 males (50.0%) and 983 females (50.0%) (Table A4.1).

The results for Gender begin with four comparison sections. The first compares Survey 26 against normative ranges generated from gender data. That is, gender specific normative ranges are generated by using the mean scores of each gender group over past surveys as data. This section therefore allows the Survey 26 data to be compared with the average of similar past data.

The second section compares each gender group averaged across all surveys against the generic normal ranges. For example, all of the ‘male’ respondents over all surveys are combined to yield a single group. The mean of this group is then compared to the generic normal range for groups. Thus, in a comparison involving the Personal Wellbeing Index, the PWI mean from all ‘males’ will be compared to the generic normal range for Personal Wellbeing Index mean scores. This comparison shows how, on average, each gender group compares against population averages.

The third section compares the gender differences over time.

The fourth section compares the gender group within demographic groupings.

4.1. Survey 26 vs. Gender-Specific Normal Ranges

These results come from Table A4.1 and Table A4.16.

![Males in Survey 26 vs. Male Normal Range for Group Data](image)

Figure 4.1: Males in Survey 26 vs. Male Normal Range for Group Data

The male Personal Wellbeing Index remains within its normal range, as do most domains. The exceptions are Health, which lies below its range, and Achieving which is at the bottom. This is the second consecutive survey to show this pattern of low scores in these two domains.
The female Personal Wellbeing Index and all domains fall within their normal ranges. As with males, Health is low.
4.2. Gender Group Averages (cumulative data) vs. Generic Normal Ranges

This section compares each gender group averaged across all surveys (Table A4.2) with generic normal ranges. It shows the average performance of each gender group relative to population averages (Table A2.21).

On average across all surveys, females have a 1.0 point higher level of wellbeing than males. The most marked differences between the genders are in both domains that concern inter-personal satisfaction. Females have far higher satisfaction with both Relationships (+2.2 points) and Community (+3.0 points) than males, with each gender scoring at opposite ends of the generic normal range.

The two other domains showing a marked gender difference are Achieving (females > males by 1.7 points) and Safety (males > females by +1.8 points).

In summary, the overall higher female average for the Personal Wellbeing Index is predominantly driven by their high ratings on the two interpersonal domains. These comparisons are shown in Figure 4.5.
Since interpersonal relationships are a major key to resilience, these differences may go some way to explaining why females are more resilient than males in such situations as unemployment and living alone.
4.3. Gender Differences Over Time

The Index data are presented for this survey in Table A4.1 and analysed across all surveys in Table A4.2.

4.3.1. Personal Wellbeing Index

Over the first 13 surveys, females tended to have higher wellbeing than males (Figure 4.6). Then, over the next 12 surveys (14-25) there was no consistent gender difference. Over the past 3 surveys, the higher wellbeing for females has re-emerged.

While the reason for this changed pattern is not known, it is clear that a single cross-sectional survey could have discovered any result in terms of the existence of a gender difference in wellbeing.

The correlation between survey x gender is modest (Table A4.12.1: r=.34, ns) and the trajectories for each gender over time has been quite different. For females, using the reference point of the first survey, their scores became significantly higher after one year (S3, March 2002) and remained variably higher over the next 2.5 years, up to Survey 12 (August 2004), with 5/10 surveys during this period being higher than Survey 1. Then the female values returned to normal, with the next nine surveys, from Survey 13 in May 2005 to Survey 21 in May 2009, being no different from Survey 1. Since Survey 22, 5/6 surveys have again been higher than the first survey.

The male scores, on the other hand, first rose to be higher than Survey 1 at Survey 6 (March 2003) and have essentially remained at this higher level ever since. The significant interaction (Table A4.2) between the genders represents this complex pattern of wellbeing changes between genders.

4.3.2. Homeostasis

According to the theory of homeostasis, due to the ceiling imposed by each set-point, an upward movement in the Personal Wellbeing Index as shown in Figure 4.6 should be accompanied by a reduction in the standard deviation. This prediction is made through using the following logic.

Assume some ‘good’ is applied to all members of a population, then an upward shift in the mean could be caused by any of the following:
1. All people in the sample show the same degree of rise. This is obviously impossible due to individual differences in susceptibility.

2. Some people rise while others fall, but the rises outnumber the falls, and so the overall mean of the sample rises. Of itself, this should cause the SD to increase, reflecting the range being pushed up by the higher values.

3. The extent to which people can rise or fall is limited by their set-point range as follows:

   3.1 Assuming most people were within their set-point-range prior to the ‘good’, some small degree of movement is possible within their range.

   3.2 If baseline values were evenly distributed above and below the set-points, the ‘good’ will be more effective in moving wellbeing up to the set-point (congruent with homeostatic forces) than in moving wellbeing above the set point (incongruent with homeostatic forces). Thus, the range of values within the sample will tend to contract and the SD will decrease.

   3.3 For individual values lying below the set-point-range at baseline, the ‘good’ has the potential to move these values into the set-point-range and to re-establish normal range wellbeing for such people. The theoretical magnitude of change in such cases is substantial and, again, this would tend to decrease the standard deviation of the sample.

In summary, the application of homeostasis theory allows the prediction of an inverse relationship between the magnitude of sample mean scores and sample standard deviations.

The data for the following figures come from Table A4.2 and the correlation calculations from Tables A4.17 and A4.18.

![Figure 4.7: Survey Means and SDs (Males) Personal Wellbeing Index](image-url)
Section 4: Gender continued

The magnitude of the correlations is as predicted by theory, with a significant correlation between the Personal Wellbeing Index mean and SD for both genders.

4.3.3. Personal Wellbeing Domains

4.3.3.1. Standard of Living

These results come from Table A4.2. On nine occasions there has been a gender difference (shaded), most commonly with females > males, and on one occasion males > females (Survey 19). The ANOVA shows a significant effect overall for gender (females > males) and an interaction with survey, caused largely by the anomalously low male value at S1. This causes the male values to rise faster than the female values. If the comparison is made against S2, no male and just one female value (S23) is higher. There is, thus, no overall time-trend in these results.
4.3.3.2. Health

These results come from Table A4.2. This is the most stable domain, with a significant downward trend over surveys (p = .000) and no interaction. However, overall females > males and there have been 5 occasions when individual surveys (shaded) have shown this differences. In Survey 19, males > females, and on all other occasions females > males.

Male health satisfaction fell to its lowest level on record (72.0) at Survey 26, which is statistically lower than four previous surveys. This is the first time such differences have been recorded. Female satisfaction has not statistically changed over these surveys. These results are very important in showing that the overall rise in the Personal Wellbeing Index is restricted to just some domains. This, in turn, adds credibility, to the overall rise that has been observed, since a measurement artefact would be expected to involve all domains equally.

4.3.3.3. Achieving in Life

Satisfaction for both genders fell between Survey 10 and Survey 11 reflecting a change in the wording of this item (see red arrow and Chapter 2). However, despite this, none of the male values differ significantly from Survey 1. Female values fell to a low at Surveys 19 and many surveys are statistically higher than this value.
Section 4: Gender continued

There is a significant interaction between survey and gender. The Surveys from S1 to S15 showed higher values for females. Then there was a period of no systematic gender difference, but over the last four surveys the female advantage has returned.

4.3.3.4. Relationships

This domain also shows a significant interaction between gender and surveys.

Over the first 12 surveys, females had higher relationship satisfaction than males. However, following Survey 12 (Olympics) the pattern dramatically changed, with subsequent surveys showing no systematic gender difference for a period of three years. Then, at S20, the gender difference started to emerge once again, and has been maintained.

The Survey x Gender interaction is significant (p = 000) and appears to be due to the change in female relationship satisfaction that occurred at Survey 13, which was the first survey following the Athens Olympic games. At this Survey 13, the satisfaction of both males (-3.2 points) and females (-5.0 points) significantly decreased from the previous survey. However, while the male decrease took satisfaction to a level no different from most previous surveys, this was not true for females. Here the fall signalled an end to the elevated levels of female satisfaction that had occurred from Survey 2 to Survey 12. The new level was no different from Survey 1 and since then it has risen again.

Thus, the significant interaction has been primarily caused by an elevated period of relationship satisfaction over the period Survey 2 to Survey 12 that was more marked for females than for males.
Section 4: Gender continued

4.3.3.5. Safety

Safety is the only domain to show generally higher satisfaction levels for males across the surveys (Table A4.2).

![Graph showing satisfaction with Safety across all Surveys]

The trend line \( f1 \) and \( m1 \) denotes values higher than \( S1, S2 \)
The trend line \( f2 \) and \( m2 \) denotes values higher than \( S3, S4, S6 \)
Shaded boxes denote a significant between-group difference.

Figure 4.13: Satisfaction with Safety across all Surveys

The domain of safety is particularly interesting for a number of reasons as follows:

(a) It is the only domain to be generally statistically higher in males. This has occurred on 16/26 occasions (shaded) but has not occurred for the past two surveys.

(b) The satisfaction with safety for both males and females has been gradually rising over the course of these surveys.

(c) Safety, split by gender, is the domain that is most sensitive to the changes over time between surveys. The combined trend lines for both males and females (Figure 4.13) generate 147 significant differences within males and females across the surveys (Table A4.2). The next highest is Future Security with 61 significant differences. The maximum ‘safety’ value for females occurred at Survey 27 (80.7 points) and for males (81.8 points) at Survey 25. These are 5.5 and 6.6 points higher than Survey 1, respectively. This is a remarkable degree of correspondence.

(d) Safety does show a weak survey x gender interaction (\( p = .01 \)), attesting to the stability of the gender difference over time.

(e) Safety is the only domain that generally fails to contribute unique variance to the prediction of satisfaction with Life as a Whole (see Table A2.17). This consistent result gave rise to a discussion in Report 11.0 as to whether safety should be considered a domain of the Personal Wellbeing Index. However, analysis of data from the International Wellbeing Group (see manual for the Personal Wellbeing Index) indicates that safety does contribute unique variance to ‘life as a whole’ in some other countries. Moreover, it occasionally makes a unique contribution in Australia both for the whole sample (see Survey 21) and for some sub-groups (e.g. Widows). Thus, it may generally be regarded as a ‘sleeper’ domain in Australia.
4.3.3.6. Community

These results come from Table A4.2. There are significant main effects showing females > males and a rise over surveys. The gender x survey interaction is not significant. The female but not the male values at Survey 27 remain high.

These trend differences show that the genders seem to be gradually converging, but the interaction just fails to reach significance (p = .11).

This domain shows the most consistent record of gender difference, with females showing significantly higher satisfaction in all but three of the surveys.

4.3.3.7. Future Security

The third domain to show a gender x survey interaction is satisfaction with Future Security. This is shown in Figure 4.9 below.

The two genders have tended not to differ from one another over this series of measures, with just 4/26 comparisons being significantly different, in each case favouring females.
However, there is a trend of male satisfaction gradually rising through the series. This is the cause of the significant interaction.

The persistent rise in male satisfaction with future security up to Survey 18 may have been due to consistently good economic conditions and the continued presence of terrorist attacks and armed conflict outside Australia. This rising trend ceased after S19.

4.3.3.8. Spiritual/Religious

This new domain showed consistently higher satisfaction for females (Table 4.2) up to Survey 23, with a significant rising trend in Spiritual/Religious satisfaction common to both genders. Then at Survey 24 the question format was changed to include a gating question designed to exclude people from responding to this item if they had no spiritual/religious beliefs.

The gating question has had the effect of drastically changing the gender response pattern. Whereas prior to the use of this gating device, females consistently scoring 6-8 points higher than males, in Surveys 24-25 the two genders do not differ. Over the past 4 surveys, this domain has been the most stable, with a 0.6 point variation within females and a 1.4 point variation within males.

Given the purpose of the gating item, it might be expected that the mean score should rise with its use, since only those people who overtly profess to have a spiritual/religious dimension in their lives respond to the question of satisfaction. And, indeed this is evident for both genders, but the rise is far stronger for males than for females. Using Survey 23 as a bench-mark, at Survey 24 female satisfaction rose by 3.8 points and male satisfaction by 7.7 points.

One explanation for this difference is that, in the absence of the gating item, males are more likely to answer the satisfaction question even though they have no personal experience of spiritual or religious beliefs. In Survey 23 approximately equal proportions of males and females responded to the satisfaction question (male – 82.1%; females 87.3%). However, in the presence of the gating question in Survey 24 these proportions dropped to 46.4% and 61.3% respectively. In other words, about 35% of the males who responded to this item in Survey 23 actually had no such beliefs. For females this was about 25%. So the weaker satisfaction of males in the earlier surveys can probably be attributed to a higher proportion of people with no spiritual or religious beliefs responding to the question.

4.3.4. Domain Stability Across Surveys x Gender

Major shifts in domain satisfaction, defined as a change of greater than 2.0 percentage points between adjacent surveys, are shown in Table 4.2 for each gender. Where each large change has been recorded within one gender (bold) the magnitude of change in the other gender in the same survey is also shown.
### Table 4.1: Domain Changes >2.0% Between Adjacent Surveys within each Gender

<table>
<thead>
<tr>
<th>Domain</th>
<th>Surveys</th>
<th>Male</th>
<th>Female</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard of Living</td>
<td>1-2</td>
<td>+4.18</td>
<td>+1.72</td>
<td>September 11</td>
</tr>
<tr>
<td></td>
<td>11-12</td>
<td>+1.90</td>
<td>+3.08</td>
<td>Olympics</td>
</tr>
<tr>
<td></td>
<td>12-13</td>
<td>-1.94</td>
<td>-2.06</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>15-16</td>
<td>+0.89</td>
<td>+2.42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18-19</td>
<td>-0.95</td>
<td>-2.25</td>
<td>Labor election</td>
</tr>
<tr>
<td>Health</td>
<td>19-20</td>
<td>-2.77</td>
<td>+0.59</td>
<td>Begin economic slump</td>
</tr>
<tr>
<td>Achieving</td>
<td>1-2</td>
<td>+2.08</td>
<td>+0.12</td>
<td>September 11</td>
</tr>
<tr>
<td></td>
<td>10-11</td>
<td>-2.06</td>
<td>-2.07</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>12-13</td>
<td>-1.72</td>
<td>-2.09</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>18-19</td>
<td>+1.07</td>
<td>-2.99</td>
<td>Labor election</td>
</tr>
<tr>
<td>Relationships</td>
<td>5-6</td>
<td>+2.69</td>
<td>-1.03</td>
<td>First Bali Bombing</td>
</tr>
<tr>
<td></td>
<td>12-13</td>
<td>-3.15</td>
<td>-4.95</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>19-20</td>
<td>-0.44</td>
<td>+2.33</td>
<td>Begin economic slump</td>
</tr>
<tr>
<td></td>
<td>22-23</td>
<td>+0.40</td>
<td>+3.22</td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td>4-5</td>
<td>-0.35</td>
<td>-2.32</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>10-11</td>
<td>+0.53</td>
<td>-2.24</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>11-12</td>
<td>+0.75</td>
<td>+2.88</td>
<td>Olympics</td>
</tr>
<tr>
<td></td>
<td>12-13</td>
<td>-2.04</td>
<td>-3.97</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>14-15</td>
<td>-1.13</td>
<td>-3.21</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>16-17</td>
<td>+2.89</td>
<td>+1.69</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>22-23</td>
<td>-2.77</td>
<td>-1.28</td>
<td></td>
</tr>
<tr>
<td></td>
<td>23-24</td>
<td>+3.1</td>
<td>+0.6</td>
<td></td>
</tr>
<tr>
<td>Future Security</td>
<td>6-7</td>
<td>+1.51</td>
<td>+2.43</td>
<td>Begin Iraq War</td>
</tr>
<tr>
<td></td>
<td>11-12</td>
<td>+0.17</td>
<td>+3.64</td>
<td>Olympics</td>
</tr>
<tr>
<td></td>
<td>12-13</td>
<td>-2.04</td>
<td>-3.97</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>16-17</td>
<td>+2.85</td>
<td>+2.11</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>18-19</td>
<td>-1.60</td>
<td>-2.24</td>
<td>Labor election</td>
</tr>
<tr>
<td></td>
<td>21-22</td>
<td>+1.79</td>
<td>+2.35</td>
<td>Recession recovery</td>
</tr>
<tr>
<td></td>
<td>25-26</td>
<td>-2.99</td>
<td>-0.34</td>
<td></td>
</tr>
<tr>
<td>Community</td>
<td>11-12</td>
<td>+1.07</td>
<td>+3.75</td>
<td>Olympics</td>
</tr>
<tr>
<td></td>
<td>12-13</td>
<td>-2.42</td>
<td>-3.21</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>13-14</td>
<td>+2.46</td>
<td>+0.62</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>19-20</td>
<td>-1.19</td>
<td>+2.26</td>
<td>Begin economic slump</td>
</tr>
<tr>
<td></td>
<td>20-21</td>
<td>+2.74</td>
<td>-0.70</td>
<td>Victoria bushfires</td>
</tr>
</tbody>
</table>

This table is interesting from a number of perspectives as follows:

1. It emphasizes the extraordinary stability of these measures of gender mean scores for domains. With one exception, no domain change between adjacent surveys has exceeded 3.8 points. Of the total 350 comparisons, (2 genders x 25 adjacent survey comparisons x 7 domains) only 34 (9.7%) have varied by >2 percentage points.

2. The outlying value of 4.18% (Standard of Living, Male, Surveys 1-2) is anomalous. There seems no obvious reason for such a marked change in this domain in response to September 11. However, female satisfaction with this domain also showed a substantial 1.72% rise at the same time, which lends some degree of credibility, but no additional explanation, to the result.

3. The changes in both genders for ‘achievements’ between Survey 10 and Survey 11 is an artefact caused by the wording change to this item. It is notable that the change has occurred equally within both genders.

4. Of, these major changes, 18/34 (52.9%) are temporally linked to the period immediately following one of the six major events: September 11 (S1-S2), Bali (S5-S6), the Iraq War (S6-S7), the Athens Olympics (S11-S12), the Labor election (S18-S19), the start of the economic slump (S19-S20), the Victorian bushfires (S20-S21) and the recession recovery (S21-S22) (S22-S23). This is further evidence that the Index changes are more likely as a consequence of these events, rather than simply occurring at random.
5. In terms of linking the specific domain changes with a logical explanation for such change, it is a mixed bag. But maybe too much can be made of this. These values are part of a wave of change that involves all of the domains to some degree. Additionally, we know nothing about the relative sensitivity of domains in particular circumstances, other than what these data can tell us. So the apparent logic of safety and security rising after the Iraq war needs to be balanced against the apparent illogicality of relationship satisfaction changing in opposite directions for males and females following the Bali bombing (S5-S6). More data are needed in order to explain some of these domain level changes.

6. It is notable that the domain of health has shown only one change >2 points between adjacent surveys for either gender. This confirms its status as the most stable domain.

4.3.5. *National Wellbeing Index*

![Graph of National Wellbeing Index](image)

*Figure 4.17: Gender x National Wellbeing Index x Survey*

These values come from Table A4.2. Both genders showed rising satisfaction over the course of these surveys up to S22, but since then both have fallen.

Since the national domains are under less homeostatic control than the personal domains (they refer to content more distal to the self and so their levels are less determined by HPMood) it is somewhat surprising to see how closely the male and female values across surveys mirror one another. The level of satisfaction is also very similar between the genders for each survey, with only 8/24 surveys showing a gender difference. However, unlike the personal index, these differences tend to show higher values for males (7/8).

4.3.6. *National Wellbeing Domains*

Only 4 national domains show a survey x gender interaction (see Table A4.2). These are Economic Situation, Natural Environment, Government and National Security.
4.3.6.1. Economic Situation

Satisfaction with economic situation is shown below.

Following the remarkable rise in satisfaction with the Economic Situation over the period between Survey 1 and Survey 3, and the slow but steady rise over the next 5.5 years, satisfaction after Survey 18 (October 2007), both genders fell precipitously with the onset of the economic collapse. Interestingly, however, both genders retained a level of economic satisfaction higher than it was at Survey 1. The values for both genders have now returned to low levels.

It is also notable that, while at Survey 1 females > males, since Survey 4 the direction of difference has been in the opposite direction. The highest gender difference was at Survey 16 (3.3 points).

4.3.6.2. Natural Environment

Satisfaction with the natural environment shows a significant interaction between gender and survey (p = .004) and an overall gender difference (p = .01).

The gender x survey interaction shows a progressive shift in satisfaction with the environment, from predominantly higher values for females over the first 10 surveys, to predominantly higher values for males ever since. However, very few of these differences reach statistical significance.
Satisfaction for both genders is being maintained at levels significantly higher than many previous surveys.

4.3.6.3. Government

As shown in Table A4.2, satisfaction with Government shows a significant interaction between gender and survey (p = .038) and an overall gender difference (p = .000).

On 6 occasions there has been a significant gender difference in satisfaction with Government. On each occasion female satisfaction has been higher than male satisfaction, and the largest difference is in Survey 26.0 (3.9 points).

4.3.6.4. National Security

National Security also shows a gender x survey interaction as shown below.

Following the initial dramatic rise from Survey 2 to Survey 3 of some 5-6 points, both genders trended upwards together. From Survey 13 to Survey 16 female satisfaction with national security remained stable while male satisfaction increased, causing a gender difference. After Survey 16, satisfaction rose for both genders, taking their satisfaction with national security to its maximum. In Survey 21
female satisfaction fell a massive 4.3 points, while male satisfaction remained unchanged. Both retain a level above Survey 3.

4.3.7. *Life as a Whole and Life in Australia*

Satisfaction with life as a whole, but not satisfaction with life in Australia, shows an interaction with gender (p = .005) (Table A4.2).

In general, females record higher satisfaction with life as a whole than do males. Over the first 13 surveys, female satisfaction with Life as a Whole was consistently higher than male satisfaction. This changed in October 2005 (Survey 14), when the difference became non-significant. This lack of a systematic gender difference continued for the next 9 surveys (4 years) to September 2009 (Survey 22). In Survey 23 the systematic gender difference reappeared and has remained.

In comparison to their levels of Survey 1, female satisfaction has risen higher on two occasions as Surveys 12 and 23. However, at Survey 15 and Survey 19 the level of female satisfaction dropped numerically below (but not statistically) that of Survey 1.

The male values, on the other hand, have been maintained at an elevated level from Survey 6 to the present.
4.3.8. **Likelihood of a Terrorist Attack**

The proportion of the population who expect a terrorist attack is gradually diminishing, and Table A4.1 shows no gender difference in the perceived likelihood of a terrorist attack. However, Table A4.2 shows a significant interaction between survey and gender, shown below.

![Figure 4.23: Perceived Likelihood of a Terrorist Attack and Gender](image)

While there is no overall gender difference in the perceived likelihood of a terrorist attack, the value for females>males at Survey 13, which is a time of no special event, being some 6 months following the Athens Olympics, and males>females at S22. These are likely random fluctuations.

The significant interaction is caused by the relative, and possibly random, shifts of male vs. female differences. No systematic trend can be discerned. Moreover, given the lack of significant gender differences, this result has little importance.
4.4. Gender and Demographics

4.4.1. Gender and Age

Survey 26: Table A4.3 shows no age related differences between Surveys 25 and 26 for either gender.

Combined data: Table A4.4 provides the Gender x Age analysis using the entire database from all surveys. The combined PWI results are shown below (minimum N=1,504 for Male 76+y).

Key: Ages linked by ‡‡ are significantly different for males (m) and for females (f). Shaded boxes denote a significant gender difference.

Figure 4.24: Gender x Age: Personal Wellbeing Index (combined surveys)

For both genders a significant rise in wellbeing occurs at 56-65 years. A second rise occurs at 66-75y, and for females only, a third rise at 76+y. Further discussion of these changes is provided in the chapter on Age.

The pattern of age-related change in the Personal Wellbeing Index is different between genders, with the age x gender interaction being significant ($p = .011$) (Table A4.4). As can be seen from Figure 4.24 there is no gender difference within the youngest group. However, a gender difference emerges between the youngest group and lower values for all three older groups up to 55 years, but only for males.

The systematic change in the gender difference with age is shown in Figure 4.25.

Figure 4.25: Gender x Age: Female PWI minus Male PWI (combined data)
Section 4: Gender continued

There is a very systematic pattern of gender difference in personal wellbeing that emerges initially, and most strongly, within the 26-35y groups, and thereafter diminishes steadily up to 56-65y, after which age it emerges once again.

This lack of a gender difference at 18-25y is so anomalous that Table 4.5 presents these data across all surveys for verification. As can be seen, only one survey has produced a significant gender difference at this age, and this is a weak result (p=.03) which is probably a chance finding.

Report 11.0 investigated whether this marked gender difference for the two youngest groups applies to the individual domains. Figure 4.26 in that report revealed that the apparent simplicity of the sudden increase in the magnitude of gender differences from 18-25 to 26-35 years is not replicated at the level of domains. While three domains (eg. Standard of Living) show the same pattern as the overall Personal Wellbeing Index, others show no age-related change (Relationships) or even the reverse pattern (Future Security). No simple pattern can be discerned.

The reason for the sudden appearance of a gender wellbeing difference at 26-35 years remains mysterious.

4.4.2. Gender x Age: Domains

These results come from Table A4.4.

4.4.2.1. Standard of Living

Table A4.4 shows that the gender x age interaction is significant (p=.000).

![Figure 4.26: Gender x Age: Standard of Living (combined data)](image)

*Key:* Values above the trend-lines are significantly higher than 36-45 for males (m) and for females (f). Shaded boxes denote a significant between-group difference.

Within four of the age groups (shaded), females are more satisfied with their standard of living than males. However, the age-trends for standard of living are very similar for both genders. From an initial value of about 79 points, satisfaction falls significantly to reach a low at 36-45 years. It does not significantly rise until 56-65 years, at which age it reaches a level of equivalent to the 18-25y group. The level of satisfaction continues to increase until, at 76+ years, it exceeds both the 18-25y level and the 56-65y level.

This pattern is remarkable in the extent to which it is the reverse of gross household income. The middle-age groups have the highest income, and the oldest groups have the lowest income. It may reflect disposable income but this cannot be determined from the current data. Whether this pattern is caused by child-related expenditure is worthy of future investigation.
4.4.2.2. Health

Table A4.4 shows that the gender x age interaction is significant (p=.000).

At 18-25 years satisfaction with health is higher for males (Table A4.4 : p=.001). Thereafter the two genders show a very different pattern of change.

Male health satisfaction shows continuous drop between 18-25 and 46-55 years. Thereafter it stabilizes, only to fall significantly again at 76+ years.

Female satisfaction, on the other hand, remains steady over the 18 to 45 years, until falling sharply at 46-55 years. From that age it gradually decreases, also at about 1 percentage point per decade.

The reason for the drop in female health satisfaction at 46-55 years may be associated with the onset of menopause. The reason for the fall in male satisfaction up to 46-55y may reflect decreasing physical fitness which affects males more than females over this age-range. From 66 years and older there is no gender difference in health satisfaction.

4.4.2.3. Achieving in Life

Table A4.4 shows that the gender x age interaction is significant (p=.004).
The interaction indicates that the gender differences are only significant up to 66-75y.

### 4.4.2.4. Relationships

Table A4.4 shows that the gender x age interaction is significant (p=.000).

The significant interaction reflects convergence between the genders with increasing age. Gender difference in satisfaction with safety does not occur beyond 66-75 years.

Across the ages, both genders show their lowest level of safety satisfaction quite late in life, at 56-65 years for females and 66-75 years for males. This trend then reverses, with safety rising for the oldest groups.
4.4.2.6. Community

Table A4.4 shows that the gender x age interaction is significant (p=.000).

![Graph showing the relationship between gender and age with regards to Community Connection satisfaction.](image)

**Key:** Values above the trend-lines are significantly higher than the designated groups for males (m) and for females (f). Shaded boxes denote a significant between-group difference.

Figure 4.31: Gender x Age: Community Connection (combined surveys)

While both genders show increasing satisfaction with Community Connection as they get older, there is only a weak gender difference within the 18-25y group. Moreover, whereas females show a marked +2.7 point increase in satisfaction from 18-25 to 26-35, males show no change (-0.3 points). Over the following decade, however, male satisfaction increases by 3.2 points.

In sociobiological terms, it is possible that the 18-35y period covers the ‘breeding years’ during which men are more concerned with providing for their immediate family while females are more concerned with creating mutually supportive ties with other mothers for the purpose of joint child care and protection. Thus, the initial rise in satisfaction with Community Connection is delayed in males with respect to females. It could also be tied to an earlier age for marriage by females.

4.4.2.7. Future Security

Table A4.4 shows that the gender x age interaction is not significant.

4.4.2.8. Spiritual/Religious

Table A4.4 shows that the gender x age interaction is significant (p=.008).

![Graph showing the relationship between gender and age with regards to Spiritual/Religious satisfaction.](image)

Figure 4.32: Gender x Age: Spiritual/Religious (combined surveys)
The significant interaction shows that satisfaction increases with age for females in a linear fashion. For males, however, it decreases between 26-35y and 46-55y, before then increasing at the same rate as for females.

### 4.5. Gender and Household Composition

Table A4.6 indicates the results for both Survey 26 and for the combined data. The combined data show higher personal wellbeing for females who live alone, with their partner, and with their partner and children. However, males who are sole parents have higher wellbeing than female sole parents ($p = .009$). This may be due to higher household income for males.

Wellbeing is above the gender-specific normative range (Table A4.16) for both males and females living with their partner only and for females living with their partner and children (Table A4.6).

The type of household composition that has one of the strongest differential gender effect is living alone, as shown below.

![Figure 4.33: Gender x Living Alone: PWI (combined)](image)

While both males and females who live alone experience a relatively low level of wellbeing, the level for females lies almost within their normal range. This is not so for males who live alone. Their Personal Wellbeing Index value is 3.1 points below their normal range and 4.1 points below the level of single-living females. This low level for males indicates a higher than normal risk of depression.

The situation of sole parents is the reverse of living alone. While both male and female sole parents have below normal wellbeing, the deficit in relation to the gender-specific normal range is much larger for females.
The normative range results come from Table A4.16 and the Sole Parent results from Table A4.6. Whereas male wellbeing is -1.0 points below their normative range, it is -3.9 points below for females. This is probably a consequence of higher household incomes for males.

4.5.1. Gender x Household Composition x Age

These results come from Table A4.7 (males) and A4.8 (females).

Of special interest is the gender difference in wellbeing for those household groups that average <70 points because this is the threshold for an increased probability of depression. These groups have been separated by age as follows.

4.5.1.1. Sole Parents

While there are more female than male sole parents in each age grouping, the highest disparity in wellbeing (5.9 points) occurs in the 26-35y group. It is possible that the males have higher household income. After the age of 66 years, however, the wellbeing of single parents increases. This is probably due to a role-reversal as the children take care of their parents.
4.5.1.2. Lives Alone

The only age at which males have a wellbeing advantage (1.7 points) is at the youngest age. This trend then progressively reverses until at 36-45 years it is the females who have a 4.7 point advantage. Thereafter the females continue to have higher wellbeing than males.

4.5.1.3. Other Adults

The two genders follow much the same trajectory, with their lowest point at 36-45 years. It is likely that many of these people are recently divorced or separated and with low income.
4.6. **Gender and Relationship Status**

Reliable gender differences, favouring females, are found for people who are either married or defacto (Table A4.9).

This might be taken to indicate that females benefit more from marriage than do males. However, this is not so as shown by rating against the gender-specific normative mean scores (Table A4.16).

Relative to their normative range, married males are 0.5 points above their normal range, while females are 0.5 points above theirs. Thus, males and females benefit equally from living with their partner in marriage.

It is notable that people in defacto relationships have somewhat lower personal wellbeing compared to people who are married (males –2.7 points; females –2.0 points). This difference from married is significant for both genders.

Using a straight gender comparison, there is no male-female difference in the wellbeing of people who have never married or are separated (Table A4.9). However, females have higher wellbeing as married (+0.9 points), de facto (+1.7), divorced (+1.2), and widowed (+2.5). Notably, however, both male and female widows have normative levels of wellbeing.

4.6.1. **Gender and Relationship Status x Household Composition**

These results come from Table A4.10 (males) and A4.11 (females).
4.6.1.1. Married

There are two living situations in which married females do better (>2 points) than married males. One is when they live alone (+8.5 points) and the other is living with parents (+3.0 points).

4.6.1.2. Divorced

The comparisons for people who are divorced are shown below:

Three groups of divorcees lie within the normal range. These include males living with their new partner, either with or without children. For females this only applies to those living with their partner in the absence of children. Females living with their new partner in the presence of children lie 2.9 points below the normal range and are clearly a vulnerable group.

The lowest wellbeing for divorcees is suffered by males living with their parents (62.6 points).
4.6.1.3. Never Married

These results come from Tables A4.10 and A4.11 show almost no gender difference in wellbeing of people who have never married between the different household composition groups. The largest difference is +2.4 points for male never-married sole parents, and may be income-related. This overall gender similarity is a curious result for the people who have never married. There are large gender differences in wellbeing between the household composition groups using the whole sample.

It is also evident that people who have never married and are living with their partner and children have a high level of wellbeing. Thus, there are very substantial wellbeing differences within the Never Married group, depending on who they live with.
4.7. **Gender x Work Status**

These results come from Table A4.12 and gender-specific normal ranges from A4.16.

Given that there is an overall 1.0 percentage point advantage to females in the Personal Wellbeing Index (Table 4.2), it can be seen that this is generally carried-over into the various work-status groups. However, full-time employment reduces the female advantage in personal wellbeing to a non-significant +0.2 points as shown below:

![Graph showing Personal Wellbeing Index (PWI) for full-time employed males and females](image)

From this figure it can be seen that, relative to gender norms, full-time employment favours the wellbeing of males, taking them to within -0.8 points of the top of the male normative range. Females, on the other hand, are relatively disadvantaged by fulltime employment. Their wellbeing lies -1.6 points below the top of the female normative range.

This is interesting in its own right, but also indicates that this one-third of females in the surveys are diminishing the overall gender difference. Clearly, therefore, some other force is at work making the overall wellbeing of females higher than males.

The lack of gender difference for the full-time employed is interesting, in that full-time employed people constitute about one half of the total sample of males and one quarter for females. This equality diminishes the overall gender difference in wellbeing.

Other matters of interest are as follows:

(a) The gender breakdown of full-time volunteers (N=169) shows the presence of far more females relative to the total sample for each gender (Male:0.3% vs. Female: 0.9%).

(b) Males (N=265) who are engaged in full-time home or family care are in the minority of all home carers (2219 female). Males in this category have a level of wellbeing that lies just well the normal range (71.7) and it is 4.0 points below the level for males who are employed (75.7). In contrast, females in fulltime home care have a level of wellbeing (75.4) that is well within the female normal range and only -0.5 points lower than females in fulltime employment.
Summary

(a) Males who are fulltime employed have much higher wellbeing than males engaged in fulltime home care.

(b) Females who are fulltime employed have no reliable wellbeing advantage over females engaged in fulltime home or family care.

(c) The gender difference in the Personal Wellbeing Index between the various fulltime groups is reported in Figure 4.43.

It is evident that the gender difference between fulltime work-status positions varies considerably. Assuming that a 1.8 point difference is the level at which statistical significance can be achieved with sufficient numbers of respondents, there is no gender difference in people who are employed, semi-retired, retired, or studying. The other groups show a female advantage of at least 2.5 points (volunteer, home care and unemployed).

In summary, the general finding in our surveys that the Personal Wellbeing Index of females is higher than that of males can be limited to those people who are full-time volunteers, home care or unemployed. Together, these people constitute 6.0% of the total males and 22.2% of the females. Thus, the overall gender advantage to females rests largely on their higher proportional representation within these two groups.
4.7.1. *Gender x Fulltime Work Status x Survey*

These results come from Table A4.12.1.

![Figure 4.45: Gender x Fulltime Work Status x Survey](image)

The interaction between gender and survey is significant (p=.023). On three occasions the gender difference within surveys has been significant. Males have been higher on two occasions (S19 and S21), while females were higher at S26. While these differences seem too frequent to be chance events, the reason for them is uncertain.
4.8. Gender x Age x Work Status

4.8.1. Gender x Age x Employed (Full-time)

These results come from Table A4.13 and the age-specific normal range from A5.12.1

Only the gender difference at 56-65y achieves significance (Table A4.13) and indicates a disadvantage to females. However both genders remain within the age-specific normal range. It is evidence that elderly people (66y+) who are employed have high wellbeing. This may well be because they are full-time employed through personal preference rather than necessity.
4.8.2. *Gender x Age x Unemployed*

These results come from Table A4.14. They show the more devastating effect of middle-age unemployment on males than on females.
NORMATIVE DATA

4.9. **Normative Data Based on Individual Scores**

These results come from Table A4.15.

4.9.1. **Personal Wellbeing Index**

The normative data for individuals on the Personal Wellbeing Index are presented below derived from the individual values of 24,045 males and 25,632 females.

![Graph showing gender normative data for Personal Wellbeing Index](image)

**Figure 4.48: Gender Normative Data for Individuals: Personal Wellbeing Index**

The vertical bars represent two standard deviations around the mean. The two groups have approximately the same difference at the top of their distributions (1.0 points) as at the bottom (0.9 points). This is also reflected in the difference between the mean scores (1.0 points), indicating a symmetrical advantage to females throughout the distributions.
4.9.2. **Age Norms (individual scores)**

These normative range data are taken from Table A4.4.

**4.9.2.1. Male Norms x Age**

![Chart showing male age normative data for Personal Wellbeing Index (PWI).]

**4.9.2.2. Female Norms x Age**

![Chart showing female age normative data for Personal Wellbeing Index (PWI).]

Figure 4.49: Gender x Age: Normative Data for Individuals: Personal Wellbeing Index

It is apparent that there is greater gender variation at the bottom of these normative ranges than at the top. The following two figures show this in more detail.
In relation to these two figures the following observations can be made:

1. The top and bottom of the distributions change with age in quite different ways. The top of the ranges gradually increases with age (Figure 4.50). The bottom of the ranges shows a biphasic pattern, where the range extends downward to 46-55 years, after which it rises (Figure 4.51.)

2. Two age cohorts of males (36-45 and 46-55y) lie below the threshold (50%) that signals increased risk of depression, compared with just one age cohort (46-55y) for females.

3. These patterns are consistent with the mean age-related gender differences shown in Figure 4.24. In general, the top of the female range is higher (Figure 4.50) and the bottom of the female range is higher (Figure 4.51). This reflects the overall higher Personal Wellbeing Index score for females over the intermediate age ranges.

4. These distributions also inform the lack of a gender difference in the Personal Wellbeing Index of the youngest group. At the lower range margin females are slightly higher (Figure 4.51) while at the top of the ranges males are slightly higher (Figure 4.50).

5. The lack of a consistent gender difference across the age groups makes it unlikely that the overall gender differences in the Personal Wellbeing Index represent a more positive female response bias. It also indicates that the drop in the lower range margin of the distribution between 26-55 years is likely to be experientially introduced. It is notable that this range...
Section 4: Gender continued

...coincides with the child-care years. A future analysis should split this analysis into people living with or without children.

4.10. Normative Data based on Survey Mean Scores

These results are taken from Table A4.16.

4.10.1. Personal Wellbeing Index and Domains

Combined survey mean scores (N=26).

The interesting feature of Figure 4.52 is the magnitude of the 2SD range. This indicates the extent of variation over the course of the 26 surveys and, so, shows the relative volatility of the gendered domains to world events. These ranges are presented in Table 4.2 below.

Table 4.2: Range (2SD) of Personal Wellbeing Mean Scores over Surveys, 1-26

<table>
<thead>
<tr>
<th></th>
<th>PWI</th>
<th>Standard of Living</th>
<th>Health</th>
<th>Achieving</th>
<th>Relationships</th>
<th>Safety</th>
<th>Community</th>
<th>Future Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>3.7</td>
<td>5.5</td>
<td>3.7</td>
<td>4.0</td>
<td>5.1</td>
<td>6.5</td>
<td>4.6</td>
<td>5.8</td>
</tr>
<tr>
<td>Female</td>
<td>3.5</td>
<td>4.8</td>
<td>3.1</td>
<td>4.3</td>
<td>5.6</td>
<td>7.3</td>
<td>4.8</td>
<td>5.8</td>
</tr>
<tr>
<td>Difference M-F</td>
<td>0.2</td>
<td>0.7</td>
<td>0.6</td>
<td>-0.3</td>
<td>-0.5</td>
<td>-0.8</td>
<td>-0.2</td>
<td>0.0</td>
</tr>
</tbody>
</table>

In relation to these values and Figure 4.52 the following observations can be made:

1. The pattern of domain volatility across surveys is similar for males and females.
2. For both genders, the most volatile domain is safety, with a 2SD range of 6.5 points (males) and 7.3 points (females).
3. For both genders, most stable domain is ‘health’. Relative to the multi-item PWI, it shows an equivalent degree of variation between surveys for males, and a lower degree of variation for females.
4.10.2. **Normative: Gender x Age (survey mean scores)**

These results are drawn from Table A4.19 (males) and Table A4.20 (females) (N=25)

This figure confirms that the gender difference in mean wellbeing only develops after 18-25 years.

The magnitude of each normative range shows the extent of Personal Wellbeing Index volatility between surveys. This is shown below.

It is evident that there is much higher volatility between survey mean scores among the youngest and oldest groups. This may be due to the fact that these extreme age groups have lower Ns and so less measurement reliability.
Dot Summary Points for Gender

1. The male Personal Wellbeing Index remains within its normal range, as do most domains. The exceptions are Health, which lies below its range, and Achieving which is at the bottom. This is the second consecutive survey to show this pattern of low scores in these two domains.

The female Personal Wellbeing Index and all domains fall within their normal ranges. As with males, Health is low.

2. Using the combined data, the 1.0 point higher PWI for females is caused by their higher values on the two interpersonal domains of relationships and community.

Since interpersonal relationships are a major key to resilience, these differences may go some way to explaining why females are more resilient than males in such situations as unemployment and living alone.

3. The 1.0 point higher PWI for females is survey-dependent. There is no systemic gender difference over the five year period Survey 14 to Survey 22. However, the higher scores for females has again been evident in the past 5 surveys.
4. Male health satisfaction remains low. Female satisfaction has not statistically changed over these surveys.

5. Relationships shows a significant interaction between gender and survey. It seems possible that the sense of threat over surveys 2 (September 2001) to 12 (August 2004) increased the level of relationship satisfaction for both genders, but more so for females than males.

Over the period of Surveys 13 (May 2005) to 22 (September 2009) the satisfaction of females returned to Survey 1 baseline, while the satisfaction of males shows a gradual rise. In Survey 23 female satisfaction showed a sudden rise which has been maintained.

6. The only personal domain to be mainly lower for females is safety. This dropped lower following September 11 for females but not for males. These differences were maintained up to October 2007 (S18). Since then the gender differences have been unpredictable.

7. Both genders showed rising satisfaction over the course of these surveys up to S22, but since then both have fallen. Males tend to score higher than females showing that the Personal Wellbeing Index difference is not due to gender response bias.
8. Satisfaction with the Economic Situation in Australia recovered to its pre-recession levels in September 2009 (S22), but it has now returned to low levels for both genders.

9. Satisfaction with the natural environment has been maintained at unprecedented levels for both genders. This may be a consequence of both climate-change denial and the breaking of the drought in most of Australia.

10. Gender differences in personal wellbeing only emerge at 26-35 years of age. They then progressively decrease up to 56-65 years and then increase once again. The reason for this is not understood.

11. The gender difference in satisfaction with relationships is most pronounced in the youngest groups. Males have lower satisfaction than females.
12. Males who live alone have lower personal wellbeing than females.

13. Female wellbeing does not significantly differ between full-time employed and full-time home care. Male wellbeing is higher for full-time employment than full-time home care.

14. Since Survey 9, the wellbeing of male fulltime workers has differed unpredictably on three occasions.
15. Unemployment has a more devastating effect on the wellbeing of males than on females.

16. In terms of the lowest margin of the normal distribution, the risk of depression (scores <50) is highest in males aged 36-55 years and females aged 46-55 years.
5. Age

The sample for Survey 26 is well represented in all age groups (Table A5.1). The minimum number of respondents is in the 18-25y group (N=93) and the maximum in the 56-65 group (N=460).

Introduction

This results section begins with four comparison sections. Section 5.1 compares Survey 25 against age-specific normative ranges (Tables A5.11.1 to A5.12.8). These age-specific normative ranges are generated by using the mean scores of each age group over past surveys as data. This section therefore allows the mean scores derived from Survey 26 to be compared with the average of similar past mean scores for Age.

Section 5.2 compares each age group, averaged across all surveys, against the generic normal ranges (Table A2.21). This comparison shows how, on average, each age group compares against general population averages.

Section 5.3 compares the age-group differences over time.

Section 5.4 compares the age groups within the demographic characteristics.

5.1. Survey 26 vs. Age-Group Specific Normal Ranges

The purpose of this section is to show the results for Survey 26 compared with the average of similar data for each age group. As will be seen, the age groups differ markedly from one another on all measures, so this section compares current survey data with equivalent data from past surveys.

The results for the PWI and domains are shown in Figure 5.1. The results from Survey 26 come from Table A5.1 and the normative data for groups from Table A5.12.1 to A5.12.10.
Section 5: Age continued

Figure 5.1: Personal Wellbeing Index and Domains for Survey 26 vs. Age-Specific Normal Ranges
Section 5: Age continued

The following points are notable:

**Patterns concerning ages:**

(a) Comparing the age groups, the most obvious feature of the PWI pattern is the larger ranges within the youngest and oldest groups. These larger ranges indicate greater volatility of survey mean scores which is mainly an artefact of the smaller Ns within these age groups (A5.1) making their means less reliable and more volatile than the larger N middle-age groups.

(b) All PWI values within Survey 26 lie within their age-specific normal ranges and very close to the values for the previous Survey 25.

(c) In terms of domains, the values for the 18-25y group are generally very high and one domain (Health) lies above its age-specific normal range.

**Summary:**

All groups are registering levels of SWB within their age-specific normal ranges. The values for the 18-25y group are particularly high.

5.1.1. *Life as a Whole*

![Figure 5.2: Age: Satisfaction with Life as a Whole: Survey 26 vs Normal Data](image)

The following observations can be made:

(a) The S26 values are generally low within their age-specific normative ranges. The values for two groups as 26-35y and 56-65y lie marginally below this range.

(b) The general rise in satisfaction with Life as a Whole from 56-65y is evident.
5.1.2. National Wellbeing Index

The results for the NWI and domains are shown in Figure 5.3. The results from Survey 26 come from Table A5.1 and the normative data for groups from Table A5.13.1 to A5.13.7.

![National Wellbeing Index and Domains for Survey 26 vs. Age-specific Normal Ranges](image-url)

Figure 5.3: National Wellbeing Index and Domains for Survey 26 vs. Age-specific Normal Ranges
The following observations can be made.

(a) The NWI values for S26 generally remain high for the youngest group, but fall with age. The 56-65y group falls slightly below it age-specific normal range.

(b) The lowest domain values are recorded for Government for all ages except the youngest. All older age groups lie below their normal ranges, and this tendency increases with age.

(c) Satisfaction with the Economic Situation is low in all age groups except the youngest.

(d) Satisfaction with Environment and with National Security remains very high for all ages.

Conclusions:

The Survey 26 values for national wellbeing are high for the youngest group. Satisfaction with Government and the Economic Situation decreases in the older age groups.

5.1.3. Government x Survey (youngest vs oldest groups)

(a) These are drawn from Table A5.3 and Figure 5.4 shows the contrast between the youngest and oldest groups. During most of the Howard-era, the oldest group showed higher satisfaction with Government, but this has now dissipated, with the S26 result being the lowest on record. The youngest group, in contrast, showed lower satisfaction during the Howard-era, with generally higher satisfaction under Labor which has been maintained.

(b) Survey 2 was conducted immediately following September 11. Following this survey, satisfaction with Government for the oldest group (76+y) remained high until it suddenly dropped in Survey 16. The reason for this is not known. The political environment was quite uneventful at that time. Satisfaction then rose to its highest level in Survey 19 (66.6 points) and has shown a downward trend ever since. It is now -13.1 points lower than its level at Survey 2.

(c) The two age groups were no different from one another in Survey 2. This changed over Surveys 3-15 when the 76y+ had higher satisfaction with Government. At Survey 16 this changed again, with the two age groups not differing from one another. Most recently they have separated again but in the opposite direction from earlier surveys.

(d) The differences do not seem to reflect a simple Liberal/Labor preference. Following the government change at S18, both groups rose higher and then remained similar to one another up to S23. The recent disaffection with Government has been more keenly felt by the older group.
(e) The degree of variation for the oldest group (66.6 – 48.2; range 18.4 points) is much the same as for the youngest group (62.5 – 44.4: range 18.1 points), but they tended to move in opposite directions until Survey 18, when they rose together. Now they are moving apart again.

Summary for Government x Survey:

The Howard-era differences between the youngest and oldest age groups in satisfaction with Government, seemed to largely reflect a preference for the Labor and Liberal parties respectively. When Labor took office they initially converged, due to the rise in satisfaction by the youngest group, but most recently they have diverged again due to stronger dissatisfaction by the oldest group.

5.1.4. Life in Australia

The following observations can be made:

(a) All groups lie in the upper portion of their normative range.

5.1.5. Terrorist Attack Likelihood and Strength of Conviction

5.1.5.1. Percent Who Consider an Attack Likely

Table A5.4 shows the percentage of each survey, from 9-24, who considered a terrorist attack likely.

Figure 5.5: Satisfaction with Life in Australia x Age (Survey 26)

The following observations can be made:

(a) All groups lie in the upper portion of their normative range.

Figure 5.6: The percentage of people who consider that a terrorist attack in the near future is likely (Surveys 25 and 26).
The following observations can be made:

(a) While all groups are below their average, as expected due to adaptation subsequent to the lack of a terrorist threat in recent years, the overall trend is clearly age-related. The younger groups are adapting faster. Whereas only about one third of people in the 18-25y group expect an attack in the near future, this is about 50% for the older groups.

(b) Over the six surveys Survey 9 to Survey 14 there was no reliable age-related difference in the perceived likelihood of a terrorist attack. In Survey 15 a difference emerged for the first time (Table A5.4) and this has been sustained.

5.1.5.2. Strength of Conviction

The strength of conviction that an attack will take place is shown as a distribution in Table A5.5 (Survey 26) and A5.5.1 shows the distribution for the combined data.

Table A5.5.2 shows the means and standard deviations calculated for individual surveys x age, and also summary statistics within each age group.

Table A5.5.3 shows the normal range for the strength of conviction by age. This is the normal range for group scores calculated from the mean scores from past surveys. These results are shown in Figure 5.7.

![Figure 5.7: Strength of Estimated Probability by people who consider a terrorist attack likely in the near future](image)

Most groups show strength of conviction that is low within, or below their normal range. This is a very different result from the group percentages shown in Figure 5.6. The strength of conviction seems to be adapting at the same rate for all age groups.

It also appears that the believers maintain an average strength of conviction in the range of 55-65 points despite the number of people with this belief varying quite markedly between surveys and age groups (see Figure 5.6).
5.2. **Age-Group Averages vs. Generic Normal Range**

The age-group averages come from Tables A5.11.1 to A5.11.8.

Mean age group average using combined data

![Graphs showing age-group averages vs. generic normal ranges for various domains: Personal Wellbeing Index (PWI), Satisfaction with Standard of Living, Satisfaction with Health, Satisfaction with Achieving, Satisfaction with Relationships, Satisfaction with Safety, Satisfaction with Community, Satisfaction with Future security.](image-url)

**Figure 5.8:** Personal Wellbeing Index and Domain Averages vs. Generic Normal Ranges
The following observations pertain:

1. The U-shaped pattern across age groups, that is characteristic of the Personal Wellbeing Index, is shared by only two of its domains (Standard and Future Security). It is interesting that standard is highest at the age when household income is lowest. This exemplifies the difference between objective and subjective data. Elderly people generally adapt to their generally modest, but stable, financially circumstances.

2. Two domains show a falling trend with age (Health and Safety). It is clear that ‘Satisfaction with Health’ cannot be used as a proxy measure of SWB.

3. Three domains show a rising trend with age (Achieving, Relationships, Community). It is curious that ‘satisfaction with what you are achieving in life’ rises to its maximum levels in old age.

4. Satisfaction with safety hardly changes with age, showing a variation of just 1.9 points. The greatest change occurs with Community (9.7 points).

5.3. Age-Group Differences Over Time

5.3.1. Age x Surveys

Figure 5.9 shows the changes in Personal Wellbeing Index that have occurred for the youngest and the oldest group (Table A5.2). These are the most volatile age groups over time.

![Figure 5.9: Age x Survey (Personal Wellbeing Index)](image)

1. The pattern of differences between these two groups has shown three phases as:
   (a) Survey 1: No difference
   (b) Surveys 2-16: 76+y > 18-25y
   (c) Surveys 17-26: No difference

3. The oldest group has shown remarkable stability since Survey 2, varying by just 4.1 points (Survey 2 = 76.4 points; Survey 10 = 80.5 points).
4. The youngest group also showed remarkable stability over the first 21 surveys, varying by just 4.3 points over the whole eight year period (Survey 18 = 77.1 points; Survey 16 = 72.8 points). Now, however, this range has expanded to 6.4 points.

5. These are the two age groups to have shown the most change over the course of these surveys. The scores for the middle-range age groups have shown sporadic changes but, as shown in Table A5.2, only marginally significant changes over time.

6. Possible reasons for the early rise in the wellbeing of the oldest group are as follows:

(a) The first involves reminiscence regarding the Second World War, the fact of survival, and the mateship of that time.

(b) The second involves heightened arousal. Both interest and anxiety are stimulated by terrorist atrocities and Australia at war. If the anxiety can be dampened, then positive arousal dominates.

Anxiety may be quelled if the Government message, that ‘our side’ is winning the ‘war on terror’, is seen as credible. Moreover, elderly people are generally more receptive to such propaganda. They had a stronger positive regard for Government than younger people at that time (Table A5.1). As one consequence, the continued media presentation of overseas terrorist activities may have caused the heightened sense of wellbeing in elderly Australians.

(c) There is evidence from other research that older people are better at accentuating the positives and ignoring the negatives. However, this explanation does not account for the finding of no age-group differences prior to September 11.

(d) It is possible that older people, having more established personal and community relationships, can draw on these more effectively during times of threat to buffer the negative impact of world events. It may also be that the sense of threat caused these people, many of whom live alone, to bond and connect more strongly with their peers, and that these enhanced relationships have persisted, maintaining the elevated sense of wellbeing.

While any of these explanations are possible, they do not account for the fact that the wellbeing of this oldest group has remained elevated over the seven years following September 11.

Of course, none of these explanations can be used to account for the rise in the wellbeing of the youngest group since Survey 11.
5.3.1.1. The Oldest Group

Change over surveys in the two domains of Health and Relationships for the 76+ year group are shown in Table A5.1 for Survey 25, and over time in Figure 5.10.

![Figure 5.10: Age x Survey: 76y+, Health and Relationships](image)

Both of these domains have shown substantial change, with a range of 9.5 points for health and 9.7 for relationships.

The significant rises in health satisfaction at Survey 6 (March 2003) and Survey 9 (November 2003) are remarkable because, for the population as a whole, this domain has been the most consistent showing no significant change between surveys (Chapter 2). However, over the past 7.0 years it has remained at a level not statistically different from Survey 1.

The rise in relationship satisfaction since S1 has been more persistent and has remained fairly consistently above Survey 1. Its value in the current survey is again higher than Survey 1.

These trends are further discussed in Report 15.0.
5.4. **Age x Demographics**

5.4.1. **Age and Household Composition**

The cumulative data from Surveys 9-26 are presented in Table A5.6. The trends in personal wellbeing are shown below in the context of the age-specific normative range for grouped data (Table A5.12.1).

![Diagram of Age x Household Composition](image)

What is most striking from Figure 5.11 is the very small number of data-points that lie within the middle-age normative ranges. This indicates a broad dichotomy within the population as people who live with a partner and people who do not. While this dichotomy is less clear cut in the youngest group (18-25y) and people older than 66 years, it applies very strongly to the middle age groups. It appears that having a partner to live with, between the ages of 26-65 years, is a crucial ingredient for personal wellbeing.

Other observations in relation to Figure 5.11 are as follows:

(a) People living with their partner alone, or living with their partner and children, are statistically indistinguishable.

(b) Living alone is a poor option for people younger than 76+ years. It is likely that people with low wellbeing live alone either because they have recently broken from a relationship or...
because they cannot find a partner to live with them. The former reason could account for the very low levels of wellbeing in people aged 36-65 years who live alone.

(c) Living with parents is a good option for people aged 18-25, but not generally thereafter. In our society it is relatively unusual for people older than 26 years to be living with their parents. This group will include people who are unable to find a cohabiting partner, who lack the financial or other resources to move elsewhere, or who have returned to their parents following a broken relationship. However, the situation changes quite dramatically at 56-65y at which age the wellbeing of this group re-enters the normal range. It could, possibly, coincide with the parents moving to live with their adult children.

(d) People who live with other adults who are neither their partner nor their parent, have consistently low personal wellbeing at ages <76 years. These people may have low income and would prefer a different form of accommodation.

(e) Sole parents have very low wellbeing until 66-75y when their wellbeing enters the normative range.

Overall, it is extraordinary to observe the dramatic change that takes place after 66 years. The differences between groups become far less and they all approximate the normal range. Whether this increasing homogeneity is due to selective death or the common post-retirement experience is uncertain at this stage.
5.4.2.  Age and Relationship Status

The cumulative data from Surveys 9-26 are presented in Table A5.7 and Figure 5.12. Key observations are as follows:

(a) Once again, this Figure exemplifies the importance of living with a partner for middle-age people. This does not apply to people aged 18-25 or elderly widows, whose wellbeing appears much less dependent on the presence of a partner.

(b) The consistency of wellbeing across age for people who are married is extraordinary. The variation across the full age range is just 2.6 percentage points.

(c) The decrease in the normal range of wellbeing in middle age (see Figure 5.12) is not due to the people with partners, but to the people without a partner.

(d) Whether subjective wellbeing ‘naturally’ rises with age seems uncertain from these data. The most stable group are those who are married, and the rise from 18-25 years to 76+ years is a modest 1.2 points. What seems clearer is that not having a partner in middle-age is generally quite catastrophic for personal wellbeing.
(e) The SWB for people who are living de facto is consistently a couple of percentage points lower than married except for the oldest group. Perhaps this is due to greater uncertainty and lower commitment in de facto relationships.

(f) The wellbeing of people who have become divorced or separated is low as expected.

(g) The wellbeing of widows is interesting since this rises with age to reach very high levels (78.8) at age 76+ years. This possibly supports the proposition that happy people live longer.

(h) The majority of people aged 18-25 years who have never married (81.3%), have normal levels of wellbeing (75.4). However, in later age-groups the relative size of this group relative to each age cohort falls markedly (Table A5.6) and, as it does so, group wellbeing systematically falls up to the 46-55 year group (Figure 5.12). Following this, however, wellbeing progressively rises up to 66-75y, but remains below the age-specific normal range.
5.4.3. **Age and Work Status**

While most groups lie within the age-normative range (Table A5.8), the following are exceptions:

(a) People who are unemployed lie marginally within the normative range at 18-25y. Beyond that age their personal wellbeing shows a marked deterioration and remains well below normal up to 56-65y. Beyond this age, people without paid employment would usually describe themselves as retired rather than unemployed.

(b) The wellbeing of full-time students is normative provided they are young (18-35y). Thereafter their wellbeing lies below the normal range.

(c) Early retirees (36-55y) have below normal wellbeing. This may be due to the forced nature of their retirement due to poor health or other circumstances beyond their control.
The results below are from Table A5.9

Most of these groups lie within the normal range. Exceptions are:

(a) People aged 36-45 and older, who combine part-time employment with part-time voluntary work, have wellbeing above the normal range.

(b) Part-time volunteers aged 26-35 and older approximate the top of the normative range.

(c) People in casual employment aged 26 to 65 years approximate the bottom of the normative range.
The results below are from Table A5.9.1.

After the age of 36 years, the combination of F/T employment and casual employment is bad for wellbeing. This is not surprising since the casual employment is most likely driven by economic necessity and will leave little time for family and leisure.

The combination of F/T employment and P/T volunteering has no discernable effect on wellbeing for the youngest group. However, after 26 years of age this combination is associated with high wellbeing.

The results below are from Table A5.9.2.

Figure 5.15: Full-time employed: Age x Part-time work status

Figure 5.16: Semi-retired: Age x Part-time work status
The results below are from Table A5.9.3.

As yet, there are too few respondents to make meaningful comment.

The results below are from Table A5.9.5

After the age of 46, engaging in P/T volunteering, and especially if this is combined with P/T work, is associated with high wellbeing.

The results below are from Table A5.9.6
As yet there are too few results to comment.

The results below are from Table A5.9.7

It is apparent that part-time work does little to lift the wellbeing of unemployed people aged 36-45 years. However, the wellbeing of such people aged 56-65 shows substantially higher wellbeing, even though it remains below the normal range.
5.5. **Normative Data Generated from Individual Scores**

Table A5.11.1 has been constructed by averaging the Personal Wellbeing Index values of all individuals who fall within each age-range across all surveys. These results are shown in Figure 5.21.

There are three interesting features of these data as follows:

(a) They are very regular in two respects. First the range of two standard deviations for the entire database (N=50,845) conforms closely to the theoretical normal range of 50-100 points (50.5 and 100.0 points respectively, see Table A5.11.1). Second, the differences between the extent of the ranges of the seven age groupings is just 5.4 points (from 46.4 : 18-25y to 51.8 : 46-55y, see Table A5.11.1) The correlation between the mean and standard deviation across the seven age groups is .198 (NS).

(b) The base of the ranges show a dip in the 36-55y age groups. This indicates a downward extension of the Personal Wellbeing Index and indicates a higher than usual (compared with the other age groups) proportion of the sample experiencing homeostatic failure (individual values <50). This is due to the people without partners within this age range. Following 55 years this dip disappears, and of particular interest is the lack of any downward range extension within the oldest group (76y+). This indicates that homeostatic failure, producing lower Personal Wellbeing Index scores, is no more common within the most elderly sample than among the younger age groups. This attests to rugged maintenance of homeostatic control within the most elderly group and is consistent with the decoupling hypothesis presented earlier.

(c) The top of the range shows a gradual but persistent rise. This is quite different from the rise in the Personal Wellbeing Index calculated using survey mean scores, which shows the sudden emergence of higher scores at 56+ years (Figure 5.1). In Figure 5.21, the data from individuals show a gradual rise across all age groups. Beginning with the 18-25y group, the increment between adjacent age ranges is 0.0%, 1.2%, 0.6%, 0.8%, 0.6%, 0.8%. One explanation for this rise is hormosis (Renner, 2003). It is possible that, as people get older, they learn to adapt more effectively to potentially stressful situations. As one consequence, an increasing proportion of people within the older groups maintain their set-point and the gradual rise in the top of the wellbeing range reflects this process. It is also consistent with progressive decoupling of wellbeing from ill-being.
5.5.1. **Normative Domain Scores (raw data from individuals)**

Tables A5.11.2 to A5.11.8 show the accumulated data for the Personal Wellbeing Index domains.

It is evident that most of the variation with age occurs mainly at the lower margin of each normative range. The upper range of **health** varies by just 2.6 percentage points (112.8 to 115.4) across the seven age ranges, which is evidence of remarkable stability. The upper range for **relationships** varies by 6.0 percentage points (116.9 to 122.9). In contrast, the variation across age in the lower range for **health** is 15.1 points (27.9 to 43.0) and **relationships** are 13.5 points (32.9 to 46.4). These are remarkably similar degrees of change. The correlation between these lower margins for health and relationships is -.79. This is consistent with the idea of domain compensation, where a decrease in one domain is compensated by a rise in another in order to maintain a steady state of SWB.

5.6. **Normative Data Generated from survey mean scores**

These results are shown in Tables A5.12.1 to A5.12.10 for the Personal Wellbeing Index and Life as a whole, and in Table A5.13.1 to A5.13.6 for the National Wellbeing Index.
Dot Summary Points for Age

1. All PWI values within Survey 26 lie within their age-specific normal ranges and very close to the values for the previous Survey 25.

2. Satisfaction with Safety is currently high for all ages

3. (a) Satisfaction with Environment remains high and may be a consequence of wide-spread rains across the continent together with the climate-change sceptics gaining media dominance.

(b) Satisfaction with Government falls with age and is below their normal range for all groups older than 36 years
4. This shows the contrast between the youngest and oldest groups. During most of the Howard-era, the oldest group showed higher satisfaction with Government, but this has now dissipated, with the S26 result being the lowest on record. The youngest group, in contrast, showed lower satisfaction during the Howard-era, and generally higher under Labor, but this has now fallen to its second lowest level.

5. The U-shaped pattern across age groups, that is characteristic of the Personal Wellbeing Index, is shared by only two of its domains (Standard and Future Security). It is interesting that standard is highest at the age when household income is lowest. This exemplifies the difference between objective and subjective data. Elderly people adapt to their generally modest, but stable, financially circumstances.

6. After the PWI being significantly different between the youngest and oldest groups over Surveys 2-16, the youngest group has sustained its rise to be statistically no different from the oldest group. The reason for this change is not known.
7.1 The reason for the overall dip in middle-age is the low wellbeing of the people who do not have a partner. The people living with their partner show no such age-related change.

7.2 In their middle age, people who do not live with a partner are at risk of low wellbeing. However, these disadvantages disappear after 66 years of age.

7.3 Living with your children as a sole parent from 66 years and older is good for your wellbeing.
8. The average wellbeing of married people varies by 2.6 points across the age-range. The wellbeing of people who are divorced varies by 5.7 points, is lowest at 36-45, and never enters the age-specific normal range.

9. Unemployment has a devastating effect on personal wellbeing beyond 25 years of age.
6. Household Composition

6.1. Data Distribution

The data for this chapter were derived from the following question:

“I am going to ask who lives in your household. Please indicate from the list I will read who lives with you.

<table>
<thead>
<tr>
<th>Household Composition</th>
<th>Survey 26 N</th>
<th>%</th>
<th>Combined Surveys %</th>
</tr>
</thead>
<tbody>
<tr>
<td>No one, you live by yourself</td>
<td>310</td>
<td>16.8%</td>
<td>16.7%</td>
</tr>
<tr>
<td>You live with your partner (only)</td>
<td>645</td>
<td>34.9%</td>
<td>31.9%</td>
</tr>
<tr>
<td>Sole parent</td>
<td>107</td>
<td>5.8%</td>
<td>6.9%</td>
</tr>
<tr>
<td>With one or both of your parents (only)</td>
<td>83</td>
<td>4.5%</td>
<td>5.7%</td>
</tr>
<tr>
<td>With adults who are neither your partner nor parent (only)</td>
<td>33</td>
<td>1.8%</td>
<td>3.6%</td>
</tr>
<tr>
<td>With partner and child</td>
<td>573</td>
<td>31.0%</td>
<td>31.0%</td>
</tr>
</tbody>
</table>

The proportions for Survey 26 are similar to the combined survey data (Table A6.1). The largest differences are +3.0% Partner only (which was also higher in Survey 25) and fewer Sole Parents (-1.1%) and Other Adults (-1.8%). Tables A6.30.1 to A6.30.15 show the proportion of each household group for each survey since Survey 9 and the normal ranges calculated from these proportions for each separate household group. All of the proportions in Survey 26 lie within the normal range of values except for Other Adults which lies -0.2% below. This small aberration in sampling will not substantially affect the overall sample mean.

In terms of the combined data, it is notable that the highest proportion of respondents (65.9%) live with their partner either as a couple alone (34.9%) or with one or more children (31.0%). The third most common form of household composition is people living alone (16.8%).

Tables A6.30.1 to A6.30.15 show the changing proportions of the samples since Survey 9 in terms of household composition, and the normal ranges derived from using the survey mean scores as data.

6.2. Introduction to Sections 6.3 and 6.4

Section 6.3 compares the current data from Survey 26 with the most relevant past data. That is, Survey 26 is compared against specific normative ranges generated from Household Composition data. These Household Composition specific normative ranges are generated by using the mean scores of each Household Composition group over past surveys as data. This section therefore allows the Survey 26 data to be compared with the average of similar past data.

Section 6.4 compares the averages for each Household Composition group against the generic normal ranges. For example, the average satisfaction for health within the sole parent group is compared to the generic normal range for health satisfaction. This comparison allows each household group to be compared against general population averages.

6.3. Survey 24 vs. Specific Normal Ranges for Household Composition

The results for Figure 6.1 come from Table A6.2 for Survey 26, and the specific normative ranges for household composition from Tables A6.31 to A6.36.
6.3.1. Personal Wellbeing and Domains

The Personal Wellbeing Index of all groups lies within its specific normal range. This also applies to the domains.
6.3.2. National Wellbeing and Domains

The results for Figure 6.1 come from Table A6.2 for Survey 26, and the specific normative ranges for household composition from Tables A6.31 to A6.36.

The National Wellbeing Index for all groups lies within its specific normal range. In terms of the national domains, Government lies below its specific normal range of household groups for Partner and children (-4.4 points), Live alone (-3.3), and Partner (-7.7). Satisfaction with Business is also lower than the range for Partner and children (-1.4 points) and Partner (-0.2).
6.3.3. **Life as a Whole and Life in Australia**

The results for Figure 6.3 and Figure 6.4 come from Table A6.2 for Survey 26, and the specific normative ranges for household composition from Tables A6.31 to A6.36.

![Figure 6.3: Household Composition: Life as a Whole](image)

All household groups lie within their normal range.

![Figure 6.4: Household Composition: Life in Australia](image)

Two groups lie below their own specific normal range. These are Sole parents (-0.6 points) and Partner and Children (-1.0).

The pattern of range differences between the groups is similar between the two measures. However, the substantially higher scores recorded for Life in Australia than for Life as a Whole (around 5-10 points higher) seems to have attenuated the extent of the household differences. While the highest and lowest groups differ by 6.9 percentage points on the Life as a Whole, this is reduced to 4.1 points for Life in Australia. It may be that ‘Life in Australia’ evokes some common abstract patriotism that becomes weakened when the item refers to some more specific aspect of national functioning, as in the national domains. Maybe this abstract dimension could be better tapped by asking ‘How satisfied are you with Australia as a whole?’
6.3.4. National Survey-Specific Aspects: Terrorist Attack

These results are drawn from Table A6.2 (Survey 26) and A6.43 (Household Composition specific normal range).

In Figure 6.5, the Specific Normal Range is constructed from the mean scores for this item from past surveys. Thus, as expected, the current values tend to be below the range mid-points, in keeping with the trend of a decreasing percentage of people who are expecting an attack. This is evident for all groups.

The strength of belief of those who believe an attack is likely is shown below. Results are drawn from Table A6.2 (Survey 26) and A6.44 (Household specific normative data).

The following observations can be made:

1. For the people who believe an attack is likely, their strength of belief is maintained at a much lower level from previous surveys. The exception is Other adults, who have not reduced their strength of conviction.

2. These results for Survey 26 are different from previous surveys, where there was a general lack of adaptation in belief strength. It was previously considered that the threshold belief strength
6.4. Comparisons With Generic Normal Ranges for Household Groups

6.4.1. Personal Wellbeing Index

The figure below depicts the Personal Wellbeing Index calculated from combined data (Table A6.1).

![Figure 6.7: Household Composition: Personal Wellbeing Index [combined data]](image)

Several aspects of this figure can be noted as follows:

(a) The normative range has been calculated from the survey mean scores (Chapter 2). It represents the range within which we have 95% confidence of finding the mean of any future general population survey.

(b) The ‘Threshold for depression risk’ is set at a value of 70. This is an approximate value derived from other research which shows that groups that fall below this level have a higher proportion of people who are depressed than groups that lie within the normative band. It can be seen that sole-parents (6.9% of the sample) have a mean score which lies at this threshold.

(c) The groups with the highest wellbeing are those people living with their partner in any combination with other people. Heading this list is the extended family comprising Partner, Children Parents and other adults (78.2 points). It is interesting that only 0.1% of the total sample live in these circumstances, indicating the extraordinary dominance of the nuclear family.

(d) Living with other adults who are neither a partner nor parent is generally bad for wellbeing. Of the six relevant groups three lie at or below the bottom of the normative range. The presence of a partner counteracts this tendency.

(e) The presence of children has a variable effect on adult wellbeing, depending on the other people present in the household and household income. These effects are shown in Figure 6.8 (see also Chapter 3).
Section 6: Household Composition continued

![Figure 6.8: Effects of Children on Adult Wellbeing (combined sample)](image)

- With no other adult present, the influence of children is somewhat negative, with the wellbeing of single parents (single adult: plus children: 70.7) being into the territory of high risk for depression. Their wellbeing is -1.3 points lower than people who live alone. The wellbeing of both groups however, is highly income dependent (Chapter 3).

- In the presence of a partner or parents the additional influence of children is non-significant (-0.8 points), as it is also for Other Adults (-0.2 points). The addition of siblings to Parents raises wellbeing by +1.0 point.

In summary, as a simple demographic, the addition of children to a household has little impact on parental wellbeing except in the case of single parents. This is, however, powerfully moderated by income (Chapter 3).

(f) Of the seven ‘partner’ groups (Figure 6.7), four lie above the normative range (76.7). Living with other adults in addition to partner reduces wellbeing by -1.8 percentage points over living with partner alone. Whether this is due to reduced relationship resources or financial resources cannot yet be reliably determined.

(g) Living with parents or with parents and other adults yields a level of wellbeing close to the bottom of the generic range.

(h) People who live alone have a level of wellbeing that lies 1.8 points below the normative range. However, this is gender-dependent with females having higher wellbeing than males (see Chapter 4).

6.4.2. Personal Domains

The results in this section are drawn from Table A6.3 (combined data), and the combined whole surveys normative data (Table A2.21).
Section 6: Household Composition continued

6.4.2.1. Live Alone vs. Generic Normal Range (combined data)

![Figure 6.9: Live Alone vs. Generic Normative Ranges](image)

It can be seen that the domains values for the people who live alone are generally well below the normative ranges for the population. Overall, the Personal Wellbeing Index lies 1.8 points below the normative range. The major deficits among the domains are with relationships (-8.3 points) and health (-3.1 points). Satisfaction with relationships is so severely deficient for the people in this group it is probably pulling satisfaction with the other domains down. In particular, this may be causing minor health issues to seem important through the lack of close friend or partner with whom such matters can be discussed.

However, four of the domains do not differ from population norms (standard, safety, community and future security).

6.4.2.2. Live with Partner vs. Generic Normal Range (combined data)

![Figure 6.10: Live with Partner Only vs. Generic Normal Range](image)

It can be seen that the personal wellbeing of people living with their partner alone is higher than the generic population normal range (+0.9 points). This also applies to most of the domains, with the most pronounced advantage being with Relationships (+4.9 points). Two domains (Health, Safety) lie within the generic normal range.
Section 6: Household Composition continued

6.4.2.3. Sole Parent vs. Generic Normal Ranges

In sharp contrast to the people who live with their partner alone, sole parents have a level of personal wellbeing lower than the generic range on the Personal Wellbeing Index and most domains. Only safety and Community just make it into the bottom of the generic normal range. It is an interesting reflection on our society that we fail to offer sufficient resource assistance to these families.

6.4.2.4. Partner and Children vs. Generic Normal Ranges

People who live with their partner and children generally have high wellbeing. They are above the generic range for the PWI and the domains of Health (+0.6) and Relationships (+2.1). Notably, their satisfaction with relationships is not as high as for people living only with their partner (+4.9 points).
6.4.2.5. Live with Parents vs. Generic Normal Ranges x People who live with their Parents

These people have generally low wellbeing despite having higher than normal satisfaction with Health (+2.1). It is notable that the two interpersonal domains lie well below the generic range as Relationships (-4.5 points) and Community (-1.2 points).

6.4.2.6. Other Adults vs. Combined Survey Mean Scores

The PWI and domain values for people living with other adults are generally low with three exceptions. Health, safety and Future Security are just within the normal population range, probably due to the generally young age of this group. Three domains are below normal as Achieving (-1.2), Relationships (-5.0) and Community (-1.6 points). The domain of Safety seems generally quite resistant to change.
6.4.2.7. Partners in the Presence and Absence of Children

An interesting comparison is between people living with their partner in the presence or absence of children. This is shown below.

Figure 6.15: Live with Partner in the Absence/Presence of Children (combined data)

The overall pattern shows that living with a partner is generally advantageous to wellbeing, but that the addition of children diminishes that advantage. While this is significant but fairly trivial in terms of the Personal Wellbeing Index (-0.8 points), it is significant in the case of two domains as Living Standard (-2.4 points) and Relationships (-2.8 points). However, the domain of health satisfaction shows a reversal. Here, partner and children shows a significant advantage (+2.2 points). It may be the case that the responsibility of child care causes parents to be more positive about their own health. In any event, it is this domain that prevents the overall Personal Wellbeing Index from being significantly different between the two groups. It is also an interesting example of the domains being directionally differentially influenced by the presence or absence of children.

This overall pattern indicates that, while the partner plus children have above normal-range wellbeing, this is more fragile than the partners living alone. This latter group have higher levels of satisfaction in the two key domains that reinforce homeostasis (money and relationships). Moreover, the domain showing an advantage for the parents plus children is health. So if this domain fails it would be expected that it may have serious consequences for the overall wellbeing of these people.
6.4.2.8. Living with Partner Only vs. Children Only (Sole Parent)

The next comparison of interest shows that partners and children are not fungible. The contrast between someone living only with their partner or only with children is very stark and shown in Figure 6.16. This is based on results shown in Table A6.3.

The advantage of living only with a partner is most obvious in the domain of relationships. Here the two groups are separated by 18.6 points. Couples also have much higher satisfaction with their Standard of Living and Future Security.

It is notable that the most affected domain for sole parents is relationships rather than Standard of Living, even though most are on very low incomes (see Chapter 3). This is consistent with the view that the most important factor missing from these people’s lives is an intimate relationship with another adult.

6.4.3. National Wellbeing Index – Generic Normal Range

These results come from Table A6.3.

It is notable that sole parents lie at the bottom of the normal range, rather than well below as is the case with the PWI. The three groups living with a partner or parents have a higher National Wellbeing Index than all of the other three groups (Table A6.3).
6.5. Combined Household Composition and Marital Status

Table A6.4 provides the comparative data (combined surveys).

(a) People who are married have higher wellbeing than people in defacto relationships. In the absence of children the advantage is +2.4 points and in the presence of children +2.4 points. In the absence of children, the married group has the highest SWB (78.0 points) of any of these groupings. Thus, the addition of children, as a drain on household resources, has more potential to reduce this exceptionally high wellbeing towards the normal range (-0.9 points). However, this is income dependent (see Chapter 3).

(b) Widows living either alone or with other adults have high wellbeing. These people tend to be elderly with a low but secure income through either a pension or superannuation. However, widowed sole parents lose -3.4 points over widows who live alone, to lie at the bottom of the normative range.

(c) People who have never married and who have moved away from their parents without a partner, have low wellbeing. It does not make much difference whether they live alone (69.2) or with other adults (72.0).

(d) As expected, people who are separated or divorced have low wellbeing. However, it is interesting that, compared with living alone, the wellbeing of both groups decreases still further in the presence of children (separated -2.3 points; divorced -1.2 points). These deficits are certainly income-dependent.
6.5.1. Income x Household Composition x Marital Status

These Household Composition x marital status groups are separated by income in Tables A6.5-A6.12.

6.5.1.1. Live Alone x Marital Status x Income

These results come from Tables A6.5 to A6.12.

While the Never married, Divorced, and Separated show much the same trajectory with increasing income, widows are very different. Even at the lowest income their wellbeing falls within the normal range. This is mainly due to their older age.

The lack of any substantial difference between the three other groups is interesting. It goes some way to answering the question of whether the low wellbeing of Never Married is due to some personality difference. These data indicate otherwise. The fact that the Never Married and the other two groups who were previously married do not differ indicates the dominating influence of income. In other words, the commonly reported finding that people who have never married have low wellbeing is primarily a function of their low household income. Their wellbeing enters the normal range at an income of $101-150K. The divorced and separated groups, on the other hand, remain well below the normal range even at $101-150K.
6.5.1.2. Sole Parent x Relationship Status x Income

These results come from Tables A6.5 to A6.12

The sole parents who are married or widowed do much better than the other groups. This may be due to higher income or respite arrangements with their spouse in the case of Married.

Conclusion

Being a sole parent is generally harmful to adult wellbeing. However, there are caveats as:

1. A major factor is low household income. However, it is notable that the separated and divorced single parents do not enter the normal range even at an income of $101-150K

2. Widows do better than the other three non-partnered groups, probably because they are older and are living with adult children.

3. Sole parents who remain married tend to do better than other sole parents. These people may retain the emotional security of marriage, and even perhaps some instrumental support, even though they regard themselves as sole parents. This group of sole parents constitute 24.8% of all sole parents (Table A6.4).
6.5.1.3. Partner plus Children x Relationship Status x Income

These results come from Tables A6.5 to A6.12

It is notable that the de facto lag by a couple of percentage points at each level of income. In terms of the Partner plus Children group it is notable that the ceiling of about 81-82 points is evident.

It is interesting that the wellbeing of the Divorced Group are so low at $31-60.
The divorced group with low income have one of the lowest levels of wellbeing on record. Living with parents under such conditions is probably a last resort.

![Image of chart showing wellbeing levels for different relationship statuses and income levels.]

Both Divorced and Never Married have low wellbeing even with a household income of $61-100K. There is something about living with non-related adults that lowers wellbeing for all groups except Widowed and Married on >$61K.

### 6.6. **Household Composition x Work Status**

#### 6.6.1. **Household Composition x Unemployment**

The accumulated data on people who are unemployed (Table A6.13) are shown below:

![Image of chart showing wellbeing levels for different employment statuses and relationship statuses.]

The protective element of having a partner is very evident here. Both of the partner groups are within 2 points of the normal range. This is in sharp contrast to people who live alone. Indeed, this group of unemployed people living alone have one of our lowest levels of wellbeing on record (61.2 points) and 22.6% of the unemployed people in our samples live in this circumstance.

#### 6.6.1.1 **Household composition x Unemployment x Income (PWI)**

These results come from Table A6.15
6.6.2. **Living Alone x Work Status**

The data for full-time work status are given in Table A6.13 and for part-time in Table A6.14.

![Figure 6.26: Household Composition x Unemployed x Income: Personal Wellbeing Index](image)

**Figure 6.26:** Household Composition x Unemployed x Income: Personal Wellbeing Index

The best work-status circumstance for someone living alone, if they are not retired, is to be engaged in part-time volunteer work. However, it does not resolve the issue of causation. Do people with normal levels of wellbeing seek voluntary work whereas people who have low levels do not? It is notable that full-time voluntary work is not more strongly linked to higher wellbeing than part-time voluntary work.

It is also interesting to note that the activities of paid work and study are unable, of themselves, to raise wellbeing to normal levels for people who live alone.

The normal-range wellbeing of people who are Full-time retired is consistent with their older-age.

6.6.3. **Sole Parents x Work Status**

Data are from Tables A6.13 and A6.14.
The strongest protective factor for Sole Parents seems to be retirement. These people are one of the very few sub-groups of sole parents whose wellbeing lies in the normal range. It is likely that they are elderly, on secure but modest incomes, and perhaps caring for grandchildren.

The second sub-group who are doing relatively well, lying just at the bottom of the normal range, are mixing Part-time work with Part-time volunteering. Sole-parents in full-time work and P/T volunteers are also close to the normative range. The former are likely to have a higher household income than the other groups.

6.6.4. **Sole Parents x Part-time Work Status x Income**

These results are found in Tables A6.16-A6.23.

It appears that part-time work, volunteering and study are similarly related to levels of wellbeing. At $61-100K all three groups enter the normal range. Income is clearly a strong determinant of wellbeing for all groups.
6.6.5. Live Alone x Part-time Work Status x Income

For people who live alone, the part-time activity that is most consistently associated with normal levels of wellbeing is volunteering. Curiously, rising income has no systematic effect to raise the wellbeing of this group.

Part-time study is associated with consistently low levels of wellbeing for people who live alone, and again this is not much influenced by income.

Part-time work, on the other hand, shows a clear relationship between wellbeing and income, such that wellbeing approximates the bottom of the normal range at $31-60K.

In summary, people who live alone and with part-time activities show a weak relationship between income and wellbeing. The missing ingredient in their lives is probably a personal relationship.

All part-time activities, with the exception of study at low income, tend to take the wellbeing of people living only with their partner above the normal range.
6.7. Changes in Survey Composition Over Time

Tables A6.30.1 to A6.30.15 document the household composition changes over surveys 9 to 26. These show the following results:

Live alone (Table A6.30.1): No systematic change in the proportion of this group within surveys or the PWI of this group.

Partner only (Table A6.30.2): No systematic change in the proportion of this group within surveys or the PWI of this group.

Sole parents (Table A6.30.3): No systematic change in the proportion of this group within surveys or the PWI of this group.

Parents (Table A6.30.4): No systematic change in the proportion of this group within surveys or the PWI of this group.

Other adults (Table A6.30.5): No systematic change in the proportion of this group within surveys or the PWI of this group.

Partner and children (Table A6.30.6): No systematic change in the proportion of this group within surveys or the PWI of this group.

6.8. Regressions

Tables A6.24-A6.29 show the regressions of the seven domains against ‘Life as a Whole’ for people who live alone and have never married. These tables depict the results from different income ranges.

### Table 6.1: Regressions: Live alone and never married (combined data)

<table>
<thead>
<tr>
<th>Domain</th>
<th>All combined data</th>
<th>Live alone – never married</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>sr² (n=1677)</td>
<td>$&lt;15,000 - sr² (N = 286)</td>
</tr>
<tr>
<td>1. Standard</td>
<td>4.4</td>
<td>4.3</td>
</tr>
<tr>
<td>2. Health</td>
<td>0.6</td>
<td>0.8</td>
</tr>
<tr>
<td>3. Achieving</td>
<td>8.0</td>
<td>8.1</td>
</tr>
<tr>
<td>4. Relationships</td>
<td>0.5</td>
<td>0.0</td>
</tr>
<tr>
<td>5. Safety</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>6. Community</td>
<td>0.7</td>
<td>0.6</td>
</tr>
<tr>
<td>7. Future Security</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Unique</td>
<td>14.7</td>
<td>14.3</td>
</tr>
<tr>
<td>Shared</td>
<td>40.6</td>
<td>50.3</td>
</tr>
<tr>
<td>R² (adjusted)</td>
<td>55.3</td>
<td>64.6</td>
</tr>
</tbody>
</table>

Shade = significant contribution

The sr² statistic represents the proportion of unique variance contributed by each domain. It is calculated as the square of the ‘Part’ statistic that can be requested from SPSS in association with a multiple regression. When this value is multiplied by 100 it gives the percentage of unique variance contributed by the item. Thus, for the <$15K group, satisfaction with standard of living contributes 4.3% of unique variance within the total 55.3% of variance accounted for in this sample.

Observations of this table are as follows:
1. There is a tendency for the amount of unique variance to increase with income.
2. The proportion of shared variance does not reliably change with rising income.
3. The domain contributing the strongest unique variance is most commonly Achieving in Life rather than Standard of Living.

4. Relationships tend to make a weak contribution. This makes sense for people who live alone. If relationships made a strong contribution they would probably be living in a relationship.
6.9. **Specific Normative Ranges for Household Composition Groups**

The normative ranges from individuals are calculated by combining all of the raw scores within each category into a single combined sample. Two standard deviations on either side of the mean then defines the normal range. The magnitude of this range indicates the degree of heterogeneity within each combined sample.

6.9.1. **Specific Norms using Data for Individuals**

The above results come from Table A6.37. The outstanding domain for the Live Alone group is Relationships, which has a low mean (69.1 points) and a very large normative range (109.2 points). This clearly points to the high heterogeneity within this group. The highest domain mean is Safety (78.1 points) which also shows the smallest range (76.3 points).

The above results come from Table A6.38. The experience of living with a partner has a homogenizing effect on people’s reported domain satisfaction. The magnitude of the normative ranges are all smaller than for the live alone group. They range from 77.4 points (Health) to 86.4 points (Relationships).
The above results come from Table A6.39. This profile is similar to Live Alone. The largest normative range is Relationships (109.4 points) and the smallest is Safety (76.8 points). These high ranges are indicative of a highly heterogeneous sample.

The above results come from Table A6.40. The experience of Living with a Partner and Children homogenises the domain satisfactions even more than it does for people Living with their Partner Only. The largest range is 71.6 points (Community) and the smallest is Standard of Living (60.4 points).
The above results come from Table A6.41. As might be expected the most variation occurs within Relationships (90.0 points) and the smallest in Standard of Living (67.4 points).

The above results come from Table A6.42. The most variation occurs within Relationships (96.9 points) and the smallest is Safety (72.3 points).

### 6.9.2 Household-specific Normative Ranges for Household Composition Groups

The specific normal ranges are shown in Figure 6.1 and Tables A6.31 to A6.36. All are based on N=17 survey mean scores.
In terms of Live Alone, the most variable domain for survey mean scores (Table A6.31) is Relationships (range 11.0 points), just as it was for the normative range calculated from the individual scores (109.0 points; Table A6.37). Similarly, Safety (range 76.3 and 3.1 points respectively) is the least variable domain. The rank-order of the domain ranges is shown below:

<table>
<thead>
<tr>
<th>Domain</th>
<th>Individual scores Table A6.37</th>
<th>Survey mean scores Table A6.31</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Health</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Achieving</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Relationships</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Safety</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Community</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Future</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

It can be seen that the rankings are significantly similar. Spearman’s correlation is r=0.75, p<0.05. It implies that much the same forces are influential in causing within-sample variation (the individual difference of HPMood, individual valuation of each domain, personal life events, national life events) as in between-survey variation (the distribution of HPMood, national events changing national mood). In this, HPMood is a powerful constant. The other influences are variable. Because national events are distal, the satisfaction changes they induce are likely to be domain-specific.
Dot Point Summary for Household Composition

1. The Personal Wellbeing Index of all groups lies within their specific normal ranges.

   Among the household composition groups, the highest levels of personal wellbeing are achieved by people living with their partner. The lowest personal wellbeing is found among sole parents. Their low wellbeing puts many of them at risk of depression.

2. People who live alone have a major loss of wellbeing in terms of relationships, health and achieving. The relative lack of buffering caused by poor relationship availability makes the person more vulnerable to life stressors. Thus, minor health issues may seem important due to the lack of a close friend with whom such matters can be discussed.

3. For a couple living together, the presence of children reduces two domains (Standard of Living, Relationships) and enhances one domain (Health). The net result is little difference between these groups in the overall Personal Wellbeing Index. However, since money and relationships are the most important domains for overall wellbeing, the relative deficit in these domains for partners with children may make them less resilient to additional stress, particularly if this is caused by poor health.

Living with a partner is most conducive to enhance wellbeing.
PARTNERS AND CHILDREN ARE NOT FUNGIBLE

4. The advantage of living only with a partner is most obvious in the domain of relationships. Here the two groups are separated by 18.6 points. Couples also have much higher satisfaction with their Standard of Living and Future Security.

It is notable that the most affected domain for sole parents is relationships rather than Standard of Living, even though most are on very low incomes (see Chapter 3). This is consistent with the view that the most important factor missing from these people’s lives is an intimate relationship with another adult.

5. For people who live alone, those who are married, and widows have above normal range Personal Wellbeing Index.

6. While the Never married, Divorced, and Separated show much the same trajectory with increasing income, widows are very different. Even at the lowest income their wellbeing falls within the normal range. This is mainly due to their older age.

The fact that the Never Married and the other two groups who were previously married (divorced/separated) do not differ indicates the dominating influence of income on their wellbeing. In other words, the commonly reported finding that people who have never married have low wellbeing is primarily a function of their low household income.

It is interesting to note that the divorced and separated groups remain well below the normal range even at $101-150K.
7. Being a sole parent is generally harmful to adult wellbeing. A major factor is low household income however it is notable that the divorced single parents do not enter the normal range even at an income of $101-150K.

Widows do better than the other three non partnered groups, probably because they are older and are living with adult children.

Sole parents who remain married tend to do better than other sole parents. These people may retain the emotional security of marriage, and even perhaps some instrumental support, even though they regard themselves as sole parents. This group of sole parents constitute 24.8% of all sole parents.

8. One key to wellbeing for people who are unemployed is to live with a partner. The presence of children diminishes wellbeing to some extent, but only among low income couples.

9. For Sole Parents, part-time work is associated with only marginally higher wellbeing than part-time volunteering. Both groups enter the normal range at $61-100K.
7. Marital Status

NOTE: Due to the absence of change in any of the personal or national variables in Table 2.1, Chapter 7 has not been updated from Report 26. The revised values for Survey 27 are, however, provided in Appendix 7.

7.1. Data Distribution

'I am going to ask you about your marital status. Please indicate any of the following categories that apply to you at the present time.

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Survey 26</th>
<th>%</th>
<th>Combined Surveys 9-26</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>1,155</td>
<td>62.3</td>
<td>20,008</td>
<td>58.8</td>
</tr>
<tr>
<td>Defacto or living together</td>
<td>111</td>
<td>6.0</td>
<td>2,533</td>
<td>7.4</td>
</tr>
<tr>
<td>Never married</td>
<td>202</td>
<td>10.9</td>
<td>5,278</td>
<td>15.5</td>
</tr>
<tr>
<td>Separated but not divorced</td>
<td>49</td>
<td>2.6</td>
<td>1,049</td>
<td>3.1</td>
</tr>
<tr>
<td>Divorced</td>
<td>164</td>
<td>8.9</td>
<td>2,649</td>
<td>7.8</td>
</tr>
<tr>
<td>Widowed</td>
<td>172</td>
<td>9.3</td>
<td>2,499</td>
<td>7.3</td>
</tr>
<tr>
<td>Total</td>
<td>1853</td>
<td>100.0</td>
<td>34,016</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The proportion of respondents in each category for Survey 24 (Table A7.1) generally reflects the proportions from the combined surveys (Table A7.2). The largest anomalies are Never Married (-4.6%) and Widowed (+2.0%), indicative of an older sample than is usual. This is a trend over surveys – the sample is getting older, probably due to exclusive mobile-phone use by many young adults. There is also a trend over recent surveys to be an increased proportion of married (+3.5%) and a lower proportion of never married. All of these trends would tend to elevate the average sample PWI.

7.2. Introduction to the Chapter

The results for Marital status begins with two comparison sections. The first compares Survey 26 against normative ranges generated from marital status data Tables A7.25 to A7.30. That is, marital status group-specific normative ranges are generated by using the mean scores of each marital group over past surveys as data. This section therefore allows the Survey 26 data to be compared with the average of similar past data.

The second section compares the averages for each marital status group again the generic normal ranges Table A2.21. For example, the average satisfaction for health within the married group is compared to the generic normal range for health satisfaction.

The third section concerns demographic variables and regressions.

7.3. Survey 25 vs. Specific Normal Ranges for Marital Status

7.3.1. Personal Wellbeing

In Survey 26 values come from Table A7.1 and the marital-status specific normative values from Tables A7.25 to A7.30. The figure shows the level of wellbeing for both Survey 26 and Survey 25 compared to the normal range separately calculated for each specific marital group.
Most values for the Personal Wellbeing Index in Survey 26 lie within their Marital-status Specific normal ranges. The exception is de facto which lies 0.3 points below. The domain-level analysis shows all except community lie low within their ranges, with health and relationships lying below. No other domain values for any of the other marital status groups lie below their normal ranges.
Section 7: Marital Status continued

7.3.2. National Wellbeing

The Survey 26 values come from Table A7.1 and the marital-status specific normal values from Tables A7.25 to A7.30.

Figure 7.2: National Wellbeing Index vs. Specific Normal Ranges
All NWI values in Survey 26 lie within their Marital-status-specific normal ranges except for Married, which lies below. The domain-level analysis for Married shows that three domains as Economic situation, Business and Government are all below their ranges but, of these, by far the lowest is Government. Two other groups, Divorced and Widowed, also rate Government as below range and for Widows this is the second survey in a row that they have given such a low rating.

Likelihood of Terrorist Attack

The percentage of people who consider a terrorist attack to be likely in the near future may now have stabilized. As can be seen, the variations between Survey 26 and 25 appear to be random and may just represent measurement error.

It is interesting to note the systematic difference between groups, ranging from about 36% of the Defacto and never Married groups, up to about 57% of the Separated group.

For those people who consider an attack likely, the strength of their belief in an attack is shown below.

It may be that these strength of belief have stabilized for most groups at between about 60-65 points. The low rating for Separated seems anomalous and may be chance due to low numbers.

### 7.4 Marital Status Averages vs. Generic Normal Ranges

The results in this section come from Table A7.2 and show the comparison of each marital status group averaged across all surveys against generic normal ranges. It shows the average performance of each work-group relative to overall population averages. The generic normal ranges are drawn from Table A2.21.
Section 7: Marital Status continued

Personal Wellbeing Index Generical Normal Ranges for Marital Status

Figure 7.5: Marital status Average vs. Generic Normal Ranges (PWI and domains)
The marital status values from combined survey data are drawn from Table A7.2. The generic normal ranges are drawn from Table A2.21

**Personal Wellbeing:** The most advantaged group are Married, having a level of wellbeing that is higher than that of all other groups and 2.4 points above Defacto. The reason for this high wellbeing may be that they are older, wealthier, and that unhappy married people have separated from one another.

It is interesting that Never Married lie below the normal range. Their most deficient domain is Relationships, which lies -9.3 points below the generic range indicating the relative lack of intimate connection for this group. As some slight compensation, their health is at the top of the generic range, perhaps due to the high proportion of young people within the never married group. However, these results are age dependent, with people in the youngest group and those over 65y having normal-range personal wellbeing (Section 5.4).

The high Personal Wellbeing Index of widows is certainly influenced by the fact that many are elderly and the effect of widowhood is also age dependant (Section 5.4). People widowed younger than 56 years have lower than age-normative wellbeing.

The most disadvantaged groups are Separated and Divorced, with a PWI about 8-9 points lower than Married. The Separated group have the lowest overall wellbeing. The most deficient domain is relationships which lies -18.1 points below the population normal range and -26.2 points below Married. The only domain lying within the normal range for both groups is Safety. Thus, marriage is a gamble for middle-age. People who do not take a chance on this union do not typically experience the wellbeing extremes that marriage and separation can bring.

The Divorced group have a similar profile to the separated group. However, the crucial domain of relationships while still very low (-12.7 points below the normal range) is higher than the separated group. This advantage over Separated is almost certainly due to their generally longer period for adaptation.

**Health:** Despite having a Personal Wellbeing Index at the top of the normal range, the level of satisfaction with health for widows is below normal, due to their older age. This exemplifies the relative unimportance of health as a determinant of SWB provided that other domains can compensate. Here, the most strongly compensating domains are Standard, Community and Future Security. Of these, Community Connection shows the highest level above the normal range (+2.7 points).

**Community Connection:** is low for all groups except Married and Widowed.
National Wellbeing Index Generical Normal Ranges for Marital Status

Figure 7.6: Marital status Average vs. Generic Normal Ranges (NWI and domains)
It is notable that all groups lie within or close to the population normal range on this, more distal, variable. However, the overall pattern of differences is similar to the Personal Wellbeing Index

The national domains (Table A7.2) show a pattern that resembles the NWI.

It is evident that the champions of Government are married and widowed. Older age, conservatism, and security may contribute to this.

For the domain of National Security, the Never Married group are relatively higher, such that they do not differ from the Married and Widowed (Table A7.2). The reason for this differential domain sensitivity is not known.

7.4.1. Life as a Whole

![Figure 7.7: Marital Status: Life as a Whole (cumulative data)](image)

The pattern of results shown in Figure 7.7 is very similar to those for the PWI.

7.4.2. Life in Australia

![Figure 7.8: Marital Status: Life in Australia](image)

Married and widowed have higher satisfaction with Life in Australia than the other groups, and Widows have higher satisfaction than married (Table A7.2). There is a remarkable lack of variation between these groups (5.1 points) compared with the Personal Wellbeing Index (9.2 points).
Section 7: Marital Status continued

7.5. Marital Status x Full-Time Work Status

The pattern of wellbeing for people in full-time employment is shown in Table A7.3 for both Survey 25 and for the combined data.

The following observations can be made as:

1. The values for Survey 26 tend to lie within about 2 points of the combined survey means except for Widows which is lower.

2. The fact of full-time employment is not of itself sufficient to bring the wellbeing of people who are separated, divorced or never married into the normal range.

3. Widows engaged in full-time work have a level of wellbeing well below the widows as a total group. This is probably because they tend to be younger than the average widow, with less time elapsed since the death of their partner, and may also be employed due to necessity rather than choice. It is notable that using the combined data (Table A7.2) only 8.0% of the widowed group are full-time employed compared with 41.8% of the married group (Table A7.3).

The data presented in Table A7.3, also show how the negative effects of unemployment are somewhat buffered through marriage (Figure 7.10)
Clearly the negative effects of unemployment on wellbeing are far less severe for people who are married, whose wellbeing lies close to the lower margin of the normative range. This is due to the buffering influence of marriage as both an emotional and a financial resource.

The combination of divorce or separation with unemployment is devastating for personal wellbeing. Loss of income must be part of the reason for their extremely low scores.

Marital status x full-time home or family care (Table A7.3) is shown below.

![Full-time Home/Family Care](image)

Figure 7.11: Marital Status vs. Full-time Home or Family Care (cumulative data)

This Figure shows the largest range of personal wellbeing (15.9 points) of any marital status comparison. The two groups with partners and widows lie within the normal range. All other non-partner groups are very low indeed, with values that indicate a high probability of depression.

### 7.6. Part-time Work Status

#### 7.6.1. Volunteering

The figure below compares the whole combined samples of each marital status group (Table A7.2) with the marital groups that contain a part-time volunteer (Table A7.4).

![Marital Status x Part-time Volunteering](image)

Figure 7.12: Marital Status x Part-time Volunteering (PWI: Combined sample)

Across all groups, part-time volunteers have marginally higher wellbeing than the total comparison group. The largest effect (+4.8 points) is for people who have separated, which is almost sufficient to take them into the normal range. This may represent a novelty effect if more people in this group have recently adopted volunteering due to a recent separation. It is notable that the relative advantage is much reduced for people who have divorced (+2.2 points) and all other groups.
An explanation for these overall results may be as follows:

(a) People with high SWB set-points tend to volunteer. Thus, the general 1-2 point advantage across the marital groups reflects this difference.

(b) The impact of volunteering on wellbeing is greatest in the early stages. At this time new relationships are forming and positive feedback is likely to be highest. Thus, the additional 4.4 points displayed by the separated group shows the novelty effect of volunteering.

If this interpretation is correct, then an implication for people who wish to maximise their wellbeing, is to change the group to whom they are offering their services on a regular basis.

The proportion of each marital group (Table A7.4 vs. A7.2) who engage in part-time voluntary work is as follows:

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Total N</th>
<th>Total Part-time Volunteers</th>
<th>% of part-time volunteers (cumulative data)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>20,008</td>
<td>2963</td>
<td>14.8</td>
</tr>
<tr>
<td>Defacto</td>
<td>2,533</td>
<td>206</td>
<td>8.1</td>
</tr>
<tr>
<td>Never married</td>
<td>5,278</td>
<td>448</td>
<td>8.5</td>
</tr>
<tr>
<td>Separated</td>
<td>1,049</td>
<td>118</td>
<td>11.2</td>
</tr>
<tr>
<td>Divorced</td>
<td>2,649</td>
<td>389</td>
<td>14.7</td>
</tr>
<tr>
<td>Widowed</td>
<td>2,499</td>
<td>591</td>
<td>23.6</td>
</tr>
</tbody>
</table>

The following conclusions may be drawn:

(1) The Separated group, who gain most from volunteering, have a relatively low proportion of part-time volunteers.

(2) There is no simple association between the probability of volunteering and having or not-having a partner.

(3) People in a married relationship are about twice as likely to be part-time volunteers as people in defacto relationships. This may be because the married group is older.

(4) Widows have by-far the highest proportion of part-time volunteers. Again this is likely due to their older age.

(5) The great majority of part-time volunteers are people who are married.

7.6.2. Part-time Study

These data are found in Table 7.2 (total sample) and Table A7.4 (part-time status).
Of all the groups, the positive effects of part-time study are most evident for people who are widowed (+2.1 points) and Separated (+2.5 points). While this degree of difference for the Widow group is similar to volunteering, the degree of advantage for the Separated group is much smaller. Moreover, these people are a small minority of their respective groups and so are likely differing from the majority of the group in other respects as well, such as being wealthier or more out-going.

### 7.7. Marital Status x Full Time Work Status x Income

These data have been drawn from Tables A7.5 to A7.12.

#### 7.7.1. Divorced

For people who are divorced and Fulltime Employed, income has little impact. Even with an income of $101-150K their Personal Wellbeing Index lies only marginally within the normal range. This is interesting since it indicates that above-average household income does not necessarily ensure high wellbeing. However, if these people also have dependents and are single parents, then maybe they need even more income to meet their resource needs.

Divorced people engaged in fulltime home care and people who are unemployed are seriously below the normal range with an income of $15-30K, while divorced people who have retired enter the normal range $31-60K. Presumably the resource needs of the latter group are much less and they are likely to be older.
**7.7.2. Never Married**

These results are limited by cell-size, with only those cells containing at least 20 cases being included. For the most part, however, it appears that work status is a more powerful influence on SWB than is household income. Two work-status groups do show a substantial rise with income as people who are unemployed, SWB rises by 14.9 points from <$15K to $101-150. Full-time students show an 8.1 point gain and employed a 7.8 point gain over this same income range.

It is notable that Never married x F/T Home show no reliable rise in SWB with income moving from <$15K to $15-30K, and neither do students. The reason for this is not clear.

**7.8. Regressions of Personal Wellbeing Index Domains Against Life as a Whole**

These regression for Marital Status are presented in Tables A7.13 to A7.18 (combined surveys). The normative results come from Table A2.17.1

<table>
<thead>
<tr>
<th>Domain</th>
<th>Normative (combined)</th>
<th>Married</th>
<th>Defacto</th>
<th>Never married</th>
<th>Separated</th>
<th>Divorced</th>
<th>Widowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Standard</td>
<td>6.1</td>
<td>6.6</td>
<td>5.2</td>
<td>4.5</td>
<td>4.4</td>
<td>6.9</td>
<td>5.7</td>
</tr>
<tr>
<td>2. Health</td>
<td>0.6</td>
<td>0.6</td>
<td>1.2</td>
<td>0.8</td>
<td>0.2</td>
<td>0.3</td>
<td>0.8</td>
</tr>
<tr>
<td>3. Achieving</td>
<td>4.2</td>
<td>4.1</td>
<td>4.6</td>
<td>7.4</td>
<td>5.2</td>
<td>4.5</td>
<td>2.7</td>
</tr>
<tr>
<td>4. Relationships</td>
<td>3.2</td>
<td>3.5</td>
<td>3.0</td>
<td>1.4</td>
<td>3.3</td>
<td>1.9</td>
<td>2.2</td>
</tr>
<tr>
<td>5. Safety</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>0.1</td>
</tr>
<tr>
<td>6. Community</td>
<td>0.4</td>
<td>0.3</td>
<td>0.5</td>
<td>0.4</td>
<td>0.1</td>
<td>0.2</td>
<td>0.6</td>
</tr>
<tr>
<td>7. Future Security</td>
<td>0.4</td>
<td>0.4</td>
<td>0.3</td>
<td>0.5</td>
<td>0.8</td>
<td>0.2</td>
<td>0.4</td>
</tr>
</tbody>
</table>

**Unique**

<table>
<thead>
<tr>
<th>Domain</th>
<th>Normative (combined)</th>
<th>Married</th>
<th>Defacto</th>
<th>Never married</th>
<th>Separated</th>
<th>Divorced</th>
<th>Widowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Health</td>
<td>35.9</td>
<td>33.8</td>
<td>32.3</td>
<td>37.4</td>
<td>32.9</td>
<td>37.9</td>
<td>24.7</td>
</tr>
<tr>
<td>3. Achieving</td>
<td>50.8</td>
<td>49.2</td>
<td>47.1</td>
<td>52.3</td>
<td>47.1</td>
<td>52.0</td>
<td>43.7</td>
</tr>
<tr>
<td>4. Relationships</td>
<td>51,917</td>
<td>22,240</td>
<td>2,784</td>
<td>5,880</td>
<td>1,114</td>
<td>2,903</td>
<td>2,741</td>
</tr>
</tbody>
</table>

The sr2 statistic represents the proportion of unique variance contributed by each domain. It is calculated as the square of the ‘Part’ statistic that can be requested from SPSS in association with a multiple regression. When this value is multiplied by 100 it gives the percentage of unique variance contributed by the item. Thus, for the normative sample, satisfaction with standard of living contributes 6.1% of unique variance within a total 50.8% variance accounted for.
Points to note are as follows:

1. Separated is unusual in that only four domains make a significant contribution.
2. Widowed has the smallest variance accounted for, and this holds for both unique and shared variance.
3. The domain of Standard is high for all marital groups and is only eclipsed in Never Married and Separated by Achieving.

### 7.9. Normative Scores

#### 7.9.1. Normative Ranges from Individual Values

These combined survey data are provided in Tables A7.19 to A7.24.

![Figure 7.16: Marital Status Normative Ranges for PWI (Cumulative: individual data)](image)

These ranges are consistent with homeostatic theory. In conditions of no systematic threat to wellbeing (Married, Defacto, Widow) the distribution approximates the positive range from 50 to 100. However, in the presence of systematic threat (Never Married, Separated, Divorced) the top of the range remains intact at about 100, while the bottom of the range falls substantially below 50. This indicates the presence, within the upper portions of these distributions, of people who are resilient and who continue to hold their wellbeing within their set-point range, thereby keeping the top of each range normatively close to 100. Also within these distributions, however, are people whose SWB homeostasis has failed and who have low wellbeing as a consequence. These people extend the tail of the distributions down to lie below 50.

#### 7.9.2. Normative Ranges from Survey Mean Scores

These data, comprising the mean values from 13 surveys, are found in Tables A7.25 to A7.30. The results for the Personal Wellbeing Index are shown below.

![Figure 7.17: Marital Status Normative Ranges for PWI (Cumulative: survey mean scores)](image)
The extent of variation in these ranges indicates the relative stability of each group mean between surveys. This stability is a function of two forces. One is the sample size, with larger sample sizes giving greater stability. The other is the degree to which each group is affected by general factors such as world or national events.

The two groups that are most different from one another are married (range 2.1 points) and separated (range 9.0 points). The top of these two ranges differ by 5.7 points while the bottom of the ranges differ by 12.6 points. In other words, there is an asymmetry in the degree of variation at the top and the bottom of each range.

This cannot be simply explained on the basis of group size. Certainly the Separated is by far the smallest of the marital groups, and this can explain the greater range due to more measurement or sampling error within each survey causing variation. But this cannot explain the asymmetry.

The reason for the asymmetry is the skewed nature of the distribution of the group means. Such means are limited in their upward movement by homeostasis and the normal distribution of values for people in each sample who are maintaining their wellbeing within the normal range. So movement in the means between surveys is more likely to reflect the proportion of each sample in homeostatic failure.
Dot Summary Points for Marital Status

1. Most values for the Personal Wellbeing Index in Survey 26 lie within their Marital-status Specific normal ranges. The exception is de facto which lies 0.3 points below. The domain-level analysis shows all except community lie low within their ranges, with health and relationships lying below. No other domain values for any of the other marital status groups lie below their normal ranges.

2. Of all the marital status groups, satisfaction with Government is lowest for the Widows, and has been for the last two surveys.

3. The most advantaged group are Married, having a level of wellbeing that is higher than that of all other groups and 2.4 points above Defacto. The reason for this high wellbeing may be that they are older, wealthier, and that unhappy married people have separated from one another.

Widows have an average level of wellbeing that lies at the top of the normal range. This is despite low income for this group.

People who have never married have a level of personal wellbeing that lies between people who remain married and those who have separated or divorced. However, this is age dependent and is only evidenced by people aged between 26-65 years. Younger and older people who have never married have normal levels of wellbeing. See Chapter 5 for a full discussion.
4. Widows have relatively low health satisfaction. This is probably due to the burden of accumulated medical condition, that yield pain, such as arthritis.

Despite this, their overall wellbeing lies at the top of the normal range. This is due to the compensating effect of high satisfaction in other domains.

5. The fact of full-time employment is not, of itself, able to bring all marital status groups into the normal range. The values for Survey 26 for widows are well below the combined surveys.

6. The negative effect of unemployment on wellbeing is partially buffered through marriage. However, the combination of separation/divorce and unemployment is devastating, yielding one of our lowest group mean scores for personal wellbeing (58.6).

7. Marital status x F/T family care shows the largest range of personal wellbeing (15.9 points) of any marital status comparison. The two groups with partners and widows lie within the normal range. All other non-partner groups are very low indeed, with values that indicate a high probability of depression.
8. Across all groups, part-time volunteers have marginally higher wellbeing than the total comparison group. The largest effect (+4.8 points) is for people who have separated, which is almost sufficient to take them into the normal range. This may represent a novelty effect if more people in this group have recently adopted volunteering due to a recent separation. It is notable that the relative advantage is much reduced for people who have divorced (+2.2 points) and all other groups.

9. For people who are divorced and Fulltime Employed, income has little impact. Even with an income of $101-150K their Personal Wellbeing Index lies only marginally within the normal range. This is interesting since it indicates that above-average household income does not necessarily ensure high wellbeing. However, if these people also have dependents and are single parents, then maybe they need even more income to meet their resource needs.

10. Work status is a more powerful influence on SWB than household income. Two work-status groups do show a substantial rise with income as people who are unemployed, SWB rises by 14.9 points from <$15K to $101-150. Full-time students show an 8.1 point gain and employed a 7.8 point gain over this same income range.
8. Work Status

NOTE: Due to the absence of change in any of the personal or national variables in Table 2.1, Chapter 8 has not been updated from Report 26. The revised values for Survey 27 are, however, provided in Appendix 8.

We asked:

“I am going to ask about your work status. Please tell me which of the following categories best applies to you at the present time. Are you in ---

<table>
<thead>
<tr>
<th>Category</th>
<th>Survey 26 N</th>
<th>%</th>
<th>Combined Surveys 9-26 N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time paid employment</td>
<td>698</td>
<td>34.9</td>
<td>14305</td>
<td>39.7</td>
</tr>
<tr>
<td>Full time retired</td>
<td>595</td>
<td>29.8</td>
<td>8633</td>
<td>24.0</td>
</tr>
<tr>
<td>Semi retired</td>
<td>59</td>
<td>3.0</td>
<td>907</td>
<td>2.5</td>
</tr>
<tr>
<td>Full time volunteer</td>
<td>7</td>
<td>0.4</td>
<td>175</td>
<td>0.5</td>
</tr>
<tr>
<td>Full time family</td>
<td>105</td>
<td>5.3</td>
<td>2548</td>
<td>7.1</td>
</tr>
<tr>
<td>Full time study</td>
<td>60</td>
<td>3.0</td>
<td>1458</td>
<td>4.1</td>
</tr>
<tr>
<td>Unemployed</td>
<td>119</td>
<td>6.0</td>
<td>1414</td>
<td>3.9</td>
</tr>
<tr>
<td>Non of the above</td>
<td>315</td>
<td>15.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Part-time</td>
<td>797</td>
<td>39.9</td>
<td>14292</td>
<td>39.7</td>
</tr>
<tr>
<td>Total sample</td>
<td>2,000</td>
<td>100.0</td>
<td>36,000</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Please tell me whether either of the following part-time categories applies to you at the present time. Are you ---

<table>
<thead>
<tr>
<th>Category</th>
<th>Survey 26 N</th>
<th>%</th>
<th>Combined Surveys 10-26 N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part time paid work</td>
<td>230</td>
<td>11.5</td>
<td>4570</td>
<td>13.4</td>
</tr>
<tr>
<td>Part time voluntary</td>
<td>294</td>
<td>14.7</td>
<td>4561</td>
<td>13.4</td>
</tr>
<tr>
<td>Part time paid &amp; voluntary</td>
<td>40</td>
<td>2.0</td>
<td>667</td>
<td>2.0</td>
</tr>
<tr>
<td>Part time study</td>
<td>76</td>
<td>3.8</td>
<td>1917</td>
<td>5.6</td>
</tr>
<tr>
<td>Casual</td>
<td>157</td>
<td>7.9</td>
<td>2007</td>
<td>5.9</td>
</tr>
<tr>
<td>Total sample</td>
<td>2,000</td>
<td>100.0</td>
<td>34,000</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Looking for Work?

<table>
<thead>
<tr>
<th>Category</th>
<th>Survey 26 N</th>
<th>% Yes/No</th>
<th>Combined Surveys 9-26 N</th>
<th>% Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>216</td>
<td>10.8</td>
<td>4,105</td>
<td>11.4</td>
</tr>
<tr>
<td>Total sample</td>
<td>2,000</td>
<td>100.0%</td>
<td>34,000</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The above data, taken from Tables A8.1, A8.2 and A8.3 indicate a high degree of congruence between the proportion of people in each work status category in Survey 26 and the combined data from Surveys 9-26. The largest discrepancies are 4.8% fewer people in F/T paid employment and 5.8% more people who are F/T retired in Survey 26 than the running average. There are also 2.1% more people who are unemployed and 2.0% more casual employed. On average, these would tend to somewhat lower the wellbeing of the whole sample.

Introduction

The results for Work Status begin with three comparison sections. The first compares Survey 26 against normative ranges generated from Work Status data. That is, work-group specific normative ranges are generated by using the mean scores of each work group over past surveys as data. This section therefore allows the Survey 26 data to be compared with the average of similar past data.

The second section compares each work-status group averaged across all surveys against the generic normal ranges. For example, all of the ‘Full-time employed’ respondents over all surveys are combined to yield a single group. The mean of this group is then compared to the generic normal range for group mean scores. Thus, in a comparison involving the Personal Wellbeing Index, the PWI mean from all ‘Full-time employed’ will be compared to the generic normal range for Personal Wellbeing Index mean scores. This comparison shows how, on average, each work-status group compares against population averages.

The third section involves comparisons of work-status groups within demographic characteristics.
8.1. **Survey 26 Compared with Work-Group Specific Normal Ranges**

The results in this section show the comparison of each work-group in Survey 26 against each work-group’s own normative range calculated from survey mean scores.

8.1.1. **Personal Wellbeing Index**

This shows the performance of the group in Survey 26 in comparison to the work group’s average performance. The results below come from (Table A8.4) for Survey 25 and Table A8.18.1 in relation to their group-specific normal range.

All group mean scores in Survey 26 are within their own normal range, but an exception is volunteers. The normal range for volunteers is so large because each survey only picks up <10 of these people, so the mean scores from each survey are unreliable and show high variation.

The following figures show the domain-level profile for each full-time work group for Survey 26 (Table A8.4) in relation to each work-status group normal range (Tables A8.18.1 to A8.18.8).

The domain profile for Full-time Employed is as follows:

All values for the PWI and domains are within their full-time employed, specific normal range. Three domains are very low as Health (also low in Surveys 23-25), Achieving and Future Security.
Section 8: Work Status continued

Figure 8.3: Work Status: Full-time Retired in Survey 26 vs. Fulltime Retired Normal Range

All values are within their specific normal range except Safety which is marginally higher.

Figure 8.4: Work Status: Semi-retired in Survey 26 vs. Semi-retired Normal Range

All values are within their specific normal ranges except Achieving which is 1.4 points below.

**Full-time Volunteers**

The domain profile for the Full-time Volunteers has not been provided. Due to the small number of such people recruited into each survey (Table A8.1) the results from individual surveys are not reliable. The results derived from the combined data for this group are available from Table A8.5.
Figure 8.5: Work Status **Full-time Home or Family Care** in Survey 26 vs. Home/Family Normal Range

All values lie within their specific normative range.

Figure 8.6: Work Status **Full-time Students** in Survey 26 vs. Full-time Student Normal Range

Most values lie within their normal range. However, Health lies below (-0.6 points) while Relationships (+2.2 points) and Community (+0.3 points) lie above.

Figure 8.7: Work Status: Unemployed in Survey 26 vs. Unemployed Normal Range
All values lie within their specific normal range.

**Summary**

In general, the F/T Work Status group profiles for Survey 26 show few significant deviations from their work-group specific normal ranges. Only two instances showed scores deviating from the normal ranges by >1.0 point. These are Achieving for Semi-Retired (-1.4 points) and Relationships for Students (+2.2 points).

8.1.2. **National Wellbeing Index**

This shows the performance of the group in Survey 26 in comparison to the work group’s average performance. The results below come from (Table A8.4) for Survey 26 and Table A8.18.1 in relation to their group-specific normal range.

![Figure 8.8: Full-time Work Status: Survey 26 vs. Work Group Norms (National Wellbeing Index)](image)

All groups in Survey 26 are within their own normal range except F/T paid, which lies 0.1 points below its range.

The following figures show the domain-level profile for each full-time work group for Survey 26 (Table A8.4) in relation to each work-status group normal range (Tables A8.18.1 to A8.18.8).

The domain profile for Full-time Employed is as follows:

![Figure 8.9: Work Status: Full-time Employed in Survey 26 vs. Fulltime Employed Normal Ranges](image)
Three domains follow the NWI in being below the specific normal range for the F/T employed group in Survey 26 as Economic situation (-0.7 points), Government (-5.6 points) and Business (-0.8 points).

Relative to their own normal range, the full-time retired are within their normal range with the stark exception of Government (-7.0 points).

All domains for the Semi-retired are within their own normal range with the exception of Economic situation (-4.5 points) and government (-0.7 points).

The domain profile for the Full-time Volunteers has not been provided. Due to the small number of such people recruited into each survey (Table A8.1) the results from individual surveys are not reliable. The results derived from the combined data for this group are available from Table A8.5.
Figure 8.12: Work Status **Full-time Home or Family Care** in Survey 26 vs. Home/Family Normal Range

All domains lie within their own normative range with the exception of two that lie above (Environment (+0.9) and Social conditions (+1.2)) and one that lies below Government (-0.1).

Figure 8.13: Work Status **Full-time Students** in Survey 26 vs. Full-time Student Normal Range

All domains lie within their normal range.

Figure 8.14: Work Status: **Unemployed** in Survey 26 vs. Unemployed Normal Range
All domains lie within their unemployed domain-specific normal range.

**Summary**

The domain that is doing conspicuously badly is Government with 4/6 work groups rating this below their specific normal range. The strongest opinion came from Retired (-7.0 points) and Employed (-5.6 points). The other domains to lie below normal ranges are Economic situation (Semi-retired -4.5 points and Employed -0.7 points) and Business (Employed -0.8 points). The most optimistic group is Home/Family which rated two domains above their normal ranges (Social situation +1.2 points and Environment +0.9 points). Neither Students nor Unemployed varied from their normal ranges, quite possibly indicating their relative disinterest in matters national.

**8.2. Work Group Averages Against Generic Normal Ranges**

The results in this section show the comparison of each work group averaged across all surveys (Table A8.5) against generic normal ranges (Table A2.21). It shows the average performance of each work-group relative to overall population averages.

The personal wellbeing of most work-status groups falls in the generic normal range. People who are full-time volunteers lie above the normal range while people who are unemployed fall below.
8.2.1. Personal Wellbeing Index

The domain profile for Full-time Employed compared against the domain generic normal ranges is as follows:

The Personal Wellbeing Index lies at the top of the generic normal range, however the responses to domains are highly variable. While health lies 0.9 points above the generic range, both domains that involve associations with other people (Relationships and Community) are low compared to the population at large.

The Personal Wellbeing Index of F/T Retired lies at the top of the generic normal range, however the domain of Health lies substantially below (-2.9 points). This low health satisfaction, however, is counteracted by four domains that lie above the range (Standard (+0.4), Relationships (+0.9), Community (+1.6) and Future Security (+1.3). This is a good example of the fact that the domain of health is relatively unimportant in the maintenance of SWB provided that the other domains can compensate.
Figure 8.18: Semi-retired Average vs. Generic Normal Range (PWI)

The profile of this group resembles that of the fulltime retired. They have a high Personal Wellbeing Index despite low Health satisfaction (-1.7), with compensation coming from Standard, Community and Security.

Figure 8.19: Full-time Volunteer vs. Generic Normal Range (PWI)

All domains for F/T Volunteers are high within the generic normal ranges, with the most outstanding domain being Community, which is +6.2 points higher than the normal range for the general population.
Section 8: Work Status continued

Figure 8.20: Full-time Family Average vs. Generic Normal Range (PWI)

All domains lie within their generic normal range. The lowest domains are Achieving and Standard. These are compensated by high levels of satisfaction with Health, Relationships and Community relative to the general population.

Figure 8.21: Full-time Students Average vs. Generic Normal Range (PWI)

Students have mid-range wellbeing, but the two domains concerning other people as Relationships (-2.0) and Community(-1.3) are below the generic range. Compensation comes from Health (+3.5) and Achieving (+0.3).
This domain profile is quite different from all of the others. Relative to the generic normal ranges, all domains are substantially below normal with the exception of Safety.

8.2.2. Work Status: Full-time only vs. Full-time plus Part-time Volunteer

These results come from Tables A8.5 and A8.13. The figure below shows, for each work group, the overall group Personal Wellbeing Index (F/T: Table A8.5) compared with the sub-group of people who also engage in part-time voluntary work (P/T Vol: Table A8.13).

It can be seen that the only groups to show a reliable increase in their Personal Wellbeing Index associated with volunteering are fulltime employed (+2.1 points) full-time retired (+2.3) and unemployed (+1.8 points). The association with volunteer work has no reliable effect for people in semi-retirement, fulltime home or fulltime students. It may be that semi-retired people would prefer not to be retired and find volunteer work a less rewarding substitute activity. Fulltime home may be fully engaged with their family. Full-time students, on the other hand, may be so engaged in their studies and social life that volunteer work makes no additional contribution to their wellbeing.

Figure 8.23: Full-time Work Status vs. Full-time Work Status plus Part-time Volunteer (combined data)
8.3. Work Status Groups within Demographic Characteristics

This section shows the domain profile of each work status group, using combined data, against the generic ranges for each domain.

8.3.1. Unemployed x Household Income

The aim of this section is to track the changes in the Personal Wellbeing Index for people who are unemployed at different levels of household income. The values for Survey 26 are shown in Table A8.6. The figures below use combined data from Table A8.7 and the generic normal ranges from Table A2.21.

The domain profile for people who are unemployed with a household income <$15K is as follows.

The Personal Wellbeing Index and all domain scores are much lower than the general population normative range. The best performing domain is Safety which is -2.9 points below the normal range.

While the Personal Wellbeing Index has risen by 4.7 points, the domains have contributed very unevenly as:
- The most spectacular rise is Relationships (+8.8 points) followed by Achieving (+5.4) and Living Standard (+7.2).
- The other 4 domains increased by <4 points.

The Personal Wellbeing Index has risen by a further +4.8 points and the same three domains have shown the largest rises as Relationships (+9.2 points), Achieving (+5.5), and Living Standard (+5.7) and they have been joined by Health (+6.7), Safety (+2.8) and future security (+1.8).

Only the domain of Community has not substantially changed

This $15-30K to $31-60K is the income increment that makes the biggest difference to improve wellbeing.

The Personal Wellbeing Index has risen by a further 1.5 points and the profile of domain rises has changed as:
- The domains to continue a strong improvement of >3 points are Health (+4.7 points) and Safety (+4.4 points).
All other domains have changed by 3.0 points or less.

The most notable deficit is in Achieving which remains -9.8 points below its normal range. This attests to the feelings of worthlessness that are such a negative feature of unemployment. This also points to the kinds of interventions likely to assist people who are unemployed to regain their wellbeing.

The Personal Wellbeing Index now lies within the normal range, as do most of the domains. The domain that remains below the generic normal range is Achieving, despite having risen a further +5.8 points from the previous income bracket. However, four of the other domains have risen to lie above their generic ranges.

Summary

1. Household income has a very strong influence on the Personal Wellbeing Index of people who are unemployed, as it does on all groups. The largest increase due to an income increment occurs between $15-30K and $31-60K.

2. While the negative influence of unemployment is diminished by high household income, unemployment continues to exert a strong negative influence on key domains. Chief among these are Achieving in Life and Relationships, which remain below the normal range even with a household income of $61-100K. Clearly, these two domains are a particular source of vulnerability for people who are unemployed.

3. For people with low household income, the other domains that show the greatest increase with higher household income are Living Standard and Health. The first of these is intuitive, the second one is not. The strong rise in health satisfaction may be due to increased access to health care, although with Medicare this should not be a major factor. It may also be linked with the easing of psychosomatic symptoms as daily life becomes financially easier.
8.3.2. Looking for Work Personal Wellbeing Index

Tables A8.8 and A8.9 show the Personal Wellbeing Index and distribution of people looking/not looking for work. Tables A8.10 and A8.11 show these data for people either in full-time work or unemployed.

![Figure 8.29: Looking for Work: Personal Wellbeing Index (combined data)](image)

It is evident that the 8.9% of people who are employed full time and looking for work have a level of personal wellbeing that is -2.5 points below the normative range and -5.0 points below those not looking at work.

It is also notable that people who are unemployed and looking for work also have a level of wellbeing -2.5 point below those who are not looking. Evidently, looking for work is harmful to wellbeing.

8.3.3. Looking for Work: Employed (PWI and Domains)

Figure 8.30 shows the domain performance of fulltime employed who are or are not (Table A8.10) looking for work. The people employed full-time who are not looking for work have normal-range domains. For people who are looking for work, only the domain of Safety remains within the normal range.

![Figure 8.30: Work Status: Full-time Employed Looking/Not Looking for Work (combined data)](image)
By far the largest disparity is for the domain ‘Achieving in life’ which differs by 9.5 points between those looking, and not looking, for work. No doubt this is one of the main reasons these people are seeking to change their employment. It also signals that the low value for this domain may be central in driving the other domains, and therefore the PWI, down below normal. Many employed people gain a great sense of ‘purpose in life’ from their employment, and having a sense of purpose is central to wellbeing.

This domain profile may be diagnostic of employees who are likely to take an alternative job if the opportunity arises.

Table A8.12 shows the proportion of people in each survey who are unemployed and are/are not looking for work. The proportion looking for work varies from 60.8% (Survey 11) to 27.5% (Survey 23). The current value of 36.0% is mid-range. The proportion of people who are unemployed and not looking for work varies from 72.5% (Survey 23) to 35.6% (Survey 13). The current value of 64.0% is high.

The figure below compares people who are unemployed and either are looking (45.1%) or not looking (54.9%) for work (Table A8.11) on the PWI and domains.

The Personal Wellbeing Index of the ‘Not Looking’ is higher than the ‘Looking’, and this also applies to the domains of Standard, Achieving, Relationships and Future Security. However, the people who are looking for work have higher health satisfaction, and it may be that their better health allows them to actively look for work.
8.3.4. **Full-Time Employment Status x Gender**

These results come from Table A8.14.

There are three situations in which the SWB of females significantly exceeds males. These are in full-time retirement (+1.2 points), full-time home (+3.7 points) and unemployment (+4.2 points). The most important of these are full-time home for males and unemployment for both genders, since the wellbeing of these groups lie well below the normal range. In terms of unemployment, males are very severely affected.

8.3.5. **F/T work group plus P/T status**
8.4. Regressions

Tables A8.16 to A8.16.6 present multiple regression analyses for each of the work-status groups. In each calculation the PWI domains are regressed against Life as a Whole. Figure 8.32 shows the variance accounted for in total, and also broken down into shared and unique variance.

![Regressions](image)

**Figure 8.34: Regressions of the Personal Wellbeing Index Domains against Life as a Whole: % of variance accounted for.**

There is considerable variation between these groups in the extent to which the Personal Wellbeing Index domains account for variance in Life as a Whole. The $R^2$ range is 14 percent, from 43% (Retired) to 57% (Semi-retired).

The variation is mainly due to differences in shared variance with a range of 13.4 percent across these seven groups. The difference in the unique variance is only 4.6 percent.

This indicates that the domains are very constant, across these groups, in the extent to which they are collectively able to capture unique variance in Life as a Whole. This is probably the predominantly cognitive component.

The shared variance is the effective component provided predominantly by MPMood. However, in difficult living circumstances, affective variance is also supplied by the negative emotions attached to the homeostatic failure of some group members.

If this explanation is correct, there should be a simple relationship between the extent of shared variance (Figure 8.32) and the group mean (Table A8.17.1). This is shown in Table 8.1.

**Table 8.1: The relationship between shared variance and the negativity of the downward extension group-specific normal range**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean score (Lowest = 1)</th>
<th>Shared variance (Highest = 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployed</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Home/Family</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Semi-retired</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Retired</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Study</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Paid</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

The Fulltime Volunteers have not been included because the sample size is so small. The Spearman correlation coefficient of .611 is a reasonable fit with the prediction.
8.5. Demographic Changes Over Time for the Full Sample

The purpose of this section is to document the proportion of the whole sample (N = 2,000) made-up of each designated demographic group. This will allow a correction-factor to be calculated which determines the extent to which changes in the proportion of each sub-group are responsible for between-survey fluctuations in the Personal Wellbeing Index. The values for Survey 25 come from table A8.1.

Table 8.2: Demographic Changes in percentage of Full-time Work Status Over Time

<table>
<thead>
<tr>
<th>Survey</th>
<th>Paid employment N %</th>
<th>Retired N %</th>
<th>Semi-retired N %</th>
<th>Volunteer N %</th>
<th>Family N %</th>
<th>Study N %</th>
<th>Unemployed N %</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>683 34.2</td>
<td>490 24.5</td>
<td>47 2.4</td>
<td>9 0.5</td>
<td>158 7.9</td>
<td>-</td>
<td>139 7.0</td>
</tr>
<tr>
<td>10</td>
<td>750 37.5</td>
<td>517 25.9</td>
<td>39 2.0</td>
<td>13 0.7</td>
<td>208 10.4</td>
<td>94 4.7</td>
<td>74 3.7</td>
</tr>
<tr>
<td>11</td>
<td>759 38.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>12</td>
<td>705 35.3</td>
<td>654 32.7</td>
<td>50 2.5</td>
<td>5 0.3</td>
<td>152 7.6</td>
<td>75 3.8</td>
<td>70 3.5</td>
</tr>
<tr>
<td>13</td>
<td>876 43.8</td>
<td>371 18.6</td>
<td>68 3.4</td>
<td>14 0.7</td>
<td>150 7.5</td>
<td>96 4.8</td>
<td>45 2.3</td>
</tr>
<tr>
<td>14</td>
<td>919 46.0</td>
<td>343 17.2</td>
<td>43 2.2</td>
<td>12 0.6</td>
<td>128 6.4</td>
<td>110 5.5</td>
<td>68 3.4</td>
</tr>
<tr>
<td>15</td>
<td>872 43.6</td>
<td>329 16.5</td>
<td>52 2.6</td>
<td>9 0.5</td>
<td>119 6.0</td>
<td>74 3.7</td>
<td>66 3.3</td>
</tr>
<tr>
<td>16</td>
<td>888 43.4</td>
<td>365 18.3</td>
<td>-</td>
<td>14 0.7</td>
<td>135 6.8</td>
<td>100 5.0</td>
<td>23 1.2</td>
</tr>
<tr>
<td>17</td>
<td>845 42.3</td>
<td>418 20.9</td>
<td>51 2.6</td>
<td>13 0.7</td>
<td>113 5.7</td>
<td>78 3.9</td>
<td>54 2.7</td>
</tr>
<tr>
<td>18</td>
<td>859 43.0</td>
<td>402 20.1</td>
<td>65 3.3</td>
<td>9 0.5</td>
<td>112 5.6</td>
<td>96 4.8</td>
<td>61 3.1</td>
</tr>
<tr>
<td>19</td>
<td>777 38.9</td>
<td>441 22.1</td>
<td>64 3.2</td>
<td>12 0.6</td>
<td>133 6.7</td>
<td>101 5.1</td>
<td>79 4.0</td>
</tr>
<tr>
<td>20</td>
<td>740 37.0</td>
<td>473 23.7</td>
<td>44 2.2</td>
<td>5 0.3</td>
<td>115 5.8</td>
<td>80 4.0</td>
<td>65 3.3</td>
</tr>
<tr>
<td>21</td>
<td>796 39.9</td>
<td>537 26.9</td>
<td>37 1.9</td>
<td>13 0.7</td>
<td>138 6.9</td>
<td>80 4.0</td>
<td>69 3.5</td>
</tr>
<tr>
<td>22</td>
<td>738 36.9</td>
<td>609 30.5</td>
<td>49 2.5</td>
<td>6 0.3</td>
<td>155 7.8</td>
<td>119 6.0</td>
<td>55 2.8</td>
</tr>
<tr>
<td>23</td>
<td>826 41.3</td>
<td>464 23.2</td>
<td>51 2.6</td>
<td>5 0.3</td>
<td>124 6.2</td>
<td>62 3.1</td>
<td>123 6.2</td>
</tr>
<tr>
<td>24</td>
<td>768 38.4</td>
<td>534 26.7</td>
<td>45 2.3</td>
<td>8 0.4</td>
<td>134 6.7</td>
<td>70 3.5</td>
<td>101 5.1</td>
</tr>
<tr>
<td>25</td>
<td>753 38.1</td>
<td>544 27.5</td>
<td>78 3.9</td>
<td>15 .8</td>
<td>116 5.9</td>
<td>62 3.1</td>
<td>113 5.7</td>
</tr>
<tr>
<td>26</td>
<td>698 34.9</td>
<td>595 29.8</td>
<td>59 3.0</td>
<td>7 0.4</td>
<td>105 5.3</td>
<td>60 3.0</td>
<td>119 6.0</td>
</tr>
</tbody>
</table>

Note: Percentages are % of people within each whole Survey (n = 2,000).

Paid Employment: The percentage has varied from 34.2% (S9) to 46.0% (S14). Current is 34.9%, which is low.

Retired: The percentage has varied from 16.5% (S15) to 32.7% (S12). Current is 29.8%, which is high.

Semi-Retired: The percentage has varied from 1.9% (S21) to 3.9% (S25). Current is 3.9%, which is above the former range average by 0.5%.

Volunteers: The total number of full-time volunteers per survey has varied from 5 to 15. The current number is 7 which is low.

Home: The percentage of full-time home/family has varied from 5.3% (S26) to 7.9% (S9). Current is 5.3%, which is a record low.

Study: The percentage of full-time study has varied from 3.0% (S26) to 6.0% (S22). It is currently at 3.0% which is a record low.
**Unemployed:** The percentage of unemployed has varied from 1.2% (S16) to 7.0% (S9). Current is 6.0%, which is high.

**Summary:** Three groups are under-represented in Survey 26 as Employed, Volunteers, Home and Study. Two groups are over-represented as Retired and Unemployed. The effect of this on the overall survey mean is about balanced.

The values for Survey 26 come from Table A8.2.

### Table 8.3: Demographic Changes in percentage of Part-Time Work Status Over Time

<table>
<thead>
<tr>
<th>Survey</th>
<th>Paid Work</th>
<th>Volunteer</th>
<th>Paid and Volunteer</th>
<th>Study</th>
<th>Casual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
</tr>
<tr>
<td>9</td>
<td>348 17.4</td>
<td>173 8.7</td>
<td>49 2.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>310 15.5</td>
<td>326 16.3</td>
<td>27 1.4</td>
<td>90 4.5</td>
<td>46</td>
</tr>
<tr>
<td>11</td>
<td>310 15.5</td>
<td>354 17.7</td>
<td>87 4.9</td>
<td>163</td>
<td>8.2</td>
</tr>
<tr>
<td>12</td>
<td>260 13.0</td>
<td>385 19.3</td>
<td>69 3.5</td>
<td>112</td>
<td>5.6</td>
</tr>
<tr>
<td>13</td>
<td>354 17.7</td>
<td>241 12.1</td>
<td>65 3.3</td>
<td>135</td>
<td>6.8</td>
</tr>
<tr>
<td>14</td>
<td>365 18.3</td>
<td>240 12.0</td>
<td>57 2.9</td>
<td>133</td>
<td>6.7</td>
</tr>
<tr>
<td>15</td>
<td>318 15.9</td>
<td>223 11.2</td>
<td>30 1.5</td>
<td>125</td>
<td>6.3</td>
</tr>
<tr>
<td>16</td>
<td>274 13.7</td>
<td>242 12.1</td>
<td>30 1.5</td>
<td>113</td>
<td>5.7</td>
</tr>
<tr>
<td>17</td>
<td>254 12.7</td>
<td>294 14.7</td>
<td>54 2.7</td>
<td>145</td>
<td>7.3</td>
</tr>
<tr>
<td>18</td>
<td>251 12.6</td>
<td>288 14.4</td>
<td>40 2.0</td>
<td>130</td>
<td>6.5</td>
</tr>
<tr>
<td>19</td>
<td>253 12.7</td>
<td>286 13.3</td>
<td>-</td>
<td>110</td>
<td>5.5</td>
</tr>
<tr>
<td>20</td>
<td>268 13.3</td>
<td>222 11.1</td>
<td>27 1.4</td>
<td>89</td>
<td>4.5</td>
</tr>
<tr>
<td>21</td>
<td>262 13.1</td>
<td>284 13.2</td>
<td>45 2.3</td>
<td>105</td>
<td>5.3</td>
</tr>
<tr>
<td>22</td>
<td>273 13.7</td>
<td>261 13.1</td>
<td>28 1.4</td>
<td>119</td>
<td>6.0</td>
</tr>
<tr>
<td>23</td>
<td>252 12.6</td>
<td>298 14.9</td>
<td>40 2.0</td>
<td>131</td>
<td>6.6</td>
</tr>
<tr>
<td>24</td>
<td>267 13.4</td>
<td>255 12.8</td>
<td>30 1.5</td>
<td>91</td>
<td>4.6</td>
</tr>
<tr>
<td>25</td>
<td>233 11.8</td>
<td>283 14.3</td>
<td>31 1.6</td>
<td>98</td>
<td>5.0</td>
</tr>
<tr>
<td>26</td>
<td>230 11.5</td>
<td>294 14.7</td>
<td>40 2.0</td>
<td>76</td>
<td>3.8</td>
</tr>
</tbody>
</table>

**Note:** Percentages are the % of each total sample (N = 2,000).

The proportion of the sample in part-time paid positions has decreased over the past few years. The current percentage (11.5%) is the second-lowest yet recorded. This may reflect a trend away from part-time to casual employment. The other part-time groups seem not to have shown any systematic change.

### Table 8.4: Demographic Changes in Looking for Work

<table>
<thead>
<tr>
<th>Survey</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N %</td>
<td>N</td>
</tr>
<tr>
<td>9</td>
<td>204</td>
<td>1686</td>
</tr>
<tr>
<td>10</td>
<td>219</td>
<td>1754</td>
</tr>
<tr>
<td>11</td>
<td>229</td>
<td>1759</td>
</tr>
<tr>
<td>12</td>
<td>176</td>
<td>828</td>
</tr>
<tr>
<td>13</td>
<td>265</td>
<td>1702</td>
</tr>
<tr>
<td>14</td>
<td>268</td>
<td>1697</td>
</tr>
<tr>
<td>15</td>
<td>235</td>
<td>1704</td>
</tr>
<tr>
<td>16</td>
<td>229</td>
<td>1709</td>
</tr>
<tr>
<td>17</td>
<td>232</td>
<td>1704</td>
</tr>
<tr>
<td>18</td>
<td>223</td>
<td>1696</td>
</tr>
<tr>
<td>19</td>
<td>227</td>
<td>1690</td>
</tr>
<tr>
<td>20</td>
<td>214</td>
<td>1664</td>
</tr>
<tr>
<td>21</td>
<td>214</td>
<td>1762</td>
</tr>
<tr>
<td>22</td>
<td>251</td>
<td>1712</td>
</tr>
<tr>
<td>23</td>
<td>250</td>
<td>12.5</td>
</tr>
<tr>
<td>24</td>
<td>216</td>
<td>10.8</td>
</tr>
<tr>
<td>25</td>
<td>237</td>
<td>3889</td>
</tr>
<tr>
<td>26</td>
<td>216</td>
<td>4105</td>
</tr>
</tbody>
</table>

**Note:** Percentages are the % of people within each survey (N=2000).

There appears to be no systematic change over time.
8.6. **Normative Data**

8.6.1. **Normative Data Based on Individual Scores**

These values have been taken from Table A8.17.1 and represent the accumulated data from Surveys 9-26. These ranges are very similar to those of the general population (Table A2.19) with three exceptions. The first two are the Full-time volunteers and full-time home whose distributions extend down to <50. In the case of Volunteers, their mean score (77.2 points) actually lies above the generic normal range for groups and the fact that the lower margin of their range extends to <50 mainly reflects the large standard deviation due to a small sample (N=169). However, this cannot be said in relation to the Full-time Home group, and their extension to <50 indicates a proportion of people at risk of depression.

![Figure 8.35: Normative Employment Status Data for Individuals](image)

The other abnormal distribution, as expected, comprises people who are unemployed. The Unemployed mean is far below normal and the normal range extends well into the levels <50 with heightened probability of depression.

8.6.2. **Normative Data Based on Survey Mean Scores**

Employment-status specific normative data for groups are shown in Figures 8.1 to 8.6 for the Personal Wellbeing Index and domains, and in Figures 8.8 to 8.14 for the National Wellbeing Index and domains. These results in tabular form are shown in Tables A8.18.1 to A8.18.8 for the PWI and domains, and A8.18.10 to A8.18.16 for the NWI and domains. These ranges reflect the extent of variation from one survey to the next and so are mainly measures of the reliability of each variable.
Dot Point Summary for Work Status

1. All group mean scores in Survey 26 are within their own normal range. The normal range for volunteers is so large because each survey only picks up <10 of these people, so the mean scores from each survey are unreliable and show high variation.

2. All values for the PWI and domains are within their full-time employed, specific normal range. Three domains are very low as Health (also low in Surveys 23-25), Achieving and Future Security.

3. The profile of Unemployed for Survey 26, matched against their own normative range, shows the PWI and domains to be generally high.

4. Relative to their own normal range, the full-time retired are within their normal range with the stark exception of Government (-3.8 points).
5. The personal wellbeing of most work-status groups falls in the generic normal range. People who are full-time retired lie above the normal range while people who are unemployed fall below.

6. Even though full-time employed have a level of wellbeing at the top of the generic normal range, both domains that concern associations with other people (Relationships and Community) are low.

7. Full-time retired have personal wellbeing above the generic normal range even though they have lower than normal health satisfaction. This emphasises that measures of subjective health are invalid as measures of overall wellbeing.

8. Full-time students have below-normal satisfaction in both domains that indicate connection to other people (relationships and community). This likely makes students more vulnerable to the effects challenging events. On such occasions, inter-personal relationships will provide a weak buffer.
9. People who are unemployed have lower than normal wellbeing for all domains except safety.

10. Engaging in part-time volunteer work has a marginal relationship with higher wellbeing for people who are unemployed. It does not bring their wellbeing into the normal range.

11. Of those people full-time employed, the 10.0% who are looking for work have lower than normal wellbeing. This is most particularly evident in the domain of Achieving. This domain pattern may be diagnostic of employees who are functioning poorly in their current employment.

12. Whether people who are unemployed are looking for work or not makes no significant difference to their low personal wellbeing. On a domain basis, people not looking for work have higher satisfaction with Achieving and Future Security.
9. Life Events

9.1. Occurrence of Personal Life Events

9.1.1. Frequency of Life Events

Prior to any mention of terrorist attacks or war, people are asked “Has anything happened to you recently causing you to feel happier or sadder than normal?” If they answer ‘Yes’, they are then asked whether this was a happy or a sad event, and to ‘rate its influence on a 0 to 10 scale, from very weak to very strong’.

If people were to be severely interrogated along these line virtually everybody would recall an event of some kind that made them happier or sadder than normal. The time frame is loose (‘recently’) and the point of reference (‘normal’) is open to interpretation. But respondents are not interrogated, and if they answer that they have experienced no such event, the interviewer proceeds to the next item. Because of this, the item is either measuring people’s sensitivity to the positive and negative events in their lives, or the extent to which people are willing to identify such events. In either case it is measuring the direction of people’s attention to the positive or negative side of their life.

On average across the surveys, about half of the people sampled state they have experienced such an event (Table A9.2). The proportion, of people reporting a personal life event has previously peaked twice (Figure 9.1). The proportion at S6 (pre-Iraq war) (54.6%) is almost the same as that immediately following September 11 (55.0%). However, the proportion of 61.7% for Survey 18 (Pre-election of Labor government) eclipses by far all previous and subsequent estimates. The current proportion of 53.2% is slightly above average.

![Figure 9.1: Percentage of Respondents Reporting the Experience of a Personal Life Event](image)

There seems to be two possible reasons for a high proportion of the population to recall a significant personal event. One is the presence of an event that is personally meaningful but external to their immediate personal experience. The above-named events of September 11, the Pre-Iraq war and a change of Government, may be considered as examples of this. Such events may act to increase the arousal-level of the population, thereby making them more sensitive to the events in their lives.

The other reason for the population to score high on this measure is that a higher-than-normal proportion of people have, in fact, experienced an event of unusual magnitude in their lives.
One possible way to test between these two possibilities would be to see whether the people reporting an event have a change in their Personal Wellbeing Index. Presumably, if the change in reporting is due to elevated arousal then the Personal Wellbeing Index should remain stable. If, however, it is due to a personal event of unusual strength, then the Personal Wellbeing Index would be vulnerable to change. This will be tested later.

9.1.2. Happy vs. Sad Events

Due to the rapidity of adaptation to positive events or happenings, it is unlikely that the population as a whole would experience an unusual level of positive events. Granted this could happen, through such occasions as the end of a war, nothing like this happened prior to October 2007 (S18). The only obvious event at this time was the forthcoming election. However, two previous elections had no influence on life events and, anyway, the electorate would be about evenly divided as to the probability of the electoral outcome. It is also notable that even events such as the Athens Olympics failed to substantially change the proportion of people experiencing a major life event.

This is not true of negative events. A strongly-felt negative event will have a more persistent influence on the individual than a positive event. Therefore, it might be expected that the most likely scenario is for the increased proportion of people reporting a life event to be dominated by people reporting a negative event. The results are shown below.

The construction of Figure 9.2 follows the same procedure as Figure 9.1. The mean happy event percentages from each survey, and the mean sad event percentages from each survey (Table A9.3), produce a mean, SD and 2 x SD range (Table A9.4).

The percentage of people reporting either a happy or a sad event, shown in Figure 9.2, indicates that while the proportion of people recalling a sad event is close to the mean, the proportion reporting a happy event (17.6%) is the lowest on record and only just within the normal range.

Figure 9.2: The Percentage of People Reporting a Happy or a Sad Event in Their Life
Notably, the patterns for happy and sad events are very different from one-another and are clearly not reciprocal. While an approximately equal proportion of people reported happy or sad events at most times, the increase in the incidence of people reporting happy events at S6, and sad events at Surveys 2, 18 and 25 did not result in usually low proportions of people reporting sad or happy events respectively. The correlation between the happy and sad percentages across surveys in Table A9.3 is - .13 (Table A9.4), which is non-significant.

9.1.2.1. Happy Events

The most unusual occasion of people reporting a happy event coincided with the period immediately prior to the commencement of the Iraq war (S6: 28.4%). This is marginally significant since it exceeds the upper margin of the normal range of values. It is notable that the significant rise in population wellbeing at Survey 12 (Athens Olympics) did not cause a concomitant change in the reported incidence of happy personal events.

One explanation of the pre-Iraq rise in happy events is that the looming war induced a state of activated positive affect as a defence against anxiety. The war differs from the terrorist attacks in that it had not yet taken place, and so was an anticipated event. Thus, to think of reasons why the war is unlikely to take place, or that it is morally justified, is one way people could stave-off the personal impact of dark thoughts of war. In doing this, they may shift their threshold for the recognition of positive events in their lives and, as a consequence, more people report the occurrence of recent happy events.

Another possibility is that the prospect of war and the threat and danger it involves sharpens people’s appreciation of life. But this does not explain why a comparable rise failed to occur following the terrorist attacks.

9.1.2.2. Sad Events

In terms of negative events, as predicted from theory, abnormally high levels have been recorded on three occasions. One of these occurred immediately following September 11 (S2: 35.4%) and the other at Survey 18 (37.0%). However, the 36.8% at Survey 25 appears anomalous.

There are at least two potential causes for the jump in the experience of sad events at Survey 18. One was the new IR (Industrial Relations) legislation, which had been in operation for about a year at the time of the survey. This legislation caused many employees to negotiate an individual contract with their employer, rather than through collective union bargaining, as had previously been the case. The result was that many workers suffered reduced conditions of employment and remuneration.

Against this explanation is the fact that some six months later, at Survey 19, the percentage of people reporting a negative event had returned to normal and the work-place conditions had not changed. However, a few months after Survey 18 the new government did repeal the IR laws and union-power was on the way to being restored. So maybe the anticipation of restorative change was responsible for the return to normality in this measure.

Perhaps a significant proportion of people had been adversely affected and they recorded this as their negative event. The other possibility is general dissatisfaction with the incumbent government, which resulted in a land-slide victory for the opposition one month later. Notably, however, this dissatisfaction did not translate into a fall for either the Personal Wellbeing Index or National Wellbeing Index, and neither did it cause dissatisfaction with ‘Government in Australia’.
Summary interpretation

The proportion of people reporting a recent happy event in their lives has been remarkably stable over the 24 surveys. The maximum degree of variation has been 9.2% (from 19.2% at S4 to 28.4% at S6). This is probably just random variation—since none of the values exceed the boundaries of the normal range.

The proportion of people reporting a recent sad event has been much less stable. The maximum degree of variation is 13.7% (from 23.3% at S4 to 37.0% at S18). While variations below the overall mean (27.5%) are likely to be random, three of the values above the mean are significant. While one of these (S2) may be attributed to September 11, the cause of the rise at Surveys 18 and 25 is unclear. The former could have been due to the impact of the IR legislation or the impending change of Government in the following November election.

9.1.3. Gender and Life Event Frequency

Females show a stronger tendency than men to report that something has happened to them recently causing them to feel either happier or sadder than normal (see total % events: Table A9.5: Figure 9.3). Using the gender percentages from each survey as data, the overall gender difference is significant (Table A9.6). The changing gender pattern across surveys is shown in Figure 9.3.

The current values at Survey 26 are about average for both genders and they are separated by 8.0%. In historical terms the following can be noted:

- At Survey 18, values were maximal for both genders. The female value of 65.6% was 6.9 higher than any previous female score, while the male value of 57.8% was 3.3% higher than any previous male score.
- Both genders experienced their lowest incidence of life events at Survey 4 (12 months following September 11).
- The generally greater volatility of female scores is shown by the standard deviations of the gender-specific total scores across surveys (Table A9.6: Males = 3.3, Females = 5.1).
- The two surveys showing the maximum degrees of gender separation are Survey 16 (11.6%) and Survey 9 (10.7%). There is no obvious reason for this. While the Survey 9 data were collected following the initiation of the Iraq war, the Survey 16 data were collected during an uneventful period for Australia.
Section 9: Life Events continued

- On only one occasion (S6: Pre-Iraq war) has the incidence of events within males (54.6%) slightly exceeded that within females (54.3%). This was caused by a far more substantial rise in the proportion of males experiencing a personal event (7.4% above average for males) than for females (1.7% above average for females).

- It is notable that the percentages of happy and sad events across surveys do not correlate for either males (-.12) or females (-.13) (Table A9.6).

In Summary, there is a tendency for about the same proportion of males and females to report an event, and about the same proportion to report a happy event (Table A9.6). Females, however, are more likely to report a sad event in their lives. Figure 9.4 shows the cumulative data of the percentage of people reporting happy or sad events x gender.

![Figure 9.4: Gender Differences: Proportion Reporting Happy or Sad Events (combined data)](image)

While there is no difference between the genders in terms of the reported frequency of happy events, females report significantly more sad events.

In order to further investigate these gender differences across surveys, Figure 9.5 has been prepared from data in Table A9.5.

![Figure 9.5: Event x Gender x Survey (% of a total of gender in each survey)](image)

In Survey 25, the % of happy events for males and females remained well within their normal range. However, this was not true for sad events, where both genders were just short of their maximum recorded scores.
Section 9: Life Events continued

It is apparent that there is considerable normal variation in the percentages shown in Figure 9.5. This may reflect the relative small numbers in some cells (minimum N=158). However, from the figure it can be seen that these within-group normative ranges (Table A9.6) have been significantly breached on seven occasions and all these have occurred at the top of their respective ranges. They are as follows:

1. Immediately following September 11 (S2), prior to the October 07 election (S18), and at Survey 25, a higher than normal proportion of *both males and females* reported the recent experience of a recent negative personal event. The coincidence of these rises for both genders makes it likely there is some underlying cause, rather than these being random changes.

2. During the period immediately prior to the Iraq war (S6) a higher than normal proportion of males, but not of females, reported the experience of a recent positive personal event.

**Summary**

This can be diagrammatically represented as follows (baseline is not to time-scale):

![Diagrammatic Representation of Changes in the Incidence of Personal Events & Gender](image)

Figure 9.6: Diagrammatic Representation of Changes in the Incidence of Personal Events & Gender

The following points can be noted:

(a) Seven percentages, or 7/104 instances (4x26) = 6.7% lie outside the gender-affect-specific normal range represented by two standard deviations. This is quite close to the 5% that would be expected to occur by chance.

(b) Against these being chance events is the following:

   (i) On 6 of these 7 occasions, males and females have responded in the same way.

   (ii) The breaches are not evenly split between the two types of affective experience. Six of the seven have involved negative events.

   (iii) None of the breaches have occurred below the normal range.

It is concluded that these breaches most likely represent a systematic influence on the population at the time of the surveys. The nature of this influence is as yet uncertain.
The other feature of Table 9.5 that is interesting is the range covered by the four mean scores as a group (gender x valence) at each survey. These ranges are shown below.

![Figure 9.7: The range of gender x happy/sad mean scores within each survey](image)

It might be presumed that the disparity between these four mean scores within each survey (reporting a happy or sad event) would be lowest in times of perceived stability by the population. That is, in times of great stability people are as likely to report happy as sad events and males are as likely to report events as females. These data are somewhat consistent with this view. A very low range was recorded prior to September 11 (Survey 1) and a high range was reported immediately following September 11 (Survey 2). However, inconsistent with this prediction, the highest discrepancy is at Survey 25 and the third highest at Survey 8, with no major event attached to either survey.

### 9.1.4. Life Event Frequency x Age

Table A9.7 reports the effects of age on life events both for Survey 26 and the combined samples. As can be seen, the probability of reporting a personal event, that made the person feel either happier or sadder than normal, decreases steadily after 55 years of age. However, the relative experience of happy and sad events changes dramatically between 26-35 years and 36-45 years. Whereas the proportion of people reporting a happy event dominates in the two youngest-groups, beyond 36 years the majority of people who report an event in their lives report a negative event.

![Figure 9.8: Age: Life Event Frequency (combined surveys)](image)

These data patterns are highly consistent between surveys (Table A9.7). It is difficult to reconcile these data with the finding that the PWI scores increase with age (Chapter 5), but there are two previous findings that may make this possible. First is the progressive dissociation between pain (representing negative experience) and SWB. Second is more rapid adaptation to positive events. However, this does not explain the change between 26-35 and 36-45 years.
9.1.5. *Income and Life Event Frequency*

The data for Figure 9.9 are drawn from Table A9.8. It can be seen that the income trends for the two life events are opposite. As income increases, the frequency of people reporting sad events decreases, and the frequency for happy events increases up to an income of about $251-500K.

This is consistent with a published review of the function of money in relation to wellbeing (Cummins, 2000). It is proposed that money is a flexible resource which allows people to avoid many aspects of life which have a negative effect on wellbeing. This permits rich people to maximise their potential for personal wellbeing to a greater extent than people who are poor. It also implies that rich people are less exposed to negative life events and more exposed to positive events, as indicated by these present data.

It is interesting to note that, while these two events seem to show a linear relationship with income, there is a plateau for happy events from $101K to $250K. This is consistent with the finding that there is no rise in SWB between these incomes (see chapter 3). It is also consistent with the idea that at a household income of $101-150K people can afford to give themselves nice experiences, and that this capacity does not discernibly change at $151-250K.

Because the essential causes of relative frequency of happy and sad events is so different, it would be expected that there should be no dependent relationship between the frequency of each type of event. This is confirmed by Table A9.4 which reports a correlation of -.13(non significant).

9.2. *Perceived Intensity of Life Events*

People who have experienced a life event are asked, “how strong would you rate this influence?” Table A9.9 shows the distribution of happiness/sadness intensity from 0-10 for Survey 26. The differences in the distributions of sad and happy events are informative. Far more people are likely to report that they have experienced a low-level life event that made them slightly more sad then normal, than they are to report a low-level positive event. From this table, 13.7% of people report a 0-4 strength sad event, compared with 2.4% of people reporting a 0-4 strength happy event. This is consistent with a large literature showing that people attend to and remember negative events more strongly than positive events.

Table A9.10 shows the intensity of happy and sad events across surveys.
Section 9: Life Events continued

Most obviously from these data, the average perceived strength of a happy event exceeds that of a sad event. For example, using the data from Survey 6, \( t(1072) = 10.19, p < .001 \). This is an example of the positive bias that pervades our thinking, and which is part of the homeostatic device that maintains subjective wellbeing as positive (Section 1.2).

More remarkable, however, is the stability of the experienced strength of happy, positive life events. Across the surveys it has varied between 78.2 (Survey 24) and 85.4 (Survey 10), a range of just 7.2%. It is also evident that following September 11, it was trending upwards. This trend peaked at Survey 8 (3 months following the Iraq war) and Survey 10 (nine months following the Iraq war). From Survey 11 to Survey 22 it remained no different from the intensity at Survey 1. In Survey 24 it was at its lowest level on record.

The intensity of sad events also showed an upward trend up to Survey 9. This intensity has remained fairly consistently higher than the level at Survey 1. The reason for this trend is not clear.

9.2.1. Event intensity x PWI

The correlation between the perceived intensity of happy events with the Personal Wellbeing Index is significant and positive for individual scores within surveys (Table A9.10). The correlation for the intensity of sad events with the Personal Wellbeing Index is generally not significant.

9.2.2. Event intensity x PWI x Gender

When the survey mean scores for event intensity are correlated with the survey mean scores for the Personal Wellbeing Index, males show a strong negative correlation for the intensity of sad events (Table A9.11; \( r = -.51, p = .007 \)) but much less correlation with the intensity of recalled happy events. For females (Table A9.12) neither of the correlations is significant.
Section 9: Life Events continued

9.2.3. **Household Income and Life Event Intensity**

Table A9.13 reports the influence of income on life event intensity.

There is a significant decrease in the experienced intensity of happy events at the highest level of income. This is consistent with expectation from Adaptation Level Theory. Rich people are buying more positive events but experience less relative happiness from each experience.

There is no significant effect of income on the intensity of sad events.

9.2.4. **Income x Intensity x Happy/Sad event**

Table A9.14 reports the correlations between life event intensity (happy and sad), and the Personal Wellbeing Index (domains) for Survey 26, while Table A9.15 reports these correlations for the whole sample.

From the combined data (Table A9.15) can be seen that consistently, through each income group (<$15K to $250-500K), the strength of happy, but not sad events, correlates positively with the Personal Wellbeing Index with coefficients ranging from .17 to .29 (p < .01). This is interesting as follows:

(a) The reported strength of positive events is some 10-15 points higher for happy than for sad events (Table A9.13; Figure 9.10).

(b) The reported strength is based on the estimated current impact on a past event. It is, thus, as likely to be a reflection of current mood state as it is a reflection of the event to influence that mood state. Indeed, if the perception of the event’s impact is coloured by the rosy glow of HPMood, then positive events may be experienced as more positive than they actually were.
when the event first happened. In this case, current (positive) mood is driving the perception of the event’s impact. Moreover, due to different set-points, the strength of the rosy glow will be an individual difference which will account for the positive correlation. This general influence also provides an explanation for the domain correlations in Table A9.15.

(c) The reason that the strength of sad events fails to correlate with the Personal Wellbeing Index is due to the role of homeostasis in altering such perceptions from initially negative to neutral or even positive. Thus, over time, the strength of negative events, within the bounds of normal experience, has no impact on Personal Wellbeing because such perceptions have been negated.

9.2.5. Gender and Life Event Intensity

The gender difference for the intensity of both happy and sad events is significant (Female > Male) (Table A9.16) with no interaction. This is a consistent finding across surveys.

![Figure 9.13: Intensity of Happiness/Sadness to a Personal Life Event (combined data)](image)

This familiar pattern of higher emotional intensity in females occurs for both happy and sad events (Table A9.16). It is also notable that the strength of felt sadness for both genders approximately the same value of 70% as is found for people’s levels of sadness when recalling terrorist attacks (see Reports 2-8).

It is also interesting that these two mean values of life event intensity (happy = around 80, sad = around 70) approximate the calculated normative range of 70-80 points for personal wellbeing (see Chapter 1). It seems possible that these are related and that people perceive happiness and sadness as being represented by the margins of the normative range.

9.2.6. Age and Life Event Intensity

In order to examine closely the relationship between age and the experience of life event intensity, Table A9.17 shows the results for individual surveys and combined data. This analysis shows a significant influence of age for the intensity of happy but not sad events, and no interaction between age and surveys. The age-related changes in the intensity of happy events (Table A9.17) is shown below.
Section 9: Life Events continued

Figure 9.14: Intensity of Happy Events x Age (combined data)

This is a curious pattern, with maximum intensity experienced at 26-35 and 76+ years. The reason for this pattern is not clear.

9.3. Days of the Week

Table A9.18 shows these results for Survey 26 and Table A9.18.1 for the combined data.

![Daily Personal Wellbeing Index (Combined data)](image)

Figure 9.15: Daily Personal Wellbeing Index (Combined data)

It is evident, that across the whole sample, there is no systematic change in wellbeing between the days of the week.

Table A9.18.2 splits these data according to work status. Again, there is no systematic change in wellbeing for any of the work-status groups.
Dot Point Summary for Life Events

1. On average, about half of the sample consider that a recent life event, that has happened to them, has made them feel happier or sadder than normal.

2. Immediately following September 11 (S2), prior to the October 07 election (S18), and at Survey 25, a higher than normal proportion of both males and females reported the recent experience of a recent negative personal event. The coincidence of these rises for both genders makes it likely there is some underlying cause, rather than these being random changes.

3. Females are more likely to recall the experience of a sad than a happy event in their lives.

4. Young adults are more likely to report the experience of happy than sad events in their lives. This changes at 36-45 years. At this age and older, people are more likely to report the occurrence of a sad event.
Section 9: Life Events continued

5. As income increases, the frequency of people reporting sad events decreases, and the frequency for happy events increases up to an income of about $251-500K.

![Graph showing the relationship between household income and the frequency of reporting sad and happy events.](image1)

The recalled frequency of sad events is income sensitive up to an income of $61-100K.

6. There is a significant decrease in the experienced intensity of happy events at the highest level of income. This is consistent with expectation from Adaptation Level Theory. Rich people are buying more positive events but experience less relative happiness from each experience.

![Graph showing the relationship between household income and the intensity of happy and sad events.](image2)

7. Females experience the intensity of both happy and sad events more strongly than males. This represents a pattern of enhanced emotional responsiveness for females.

![Graph showing the intensity of feeling for happy and sad events differentiated by gender.](image3)

Females report a greater felt intensity of both happy and sad events.

8. An investigation into changes in Personal Wellbeing Index across the days of the week detected no systematic effects. This is true irrespective of work-status.

![Graph showing the Personal Wellbeing Index (PWI) across the days of the week.](image4)

Wellbeing does not vary with the day of the week.
10. Sleep

We asked the following questions:

1. In an average 24 hours, how many hours do you sleep?
2. On average, how long does it take you to fall asleep once you go to bed?
3. On average, how many times do you wake during the night?
4. When you wake up at the end of your sleeping period, how refreshed do you feel?
5. Do you ever remember your dreams when you wake up?
6. Do you ever have bad dreams or nightmares?
7. How often do you have bad dreams?
8. From zero to 10, how bad are these dreams?
9. Have you worked night shifts at all this year?
10. How long ago was your last night-shift?

10.1. Hours of sleep

We asked: ‘In an average 24 hours, how many hours do you sleep?’

These results come from Table A10.1.1.

These results show that a majority of people (61%) sleep for 7 – 8 hours, on average, per night. Very few people (7.9%) manage to sleep for longer than this, but a sizable group (31.2%) get less than 7 hours per night. It is also evident that duration of sleep is related to wellbeing.

The wellbeing of people who average 7 – 9 hours is very similar. These groups do not statistically differ from one another, and their wellbeing is either in or above the normal range. A slight advantage is shown by the lucky few who can average 9 hours per night, whose wellbeing is 1.7 points above the normal range. However, an average sleep duration of either more or less than 9 hours is associated with lower wellbeing.

The reason for low wellbeing may differ between those with too much, or too little sleep. People who sleep for 10 or more hours may do so due to a lack of purpose in their lives. They have no reason to
greet the new day, so they sleep to help pass the time. On the other hand, people who sleep less than 7 hours are likely to be sleep-deprived and probably stressed. It can be seen from Figure 10.1 that wellbeing drops quite systematically with the extent of sleep deprivation.

It is interesting to compare the group of people who have 6 hours sleep and fall below the normal range, to the group who have 7 hours of sleep and are towards the top of the normal range. It seems that an extra hour of sleep for those who only have 6 hours is associated with a 3.2 point increase in Wellbeing. Exploring their scores on the different wellbeing domains should provide further insight into the relationship between sleep and wellbeing. The following results come from Table A10.1.3.

People who have 6 hours sleep score significantly lower on all domains except for Satisfaction with Relationships and Community. These are the two ‘social’ domains, and so it appears that there is no relationship between sleep and social interaction. However, the two domains which show the largest differences are Health and Safety. This may be linked to higher anxiety which can cause, or be caused by, a lack of sleep.

These results still stand after controlling for age.

In order to investigate the differences between the shortest (<4 hours) and longest (>10 hours) sleep durations, the seven domains were individually compared between the two groups. The two groups have very similar domain profiles, except for Safety. These results come from Table 10.1.4 and are shown in Figure 10.3.
sleep, but it is curious that it does not affect the other domains, such as health. The result would make sense if people were afraid to sleep, but we have no information to support this suggestion.

10.1.1. Hours of sleep x Gender

These results come from Table A10.1.6.

It is apparent that under challenging sleep conditions, female wellbeing is less affected than it is for males. Whereas the wellbeing of females who sleep 4 hours or less does lie below the normal range, for males this amount of sleep is linked to a further 10 point detriment, taking their wellbeing down to very low levels indeed. While this same pattern is evident for people who sleep 10+ hours, the gender difference here is not significant.

10.1.2. Hours of sleep x Age

These results come from table A10.1.7.

The average number of hours of sleep that people reported in a 24 hour period is 7.05 (SD = 1.33). It is generally expected that sleep duration decreases with increasing age, and our results are generally consistent with this. The youngest people (aged 18-25) reported that they slept for significantly longer than every other age group except the oldest people (aged 76+). This is probably because the lifestyle of the youngest age group involves studying or part time work. They may lead less busy lives and have fewer responsibilities, which allow them to sleep more each night.

In order to investigate whether the low sleep duration of the 46-55y group may be linked to household composition, hours of sleep were compared between people who live alone, with their partner only, with their partner and children, with other adults, or who are single parents. No differences could be detected in hours of sleep between these groups.
10.2. **Time to fall asleep**

These results come from Table A10.2.

In general, the longer it takes to fall asleep, the lower a person’s wellbeing. This decrement is apparent in people who take 10 minutes or more to fall asleep, but they remain within the normal range. People who report taking an hour or longer to fall asleep (20.28% of the sample) have a PWI that is below the normal range, and significantly lower than all other groups. When they eventually do fall asleep, a majority of these people (51.4%) only sleep for 6 hours or less. This finding further supports the relationship between Wellbeing and Sleep.

10.3. **Waking during the night**

*We asked: ‘On average, how many times do you wake up during the night?’*

Wellbeing is highest for people who sleep through the night without waking (12.36%) or who wake just once (34.0%). People who wake more often have lower wellbeing, however, they remain low within the normal range until they wake up five times or more in a night (6.21% of the sample). These people have significantly lower wellbeing. This finding indicates that wellbeing is adversely affected by poor sleep quality.

10.4. **Feeling refreshed**

*We asked: “When you wake up at the end of your sleeping period, how refreshed do you feel?”*

These results come from Table A10.4.
Figure 10.8: How refreshed do you feel vs Personal Wellbeing Index

It is intuitive that there should be a positive relationship between wellbeing and feeling refreshed after sleep. This is borne out by Figure 10.8. Interestingly, however, people who rate their level of feeling refreshed to be 6 or less (a combined 46% of the sample) have PWI scores below the normal range. These findings likely reflect a by-product of sleeping well at night, as people who feel less refreshed when they wake up could be assumed to have had worse quality sleep than those who feel very refreshed when they wake up.

10.5. Remembering your dreams

*We asked: “Do you ever remember your dreams when you wake up?”*

These results come from Table A10.5.

Figure 10.9: Remember your dreams when you wake up vs Personal Wellbeing Index

More people (72.9%) report that they remember their dreams when they wake up. However, remembering dreams has no association with wellbeing.
Section 10: Sleep continued

10.6. Bad dreams and nightmares

We asked: “Do you ever have bad dreams or nightmares?”

These results come from Table A10.6.

Figure 10.10: Bad dreams or nightmares vs Personal Wellbeing Index

Of those people who remember their dreams, those who report having bad dreams or nightmares (56.4%) have lower wellbeing, but it remains just in the normal range. In terms of the individual domains, the difference between these two groups is significant for every domain, but largest for Community and Future Security. These findings are consistent with the Continuity Hypothesis of dreams, which suggests that concerns and negative emotions in everyday waking life are reflected in dreams. According to this idea, people who are more stressed or discontent in their waking state are more likely to experience bad dreams or nightmares. This also explains why the domain of Future Security is more affected by bad dreams, since people suffering from anxiety and worry may have more reason to doubt that their current situation will improve. However, it remains unclear why the domain of Community Satisfaction is most strongly affected.

10.7. Frequency of bad dreams and nightmares

We asked: “How often do you have bad dreams?”

These results come from Table A10.7.

Figure 10.11: Frequency of bad dreams vs Personal Wellbeing Index

Following on from Figure 10.6, it is not surprising to find that the frequency with which people recall their bad dreams is related to their wellbeing. Fortunately, most people who remember their bad dreams have them only rarely (44.44%), and their wellbeing is unaffected. However, people who report that they have bad dreams once a week (9.04%) or more often (5.04%) have wellbeing below the normal range. Following on from the Continuity hypothesis mentioned earlier, the more negative
feelings people are experiencing in their waking life, the more it would be expected to carry over into their dream states. Thus, the more frequent one’s bad dreams, the worse they are likely to feel.

10.8. Intensity of bad dreams and nightmares

We asked: “From zero to 10, how bad are these dreams?”

These results come from Table A10.8.

The low wellbeing for the 3 people who reported a dream intensity level of 0 appears to be an anomaly. Among people who report some intensity, those who report them at a strength of 1 have wellbeing slightly above the normal range. These people are clearly not adversely affected by their experience. At stronger levels, however, from a strength of 2 to 7, wellbeing tends to lie towards the bottom of the normal range. Thus, these people appear to be under some stress, but still coping with this unpleasant experience. At a recalled strength of 8/10 and above, wellbeing lies below the normal range. This affects 19.8% of the people who recall their dreams.

10.9. Night shifts

We asked: ‘Have you worked night shifts at all this year?’

These results come from Table A10.9.

Of the people who work full-time, 15.92% report having worked night shifts this year. The PWI of people who work night-shifts is not significantly different from those who work full time during the day and just remains within the normal range.
Section 10: Sleep continued

10.10. **Duration since last night-shift**

*We asked: ‘How long ago was your last night-shift?’*

These results come from Table A10.10.

Of the 175 people who work night-shift, almost 50% did so during the last week. However, none of the groups differ significantly from one another and there is no systematic pattern of relationship between time since last night shift and wellbeing. This is quite surprising and probably indicates that their low wellbeing in general (Figure 10.13) is due less to disrupted sleep rhythms than to factors that cause them to need a job that imposes night-shift. Certainly, overall, it can be concluded that working night-shift is commonly associated with low wellbeing, below the normal range.
Dot point summary for Sleep and Dreams

1. There appears to be a relationship between average hours of sleep and PWI, such that PWI increases with increasing hours of sleep. This is true until 10 hours of sleep, at which point PWI falls below the normal range. Not surprisingly, PWI is most affected for people who sleep 4 hours or less in a 24 hour period.

2. Under challenging sleep conditions, female wellbeing is less affected than it is for males. Whereas the wellbeing of females who sleep 4 hours or less lies below the normal range, for males this amount of sleep is linked to a further 10 point detriment, taking their wellbeing down to very low levels indeed. While this same pattern is evident for people who sleep 10+ hours, the gender difference is not significant.

3. In general, the longer it takes to fall asleep, the lower a person’s wellbeing. This decrement is apparent in people who take 11 minutes or more to fall asleep, but they remain within the normal range. People who take an hour or longer to fall asleep (20.28% of the sample) have a PWI that is below the normal range, and significantly lower than all other groups.
Section 10: Sleep continued

4. The PWI scores are highest for people who sleep through the night without waking (12.4%) or who wake just once (34.0%). People who wake more often have lower wellbeing, however, they remain within the normal range until they wake up five times or more in a night (6.2% of the sample). The wellbeing of people who wake up five times or more in a night is significantly lower than those who only wake up once or not at all.

![Graph showing PWI scores vs number of times awake during the night]

5. Of those people who remember their dreams, those who report bad dreams or nightmares have lower wellbeing, but it just remains in the normal range. This difference is significant for every domain, but largest for Community and Future Security.

![Graph showing PWI scores vs bad dream occurrence]

6. Most people who remember their bad dreams have them only rarely (44.44%), and their wellbeing is unaffected. However, people who report that they have bad dreams once a week (9.04%) or more often (5.04%) have wellbeing below the normal range.

![Graph showing PWI scores vs frequency of bad dreams]
Appendix A1. Previous Reports on the Australian Unity Wellbeing Index

These publications are available from http://www.deakin.edu.au/research/acqol/auwbi/survey-reports/index.php


Appendix A1: Previous Reports on the Australian Unity Wellbeing Index continued


Appendix A1: Previous Reports on the Australian Unity Wellbeing Index continued

ISBN 978-1-74156-164-7