

Australian Unity Wellbeing Index
Survey 25.1

Report 25.1
January 2012

Part A: Report

*“The Wellbeing of Australians –
Bushfires and Floods: Following up the effects of fires in Victoria and
Floods in Queensland”*

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Chapter 1: 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 a special Survey 25.1, undertaken in October 2011. The survey was commissioned to detect whether the disastrous floods in North Queensland in the period December 2010 through February 2011, and fires in Victoria in the period January through February 2009, continued to affect the subjective wellbeing of people continuing to live in the disaster areas.

This survey involved 1,215 respondents, with 600 drawn from Victoria and 615 from Queensland. The questionnaire comprised only the Personal Wellbeing Index and a small set of demographic questions. In all other respects the methodology of the survey followed our normal procedures.

The Sample

The sample for this study was drawn from specifically selected areas of Queensland and Victoria.

The floods in Queensland

A series of floods devastated much of the state of Queensland over the period of December 2010 through January 2011. The flooding began with heavy rainfalls over South East Queensland, resulting from unusual tropical cyclone activity in the Coral Sea. By January 2011, a number of towns were declared as disaster zones. The areas of Condamine, Theodore, and Bundaberg were completely evacuated. Overall, around 200,000 people had been affected by the floods.

The rains and flash floods continued through January, with more towns evacuated as the devastation spread through more of the state. Tropical cyclone Yasi in early February hit the areas of Mission Beach, Cardwell, Tully, Tully Heads, Innisfail and Ingham, and necessitated the evacuation of hospitals, with significant structural damage occurring to the Cassowary Coast region. Thirty-five people died as a result of flood-related incidents during this two-month period.

In order to specifically sample people who had been affected by the floods, the worst hit areas were identified. Following advice from the Queensland Reconstruction Authority, established in January 2011 to plan and monitor the statewide reconstruction and recovery operation, the 17 communities identified in the Community Development and Engagement Initiative as being 'hardest hit' were further explored. These areas were Lockyer Valley, Western Downs, Cassowary Coast, Hinchinbrook, Ipswich, Brisbane, Banana, Barcaldine, Bundaberg, Central Highlands, North Burnett, Rockhampton, Tablelands, Toowoomba, Somerset, Gympie, and Moreton. Data from the Australian Bureau of Statistics (ABS) gave

estimates of the population of these Local Government Areas. As we wished to maximize the chances of reaching residents who were personally affected by the floods, we targeted our recruitment towards the three areas with the smallest populations. Based on ABS population data, these areas were Barcaldine (population 3400), Hinchinbrook (population 12,000), and Banana (population 16,000). Accordingly, phone numbers corresponding to residents from the following postcodes were randomly dialed: 4702, 4719, 4718, 4715, 4716, 4420, 4849, 4850, 4725, 4724, 4726, 4728, and 4732. A representative sample of 615 participants from these areas were recruited and formed the 'floods' sample.

The fires in Victoria

In the final week of January 2009, the state of Victoria experienced a severe heatwave, with three consecutive days recording temperatures above 43°C. On Saturday February 7 2009, the temperature was expected to again reach the low 40s, and strong winds were anticipated. These weather conditions, coupled with several underlying causes for the origins of the fires, resulted in one of Australia's worst natural disasters. One hundred and seventy-three lives were lost, and thousands of homes and buildings were destroyed.

The Victorian Bushfires Royal Commission investigated the 15 fires that wrought the greatest harm. These fires included Delburn, Bunyip, Kilmore East, Horsham, Coleraine, Pomborneit-Weerite, Churchill, Murrindindi, Redesdale, Narre Warren (including Harkaway and Lynbrook), Upper Ferntree Gully, Bendigo, and Beechworth-Mudgegonga. Of these areas, the towns of Kinglake (hit by the Kilmore East fire) and Marysville (hit by the Murrindindi fire) were identified as the 'hardest-hit' areas. This evaluation was made based on the comparative number of fatalities and houses destroyed. In Kinglake, 120 fatalities were reported, with 1244 houses and buildings destroyed. Thirty-nine deaths were reported in Marysville, and 590 homes were damaged. Accordingly, recruitment for the present survey was targeted toward the towns of Kinglake and Marysville. Random phone numbers corresponding to the postcodes of 3757, 3779, 3777 and 3714 were dialed. A representative sample of 600 participants from these areas were recruited and formed the 'fires' sample.

The comparative sample

In March 2009, Survey 20.1 was conducted to explore the Subjective Wellbeing of people living in Queensland and Victoria at the time of the 2009 floods and fires. Over the period February 23rd to 4th March, a geographically representative sample of people aged 18 years or over and fluent in English was obtained, restricted to respondents in Queensland and Victoria. Due to issues of sensitivity regarding the mental state of people who may have been personally directly affected by these disasters at that time, the areas in both states that had been flooded or burned were excluded from the telephone sampling. This is in stark contrast to the present survey, which specifically aimed to target those who were personally directly affected. Thus, Survey 20.1 serves as an appropriate reference group for the present sample, allowing for comparison by state and disaster type. Our final comparison sample comprised

participants from Victoria and Queensland, recruited at random, as part of Survey 26 of the Australian Unity Wellbeing Surveys, conducted in September 2011.

*Table 1:
The groups for comparison*

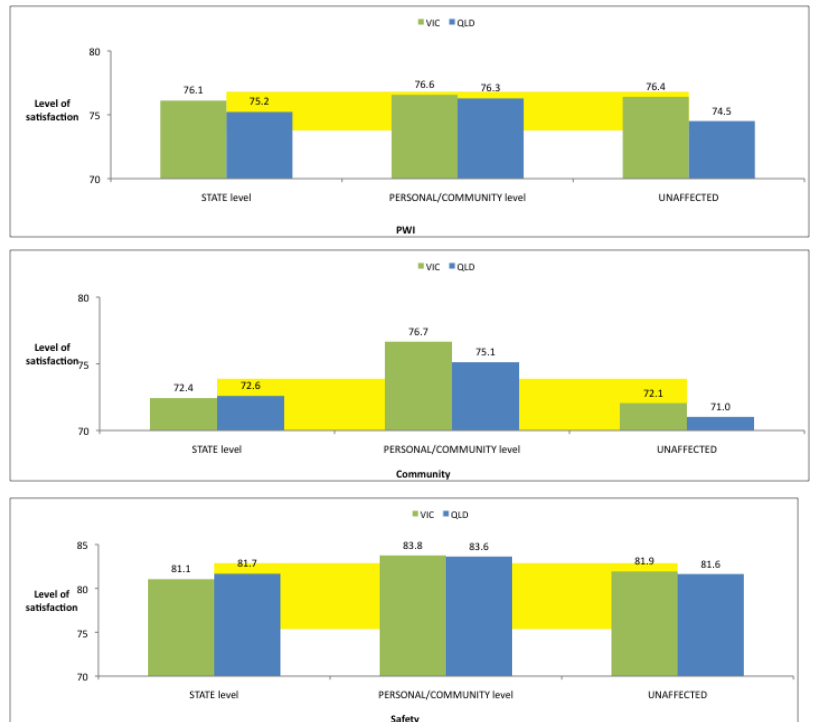
| Group | Level of effect | Disaster | Does sample include people drawn from the disaster area? | Time elapsed from disaster |
|-----------------|------------------------|-------------|--|----------------------------|
| Survey 20.1 VIC | State | Bushfires | No | 0 |
| Survey 20.1 QLD | State | 2009 Floods | | 0 |
| Survey 25.1 VIC | Personal and Community | Bushfires | Yes-specific to disaster area | 2 years, 8 months |
| Survey 25.1 QLD | Personal and Community | 2011 Floods | | 9 months |
| Survey 26 VIC | Nil | Nil | Yes-as part of a random sample from VIC and QLD | 2 years 8 months |
| Survey 26 QLD | Nil | Nil | | 9 months |

The labels given to these groups for this report are as follows:

Survey 20.1 – STATE
 Survey 25.1 – PERSONAL & COMMUNITY
 Survey 26 - UNAFFECTED

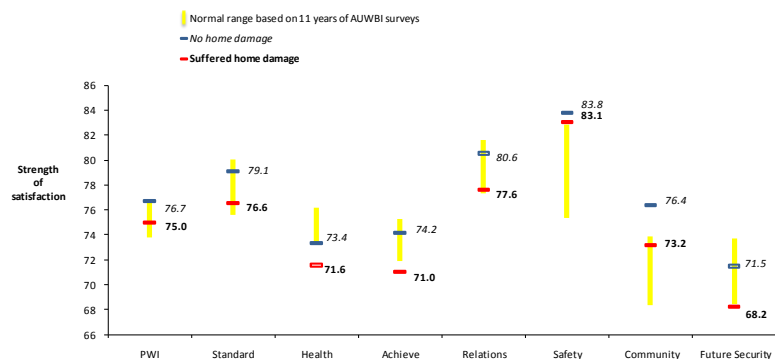
Dot point summary

1. People living in disaster-affected areas, who were affected at a **community** level, have responded to the damage sustained to the homes and towns in their area with an increased satisfaction with their personal safety and with their community, although their overall wellbeing remains within the normal range.



**Note: The yellow line indicates the normal range based on 11 years of Australian Unity Wellbeing Index (AUWBI) surveys*

2. The wellbeing of those who **personally** suffered home damage remains within the normal range. However, even though satisfaction with Safety and Community remain high, three other areas of their lives remain below normal as Health, Achieving in life, and Future Security.



**Note: Numeric values indicate mean scores*

Chapter 2: Demographic differences between the groups

This chapter explores the different samples in terms of their gender, age and income.

The demographic variables of gender, age and income were compared across the 6 samples. Table 2 shows the results of these comparisons. For the categorical variables of gender and income, the number of participants in each category is shown. The percentage of each sample corresponding to the frequency value is given in parentheses. For age, the means and standard deviations for each sample are provided.

*Table 2:
Demographic differences between the 6 samples*

| Variable | Survey 20.1 (STATE level) | | Survey 25.1 (PERSONAL and COMMUNITY level) | | Survey 26 (UNAFFECTED) | |
|-----------------------|------------------------------|----------------|--|----------------|---------------------------|----------------|
| | VIC | QLD | VIC | QLD | VIC | QLD |
| Gender | | | | | | |
| Male | 245 (50.1%) | 247 (50.1%) | 298 (49.7%) | 315 (51.2%) | 247 (50%) | 183 (50.1%) |
| Female | 244 (49.9%) | 246 (49.9%) | 302 (50.3%) | 300 (48.8%) | 247 (50%) | 182 (49.9%) |
| Age | | | | | | |
| Mean | 53.23 | 51.31 | 54.56 | 51.34 | 54.73 | 55.03 |
| SD | 16.80 | 16.58 | 15.91 | 15.81 | 16.94 | 15.58 |
| Income group | | | | | | |
| Less than \$15,000 | 27 (6.7%) | 30 (7.3%) | 41 (8.1%) | 28 (4.9%) | 21 (5.4%) | 14 (4.7%) |
| \$15,000 - \$30,000 | 73 (18.0%) | 75 (18.3%) | 134 (26.4%) | 131 (23.1%) | 85 (21.7%) | 76 (25.3%) |
| \$31,000 - \$60,000 | 95 (23.5%) | 107 (26.2%) | 126 (24.8%) | 130 (22.9%) | 97 (24.7%) | 72 (24.0%) |
| \$61,000 - \$100,000 | 104 (25.7%) | 96 (23.5%) | 119 (23.4%) | 114 (20.1%) | 94 (24.0%) | 58 (19.3%) |
| \$101,000 - \$150,000 | 61 (15.1%) | 68 (16.6%) | 65 (12.8%) | 122 (21.5%) | 56 (14.3%) | 53 (17.7%) |
| \$151,000 - \$250,000 | 33 (8.1%) | 26 (6.4%) | 16 (3.1%) | 39 (6.9%) | 29 (7.4%) | 22 (7.3%) |
| \$251,000 - \$500,000 | 8 (2.0%) | 6 (1.5%) | 5 (1.0%) | 4 (0.7%) | 8 (2.0%) | 4 (1.3%) |
| More than \$500,000 | 4 (1.0%) | 1 (0.2%) | 2 (0.4%) | 0 (0%) | 2 (0.5%) | 1 (0.3%) |

A chi-square analysis of the gender distributions revealed no significant differences across the samples.

A one-way ANOVA revealed some subtle age differences between the 6 samples. The Queensland samples from STATE level and PERSONAL & COMMUNITY level were significantly younger than Victorians from PERSONAL & COMMUNITY level, and both Victorian and Queensland subsamples from UNAFFECTED.

Regarding income, a chi-square goodness of fit test revealed that the PERSONAL & COMMUNITY level sample from Victoria had a larger than expected proportion of people reporting earnings in the lower income categories. The STATE affected sample from Victoria comprised a larger proportion of people reporting earnings in the higher income categories.

Conclusion: None of these differences are likely to systematically affect the levels of wellbeing between the surveys, as they are similar to the demographic differences usually found within normal samples in our surveys.

Chapter 3: Wellbeing differences between states and surveys

This chapter compares the wellbeing of the 6 different samples.

The PWI scores of the 6 samples are shown in Figure 1, along with the normative range.

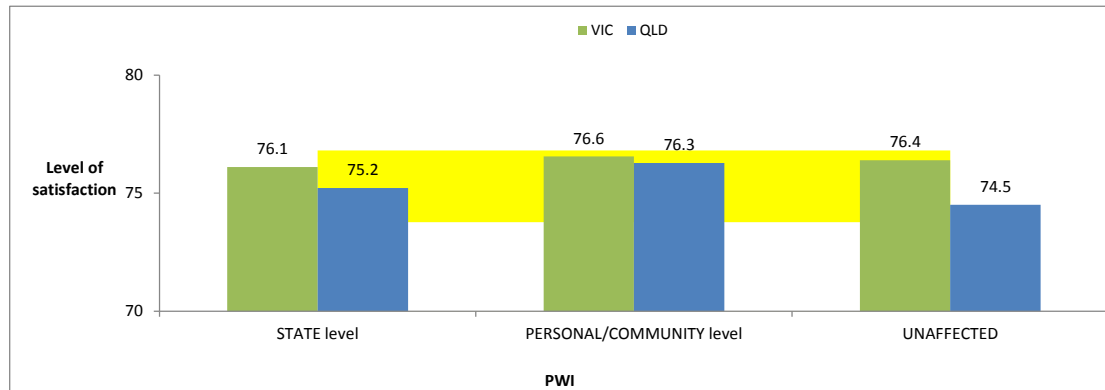


Figure 1: PWI scores across the 6 samples with normative range

Figure 1 shows that the PWI falls within the normal range for all samples except for UNAFFECTED QLD, which falls marginally below. However, the PWI of these six groups are not statistically different from one another.

Conclusion: The average wellbeing of the people living in the disaster areas is quite normal some 2.8 years (fires) and 9 months (floods) after the events.

Despite this lack of overall difference in wellbeing, investigation of the seven individual PWI domains revealed differences for the domains of Personal Safety (Figure 2) and Community (Figure 3).

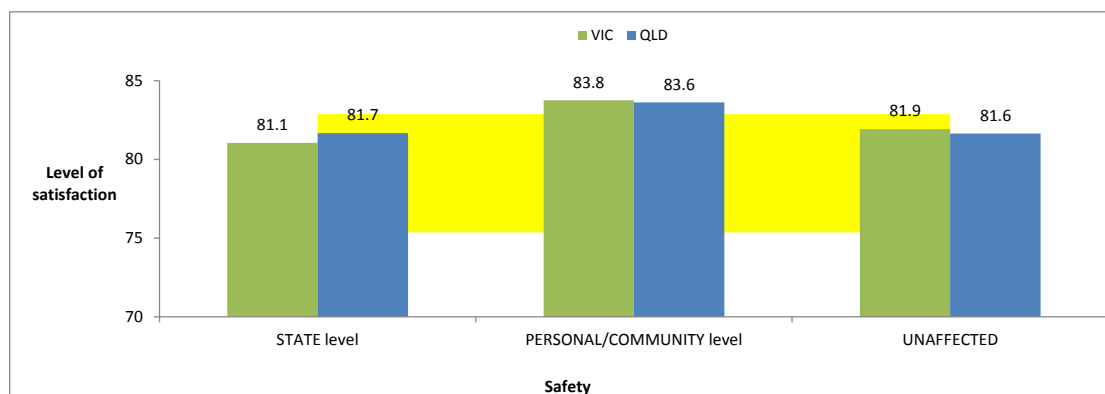


Figure 2: Satisfaction with Safety scores across the 6 samples with normative range

Both state samples from the PERSONAL/COMMUNITY affected group reported greater Satisfaction with Personal Safety.

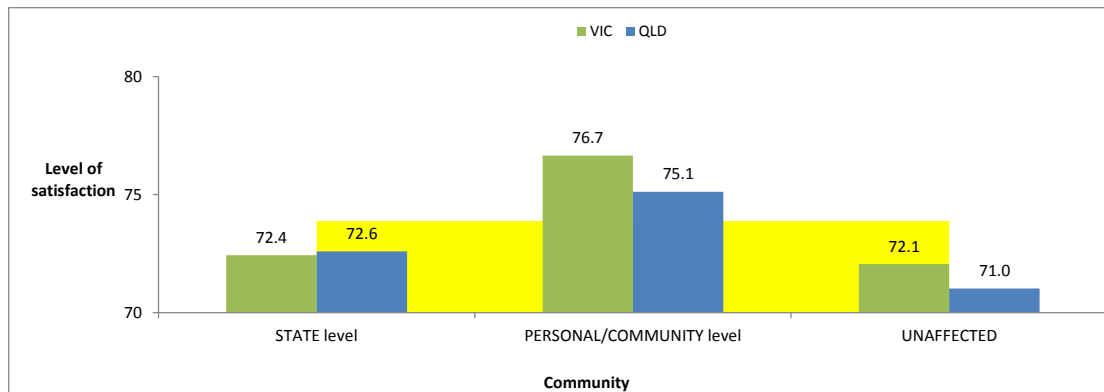


Figure 3: Satisfaction with Community scores across the 6 samples with normative range

The PERSONAL/COMMUNITY sample from Victoria reported higher Community Satisfaction than both STATE and UNAFFECTED samples. The PERSONAL/COMMUNITY sample from Queensland also reported higher Community Satisfaction than the UNAFFECTED Queensland sample.

Conclusion: These findings suggest that the people affected at the Personal and Community level, living in disaster-affected areas, have responded to the damage sustained to the homes and towns in their area with an increased satisfaction with their personal safety and with their community.

It seems counter-intuitive that the experience of a disaster would make people feel safer. However, both of these disasters triggered an outpouring of support and assistance to these communities. Moreover, Government initiatives have ensured new systems of early warnings and preventative measures which likely enhance the future safety of residents. It is also likely that the experience of shared trauma and neighbourhood cooperation forged a common bond among residents. This not only served to enhance community togetherness but also a sense of safety.

Chapter 4: The impact of fires versus floods

This chapter considers only the sample recruited for Survey 25.1, those affected by the bushfires or floods at the personal and community level. It compares participants living in bushfire-affected areas in Victoria, to participants living in flood-affected areas in Queensland.

Wellbeing variables

Figure 4 shows the mean scores for the two samples on the PWI and domains, within the context of the normative ranges for these variables over the series of surveys conducted as part of the Australian Unity Wellbeing Project.

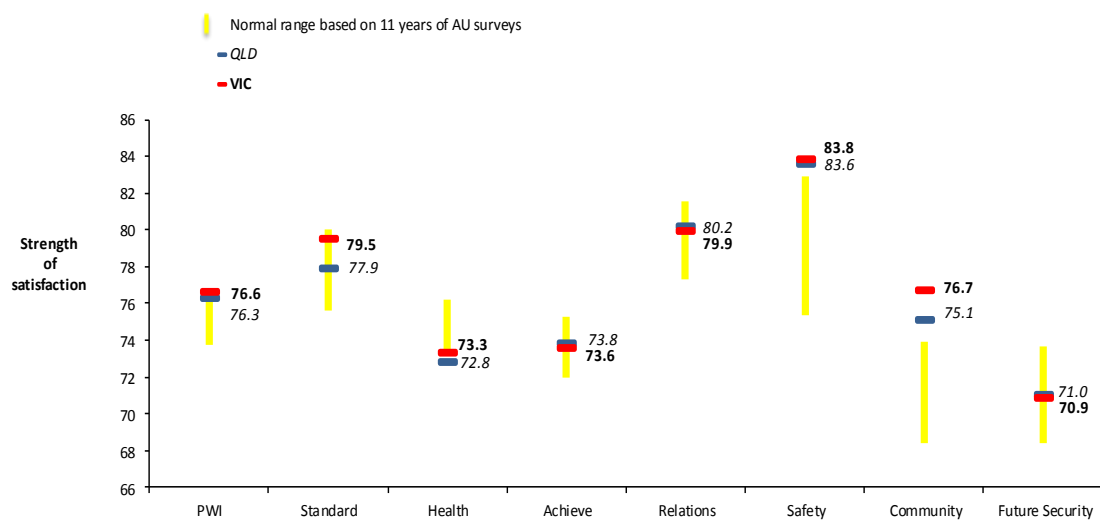


Figure 4: Fire-affected areas compared to flood-affected areas on PWI and domains (normative ranges included)

Overall, there were no differences in PWI scores or any of the domains between the Victorian and Queensland samples. However, it is interesting to observe that the effect of the disasters to increase Community and Safety satisfaction, as shown in Figures 2 and 3, was a common outcome from both fires and floods.

Conclusion: Following a natural disaster, Satisfaction with Personal Safety and Satisfaction with Community rise above the normative range.

The influence of personal disaster experience

We asked: “Within the past few years, has your home been damaged by bushfire/flood”

Table 3:
Frequencies for home damage

| | N | N% |
|-------------------|-----|--------|
| Victoria | | |
| Yes | 86 | 14.3 |
| No | 514 | 85.7 |
| Total | 600 | 100.0% |
| Queensland | | |
| Yes | 111 | 18.0% |
| No | 504 | 82.0% |
| Total | 615 | 100.0% |

“(If yes) On a scale of 0-10, how much damage was there to your house?”

From Table 3 it can be seen that a higher proportion of the people surveyed from Queensland had personally experienced home damage from the floods (18.0%) than had personally experienced home damage from the fires in Victoria (14.3%). However, the reverse order is true in relation to the extent of home damage. These comparisons are shown in Figure 5.

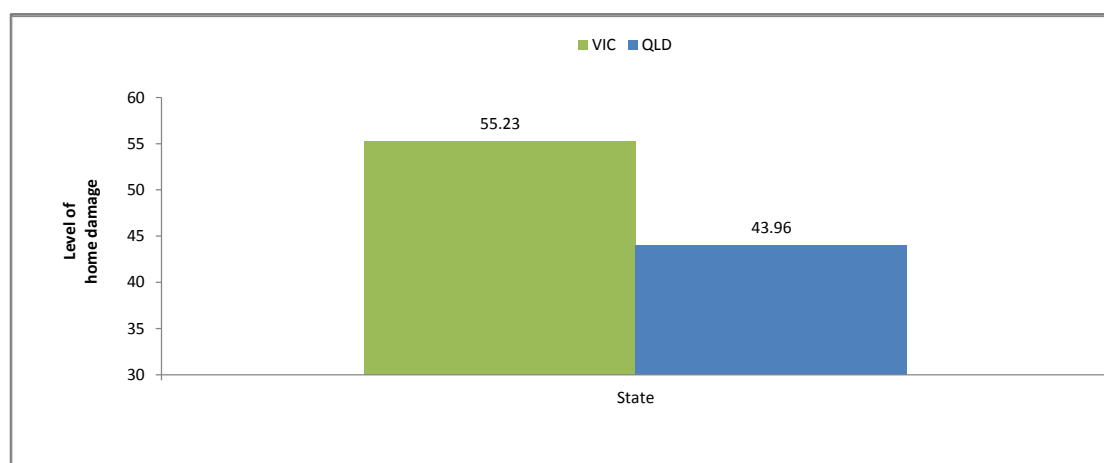


Figure 5: Level of home damage by state (PERSONAL/COMMUNITY level)

An interesting question that can be asked of these data is whether the personal experience of home damage caused wellbeing to change. Figure 6 uses the combined Victorian and Queensland data to compare the PWI and domains between people who suffered home damage and those who did not.

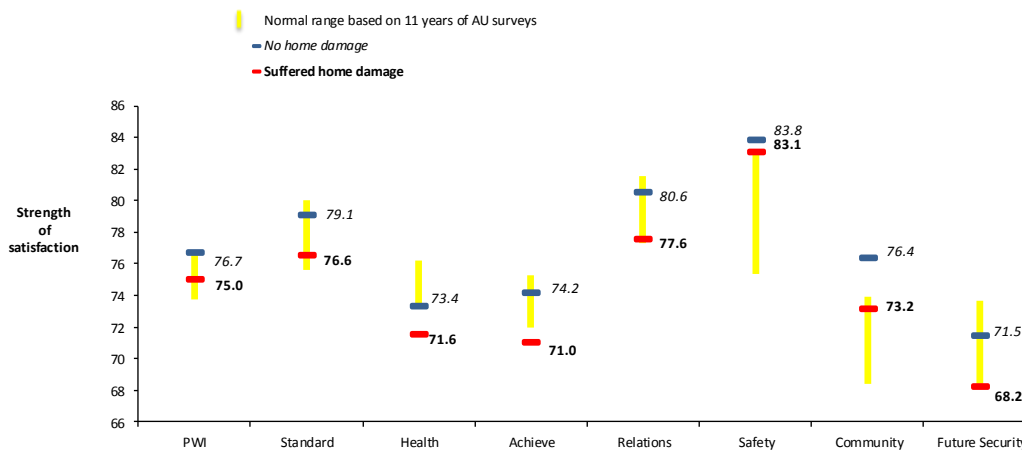


Figure 6: Home damage/no home damage (PWI and domains)

As can be seen from Figure 6, the PWI and most domains are lower for those people who had the personal experience of home damage. These differences are significant for Satisfaction with Community, suggesting that while the general community in the affected areas felt a greater connection following the disasters, those who were personally affected did not feel as close. Notably, however, their level of community satisfaction still lies at the top of the normal range.

The people who personally experienced home damage also report lower satisfaction with Achieving and Future Security.

Of particular interest is the domain of Satisfaction with Achieving, which is generally one of the more robust wellbeing domains. Low Satisfaction with Achieving for those whose houses were damaged may reflect a sense of disheartenment at people having had their homes and property damaged by fire or flood. A person's achievements would be reflected in not only their house itself, but in the documents, photos, and personal belongings that fill it.

For people who suffered home damage, their satisfaction with Future Security also falls below the normative range. While the general community may feel that they survived the disaster once and can survive again, those who were personally affected by the fires or floods appear to be less sure.

Conclusion: These findings suggest that whilst the wellbeing of the general community benefitted from the disasters, the wellbeing of those who were personally affected suffered. Notably, however, their overall wellbeing remains in the normal range.

The influence on relationships (Survey 25.1)

We asked: “Did this event affect your personal relationships?”

Table 4:
Affected personal relationships (frequency)

| | N | N% |
|---------------------|-----|--------|
| Victoria | | |
| Yes, for the better | 129 | 22.5 |
| Yes, for the worse | 101 | 17.6 |
| No | 344 | 59.9 |
| Total | 574 | 100.0% |
| Queensland | | |
| Yes, for the better | 36 | 5.9 |
| Yes, for the worse | 41 | 6.7 |
| No | 532 | 87.4 |
| Total | 609 | 100.0% |

Table 4 reveals that more people who experienced the bushfires in Victoria reported that their personal relationships were affected than did those who experienced the Queensland floods. Of those who reported that their personal relationships were affected by the disaster, it is interesting to observe an almost even split of those who said their relationships were affected for the better, compared to being affected for the worse.

“If yes, on a scale of 0-10, how much did it affect your relationships?”

Figure 7 compares the level of relationship effect reported by the Victorian and Queensland samples.

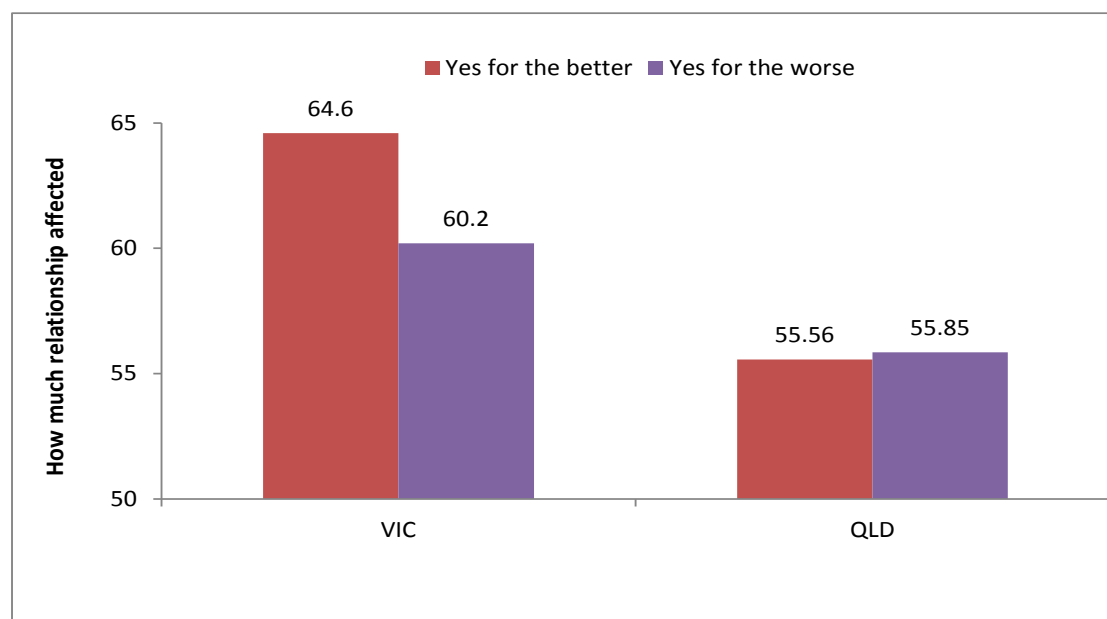


Figure 7: A comparison of the extent of relationship effect between VIC and QLD

Regardless of whether participants reported that their relationships were affected for better or worse, Victorian participants reported that their relationships had been affected more strongly than did participants from Queensland. This may reflect the relative intensity of the disaster experience. Within Victoria alone, the strength of a positive outcome on relationships was stronger than the negative.

Figure 8 compares those whose relationships were affected for the better, to those whose relationships were affected for the worse, and those whose relationships were not affected on the PWI and domains.

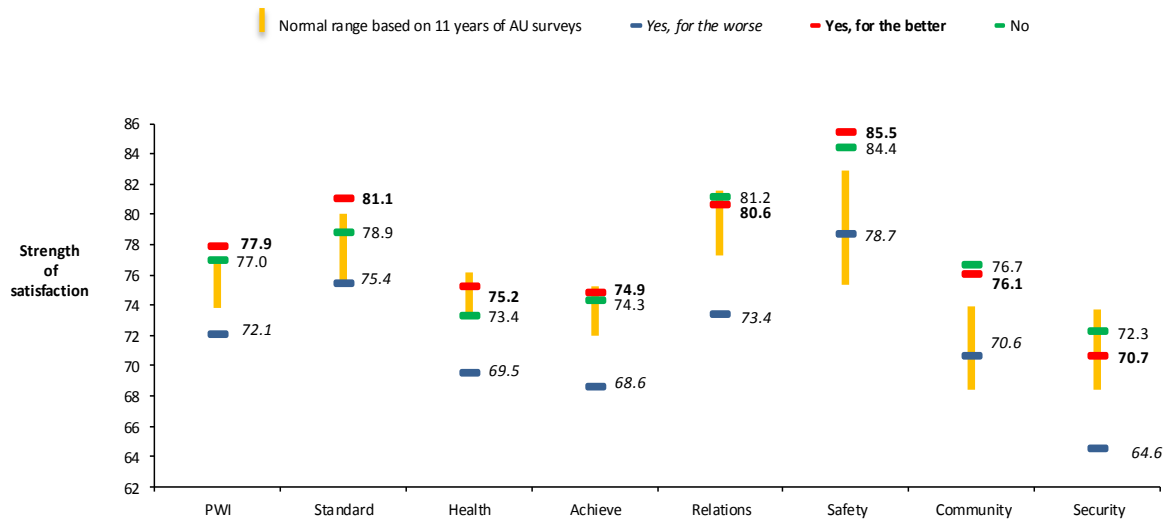


Figure 8: Comparisons of whether relationships affected on PWI and domains

When relationships were affected for the worse, scores on the PWI and all domains were lower than both other groups. These scores are also below the normative range for all but two domains. The fact that having relationships affected for the worse can have such a widespread influence on wellbeing is consistent with past research and common experience. Figure 9 compares the wellbeing of people whose relationships were affected for the worse, based on whether they experienced the bushfires or floods.

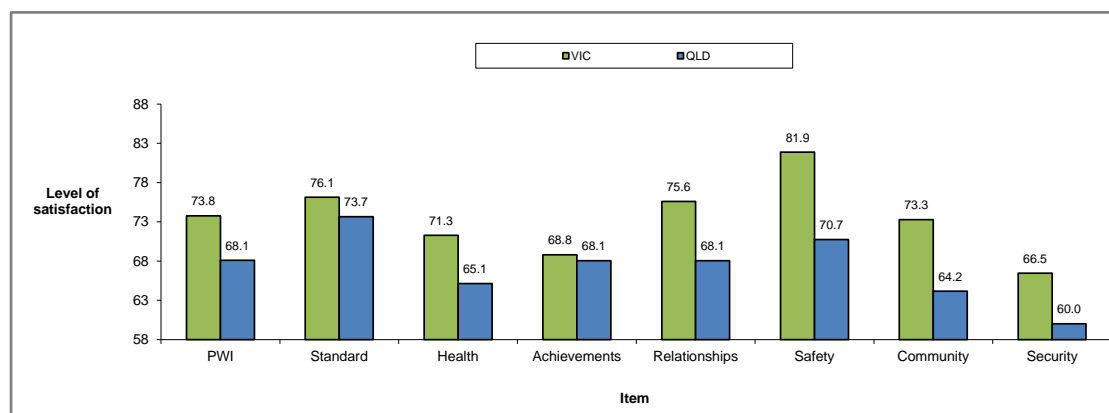


Figure 9: Relationships affected for the worse x State

*Note: For the Queensland sample, the value for each domain falls below the normal range

Figure 9 shows that people whose relationships were affected for the worse by the floods in Queensland were particularly vulnerable to lower wellbeing. Their PWI score and their scores on the Satisfaction with Safety and Community domains were significantly lower than those whose relationships were affected for the worse as a result of the bushfires in Victoria.

This finding may be explained by the difference in time that has passed since the event. For the Queenslanders, only 9 months after the floods, the damage sustained to personal relationships is likely still quite raw. Not even increased community support and awareness are enough at this stage of recovery to keep wellbeing within the normal range. By contrast, Victorians whose relationships were affected for the worse by bushfires have had over 2 years since the event for their relationships, and their general wellbeing to recover. With the passage of time, the increased community support and sense of safety should see the wellbeing of those personally affected by the floods rise back up to normal.

Conclusion: A greater proportion of Victorians reported that their personal relationships had been affected by the bushfires. However, when relationships were affected for the worse, there were greater implications for general wellbeing, particularly for those affected by the floods.

The influence on financial loss (Survey 25.1)

We asked: “Did you suffer financial loss due to this event?”

Table 5:
Frequencies for financial loss

| | N | N% |
|-------|-----|--------|
| VIC | | |
| Yes | 196 | 32.7% |
| No | 404 | 67.3% |
| Total | 600 | 100.0% |
| QLD | | |
| Yes | 219 | 35.6% |
| No | 396 | 64.4% |
| Total | 615 | 100.0% |

From Table 5 it can be seen that similar proportions of Victorians and Queenslanders reported that the disaster in their area had caused them to suffer financial loss.

“(If yes) From 0-10, how badly is this financial loss affecting your life now?”

The extent to which respondents’ lives were currently affected by that financial loss was similar across disasters.

To explore the impact of suffering financial loss on wellbeing, the wellbeing of those who suffered financial loss as a result of the fires and floods was compared to those who did not suffer financial loss. These results can be seen in the context of the normative ranges in Figure 10.

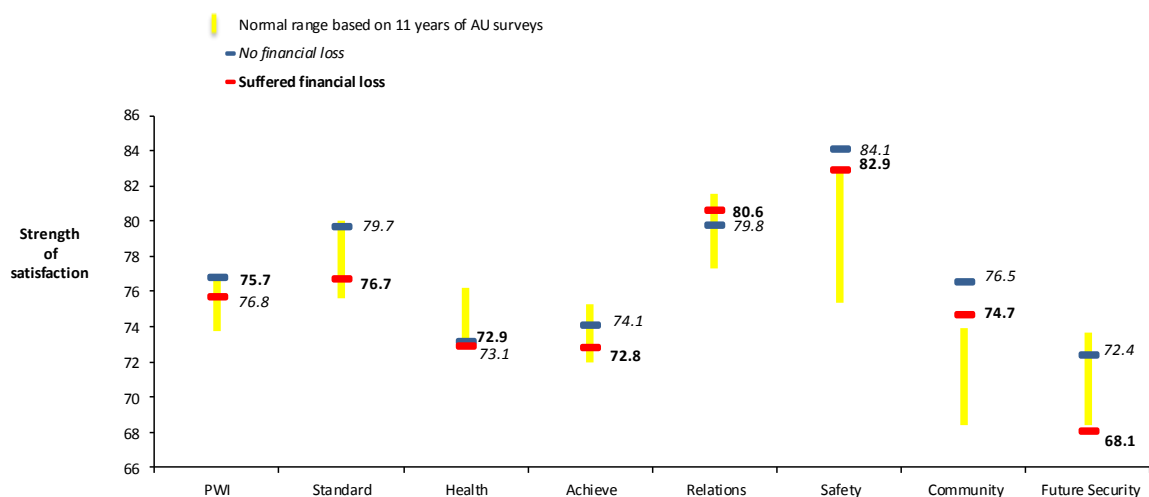


Figure 10: Comparison of those who suffered financial loss to those who did not on PWI and domains

While there was no overall difference in the PWI, the people who suffered financial loss reported lower satisfaction with standard of living and future security. These two domains are intuitively reliant on income to a large extent, and thus it seems sensible that those who suffered financial loss may have also had to compromise their living situation, and may have reason to be less satisfied with their future security.

Conclusion: In terms of financial loss, the fires and floods affected the same proportion of people in Victoria and Queensland, and the extent to which that loss affects their lives right now is similar. Those who suffered financial loss report lower Satisfaction with their Standard of Living and Future Security.

Knowing someone who died (Survey 25.1)

We asked: “Did you personally know anyone who died in this event?”

Table 6:
Frequencies for ‘know death’

| | N | N% |
|-------|-----|--------|
| VIC | | |
| Yes | 296 | 51.0% |
| No | 284 | 49.0% |
| Total | 580 | 100.0% |
| QLD | | |
| Yes | 16 | 2.7% |
| No | 587 | 97.3% |
| Total | 603 | 100.0% |

Table 6 reveals that many more respondents from Victoria knew someone who died as a result of the bushfires. This is not surprising, as many more people died as a result of the bushfires in Victoria than the floods in Queensland.

Figure 11 compares the wellbeing of people who knew someone who died in the floods or fires to others who did not.

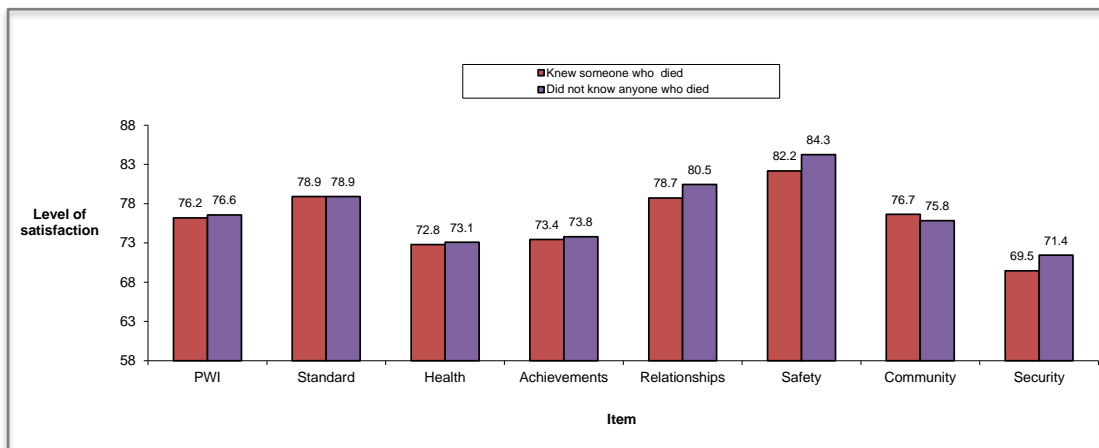


Figure 11: Comparing the wellbeing of respondents who knew someone who died in the disaster compared to those who did not

There were no significant differences on the PWI or any domain. This finding attests to the resilience of Subjective Wellbeing, in that people are able to recover from the tragic loss of someone they knew personally. It is important to note, however, that we did not enquire as to the relationship of the respondent to the person who died.

Conclusion: A much larger proportion of the Victorian sample knew someone who died as a result of the bushfires. However, knowing someone who died in the disasters had no effect on present SWB.