Community attitudes towards reporting bushfire arson to Crime Stoppers Victoria 2012-2015

Community attitudes towards reporting bushfire arson to Crime Stoppers in Victoria, 2012 – 2015: Have patterns changed? Fifth report to Crime Stoppers

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GLOSSARY

SD	Standard deviation
CS	Crime Stoppers Victoria
DN	Do nothing about a suspected event
FW	Fatal Wildfire
ME	Handling the Situation Personally
NT	Not statistically significant
NT	Non-reporting tendency
RS	Reporting strength
RT	Reporting tendency
SB	Small Bushfire that burns out a few acres with no damage to people or property
TFB	Total Fire Ban day
TZ	'000' – number in Victoria to report an emergency
VCARF 1	Victorian Community Arson Reporting Form 1, the survey questionnaire used in Survey Four in 2012
VCARF 2	Victorian Community Arson Reporting Form 2, the survey questionnaire used in the Fifth Survey, 201
VicPol	Victoria Police

SUMMARY

RESULTS FOR FULL 2015 SURVEY

This report is the fifth in a longitudinal study of reporting the crime of arson to Crime Stoppers, Victoria. While investigating the triggers for reporting fire-lighting, this report presents comparative data, especially that collected in 2012, in an attempt to understand reporting trends and the community responses to the raising of awareness of the importance of reporting crime to Crime Stoppers. The data is compared for the complete respondents for that year, and between the specific regions where surveying was undertaken. Finally, the report presents an exploration of how the reporting of arson may differ according to both the socio-economic characteristics of regions and the personal experience of crime in general and reporting habits around this.

Overall, approximately 2000 Victorians have been surveyed over about eight years. The survey questions have become progressively better targeted and comprehensive, modified from the learnings gained by the researchers from each survey. The 2015 survey covered seven regions in Victoria.

The survey tested reporting strength or the circumstances where a report would be made. This was examined through manipulating the seriousness of the fire, the relationship to the perpetrator and the role of fear. In 2015, 92% of respondents would take some action if they knew something to help solve an arson event, even if the perpetrator was friend, family or their own child, in the case of a small fire lit on a Total Fire Ban day, a small bushfire that burns out a few acres with no damage to people or property, or a fatal wildfire that destroyed property and killed people. This was an increase of 13% from the 2012 survey. However, when all opportunities to report are considered, 58% of respondents would report to the Triple Zero number, 17% to Crime Stoppers, 17% would handle the situation themselves. Eight per cent would do nothing.

When specific factors are looked at in regard to reporting strength, women are more likely to report to CS than men, but were more fearful than men of wasting CS's time. When comparing reporters (either to CS or Tripe Zero) with non-reporters (those that preferred to handle the situation themselves or do nothing), reporters felt part of their community, they felt safer and wealthier, happier in relationships, extraverted, individualistic and authoritarian, they believe police will act fast if they report, and they feel moral congruence with both police and the judicial system. The scale of the fire and relationship to the offender interacts, along with witnessed versus suspected arson, to influence reporting. Thus, to report or not is influenced by a range of judgements. For example, when there is a change in context from accidental to deliberate fire-lighting, reporting increases by 17% and perceived greater vulnerability of the offender decreases reporting by 27%. The belief about anonymity of CS increases reporting from Triple Zero to CS and strengthens reporting by at least 9%.

It is important that the public understand the difference between witnessing an arson event, when Triple Zero should be contacted, and being suspicious about a fire-lighting event, when CS should be contacted. The results for 2015 demonstrate far less public confusion about the role of CS in cases of arson when compared with 2012. It also shows an improvement in Surf Coast, previously the weakest across all regions for these metrics. Comparing 2012 and 2015, there is an average rise of 27 percentage points in correct reporting choices made across regions.

People will be more inclined to report if they expect there will be a good outcome from their report. The top three positive expectations for CS reports across each region, remains saving people's lives, properties, pets and livestock. The top three obstacles to CS reporting is always

a preference for Triple Zero, believing the legal system will not punish the suspect properly, followed by accusing the wrong person or a friend. Apart from these broad trends, there is wide variation between locations and personal characteristics and beliefs about reporting, with beliefs about local safety and their anxiety levels, and whether they believe local authorities will follow through on reports.

Looking at social problems experienced by the respondents and their propensity to report these to an authority, one in six have suffered at least three of six serious social problems, yet 90% of these remain unreported, suggesting respondents prefer to solve problems themselves. Almost half (43%) have been victimized by at least one of 11 crimes but only half (53%) were reported, mostly those crimes attracting monetary reimbursement. Sixty-two per cent of sexual assaults and half of family violence remain unreported. Thus, as predicted by the international literature (MacDonald, 2002), reporting falls among those most affected by crime.

The survey asked where people get their information about CS and arson. Over the previous 12 months, CS achieved 98% media saturation Victoria-wide. Television had the highest impact (92%) and 42% recalled its mention of bushfires. One in three respondents recalled bushfire mentions by CS on radio, one in five for local papers and social media, one in ten for billboards, although billboards are less likely to convey the CS phone number. Most people preferred to contact CS by phone (79%) but a growing percentage would like to report via a mobile app (9%), especially among younger respondents. From 2012 to 2015, respondents' awareness of media mentions of CS rose from 90-98%, with great advancements in Surf Coast and Yarra Ranges.

Knowledge about CS was examined. The anonymity of reporting to CS is asserted by 41% of total respondents, but one in ten distrusts that it is anonymous. One in five knows CS is not run by police and one in three knows it is not run by detectives.

REGIONAL THEMES

Latrobe – rural, bushfire affected

Latrobe Valley generates 85% of Victoria's electricity from brown coal. Other industries include timber milling and paper manufacturing. In January and February 2009, two bushfires in the Latrobe Valley burnt a total of 16,675 hectares of forest, the first starting in Churchill and the second at Delburn, both having been started by arsonists. Compared to the rest of Victoria, Latrobe is lower on measures of health, volunteering, internet access, youth employment, income and education. It scores higher on measures of subjective wellbeing, community engagement, feelings of safety, food security, work-life balance and housing affordability. Along with lower median wages of about 20%, crime is much higher against both persons (+80%) and property (+27%). Illegal fires affect Latrobe more than any other region but they are not always reported. When it comes to reporting arson exclusive to CS, Latrobe chooses CS when they feel safe, understand anonymity and have moral congruence with their communities and authorities. The best way to increase media awareness in Latrobe is to increase efforts in local newspapers.

Nillumbik – Melbourne fringe

Nillumbik Shire is 25 kms north-east of Melbourne and was one of the most severely affected

regions during the Black Saturday bushfires. The south of Nillumbik is predominantly urban, with commercial centres at Eltham and Diamond Creek whereas the north stretches to Kinglake National Park, a community that was severely hit. The main industries in Nillumbik include building construction and trades. Compared to the rest of the regions, Nillumbik is higher on measures of health, subjective wellbeing, social support, child health assessments, safety at night, internet access, youth employment, employment and income, education, work-life balance, waste recycling and citizenship. It even surpasses Yarra Ranges in having much lower crime rates against both person (-54%) and property (-63%) when compared to other regions. Nillumbik needs more focus on anonymity of reporting to CS as a failure to understand this is contributing to avoidance of reporting. After phone, website is the preferred means of reporting to CS by Nillumbik (10%), as with Murrindindi (9%) and a large proportion of Macedon Ranges (12%).

Yarra Ranges - Melbourne fringe, bushfire affected

Yarra Ranges surrounds significant natural reserves and tourist destinations. With a mix of fringe suburban and rural communities, 70% live in the more 'urban' areas. Along with tourism and agriculture, industries include appliance manufacturing and building construction. In 2009, several bushfires were deliberately lit around the south-eastern perimeter which necessitated evacuation on Black Saturday. Compared to the rest of the regions, the Shire of Yarra Ranges scores higher on measures of employment, income, food security, education, work-life balance, recreational participation and citizenship. It scores lower on volunteering and child health. The most dramatic departure from the rest of the regions is in crime rates, being much lower against both persons (-42%) and property (-41%). Across all measures, Yarra Ranges displays less awareness of CS in general. When it comes to reporting correlates exclusive to CS, Yarra Ranges avoids using CS because of increasing cynicism, perhaps in part due to distrust in police. Yarra Ranges and Knox might need to understand that CS is not run by police. Despite extra attention given to Yarra Ranges since 2012, it still doesn't distinguish the correct pathways of reporting and has not improved since 2012. Increasing media awareness in the form of radio should be given attention. Only Yarra Ranges still cites fear of being a court witness as one of its top three obstacles to CS reporting.

Surf Coast - rural

Surf Coast Shire is between 75 kilometres south-west of Melbourne and between up to 60 kilometres south-west of Geelong. The Shire has grown rapidly, with Torquay and Jan Juc averaging around 5% annual population increases. A popular tourist and surfing destination, tourism, hospitality, recreation and service industries make a substantial contribution to the local economy, along with agriculture and construction. Compared to the rest of the regions, Surf Coast is slightly healthier, more educated and strong on citizen engagement and recycling across both waste and water. In terms of crime, once again Surf Coast is much lower than the rest of the regions, both in terms of persons (-61%) and property (-37%). But a large influx of tourists during the summer bushfire months means that crime rates spike during this period and the possibility of arson committed by people from outside of the Shire is vastly increased compared to other areas sampled. When it comes to reporting correlates exclusive to CS, Surf Coast chooses CS when they are scared, they understand anonymity and have moral congruence with their communities and authorities. While Macedon continues to display the highest correct scores on reporting pathways, Surf Coast, previously weakest, has almost

caught up. Murrindindi, Surf Coast and Macedon all feature prominently with violent crimes including assault, sexual assault and family violence.

Macedon Ranges – rural, bushfire affected

Macedon Ranges Shire is also a major tourist destination and, like Yarra Ranges, is a semi-rural area. It suffered devastating bushfires during Ash Wednesday (1983). On the North Western outskirts of Melbourne, its industries centre on tourism, where it offers diverse natural attractions and wineries. On most indicators, Macedon Ranges is almost identical to the profile for the rest of the regions, except in terms of crime. Like Yarra Ranges, Macedon ranges enjoys higher rates of belief of personal safety at night and much lower crime than the rest of the other sites, both in terms of persons (-50%) and property (-23%). Macedon doesn't always report illegal fires but displays the highest correct scores on reporting pathways. Macedon (19%) and Yarra Ranges (11%) are also unusual in that a larger portion would prefer to contact CS via a mobile app. After phone, website is preferred by Nillumbik (10%) and Murrindindi (9%) and a large proportion of Macedon Ranges (12%). When it comes to reporting correlates exclusive to CS, Macedon and Yarra Ranges actively avoid using CS because of increasing cynicism.

Knox – Melbourne fringe

The City of Knox is an outer eastern metropolitan area 25 kilometres from Melbourne that was largely unaffected by Black Saturday, although a small portion of its boundary with the Shire of Yarra Ranges was deliberately lit along the Belgrave train-line in Ferntree Gully. Geographically, this small bushfire-affected area is more aligned with the Shire of Yarra Ranges than the more built-up suburban landscape of Knox. This city is a large municipality with a slightly older residential population where 31% are supported by local employment in retail business and manufacturing, including chemical and food production. Compared to the rest of the regions sampled, Knox is lower on volunteering, crime and recreational participation. It is higher on measures of employment, income, internet access and waste recycling. On most measures except for crime, it is a fairly typical snapshot of the rest of the regions. It almost matches Yarra Ranges in having lower crime rates against both person (-34%) and property (-14%). When it comes to reporting correlates exclusive to CS, Knox appears to report based on social approval but needs more focus on anonymity. Knox tended towards less fire-fighting volunteerism, as would be expected because it is more suburban and less fire-prone.

Murrindindi – rural, bushfire affected

Murrindindi Shire also covers the Kinglake National Park but more fully embraces the township of Kinglake, stretching to more rural areas in Yea and Alexandra. It is predominantly rural, almost half is Crown land; the rest given over to settlements surrounding agriculture and timber production. Compared to the rest of Victoria, Murrindindi is higher on measures of child health assessments, safety at night and citizen engagement. It also has lower crime rates against people (-16%) and property (-49%), but on the negative side suffers slightly lower income, restricted public transport and slightly lower food security than the other survey regions. Its focus on timber production and Crown land makes Murrindindi similar to Latrobe. When it comes to reporting correlates exclusive to CS, Murrindindi reports to CS when they are educated, have faith in positive outcomes but are socially isolated. After phone, website is preferred by Nillumbik (10%), Murrindindi (9%) and Macedon Ranges (12%).

BACKGROUND

PREVIOUS REPORTS

Funded by Crime Stoppers Victoria (CS), this research samples community attitudes on reporting arson to help formulate and evaluate key messages driving statewide media communications across print, radio and television. The role of CS in arson reporting is to improve operational efficiencies by allowing police and fire-fighting agencies to respond to emergency situations whilst still capturing all other intelligence of possible significance to later investigations using a reporting pathway outside of '000'.

The first report was completed in November 2010 and used to inform the 2010/11 campaign. A second report to the Department of Justice was submitted in June 2011 with updated results across new communities. The third report, September 2011, provided new data for the 'long form' (VCARF 1) of the survey leading up to the 2011/12 campaign. The fourth report, September 2012, brought together previous results into the psychometric instrument, the Victorian Community Arson Reporting Form (VCARF 1). In 2015, Crime Stoppers Victoria commissioned a full review of the global scientific literature on crime reporting and this was used to trial an updated questionnaire in Yarra Ranges and Knox in early 2015. The result is the VCARF 2, the world's only existing study on community reporting of arson and other crimes in a socio-ecological context.

PREVIOUS RESULTS

CS undertook a statewide media campaign in 2011/12 that focused on the following catch-phrase: *If you've seen something, if you've heard something, say something*. This was backed up in all media by conveying four key messages (here paraphrased into two): *Up to half of all bushfires are deliberately lit, often by people living in the local community* and *Reporting an arsonist is completely confidential if you call Crime Stoppers on 1800 333 000*.

Four waves of research began with interviews capturing 39 issues affecting arson reporting across six Victorian communities, five being nominated by the Victoria Police as bushfire prone - Yarra Ranges, Murrindindi (including Kinglake), Latrobe (Gippsland), Surf Coast, Macedon Ranges and suburban Knox. Using factor analysis, Community Norms (expectations about what other people would do) and Behavioural Expectations (positive and negative outcomes) accounted for 60% of the variance in arson reporting. In all regions, there was confusion over whether to call Triple Zero versus CS. Although 90% intended to report, only 20% claimed to know the CS phone number and weak reporters (those less likely to report) were simply unsure of what behaviours to look out for. All issues were carefully addressed in campaigns by CS. This suggests that 2015/ 16 data should display greater understanding of the role of CS and the importance of reporting.

BACKGROUND RATIONALE FOR THIS REPORT

Australia is a highly fire-prone country, and increasingly so under the influence of climate change, as fires are trending to be hotter, larger and can be very difficult to extinguish (Dutta et al., 2016; Hughes & Alexander, 2017). In 2013-2014, there were 101,867 fires reported to Australian fire service agencies: 19,524 'structural' fires (a fire within a building or man-made structure) 43,646 'landscape' fires, (a fire in a bush or grass area, known as a bushfire or wild-

fire) and 38,697 'other' fires (these include vehicle, other property and rubbish fires that have got away (SCRGSP, 2016). These figures are likely to be a significant under-estimation of actual fires, as many fires aren't officially reported. The causes of bushfires are as follows: the largest category (41.6% of bushfires) is where the cause is unknown; in 21.5% of bushfires there are suspicions that it was deliberately lit; 20% were believed to be accidental or recklessly lit fires; 8.7% of fires are known to be deliberately lit; 3.6% are defined as naturally caused; and 4.5% 'other', which includes factors such as re-ignitions and spot fires (Bryant, 2008).

The consequences of bushfires are often severe and widely experienced. These include deaths, the highest number being in Victoria (Steffan et al., 2017). Severe health effects can be caused by smoke, which can be transported in the atmosphere for hundreds or even thousands of kilometres from the fire front. For example, cardiac arrests increase by almost 50% in Melbourne on bushfire smoke-affected days (Dennekamp et al. 2011). The impact on mental health can be severe and lasting. Ecosystems can undergo substantial changes and biodiversity loss in areas where fire frequency has traditionally been low. Livestock, forestry and business can experience severe adverse impacts and urban water supplies can be contaminated.

The perpetrators of deliberately lit fires do not fit the traditional 28-year old male profile. In fact, the 28-year old age group is the least likely to light fires. Rather there are two groups, one from ages 40-80 years and the other below the age of 21. Fifty-four per cent of arsonists are children and work on the Youth Arson Reduction Project (McDonald et al., 2012) uncovered case studies where family violence was a unique factor.

Children's motivations can be roughly split into four groups, only one of which is truly malicious in intent: accidental fireplay, intellectual/developmental disability, sexual abuse and neglect, and conduct disorder (Stanley & Read, 2014). 10% of fire-lighters are female. Those in

a position to report them are usually peers, neighbours, teachers or caregivers (McDonald et al., 2012). Reluctance to report is uniquely complicated.

A zero tolerance approach to youth fire-lighting, whilst politically supported by some, could backfire by not bringing young offenders into early intervention programs, leaving them to escalate their behaviour and increase the likelihood of catastrophic wildfires (Read, 2012). Outrage is the usual response in the broader community, but those people who are actually in a position to report arson can be intimidated by the level of public condemnation that may fall on those they report (Read & Stanley, 2012), many of whom are children in disadvantaged communities (Stanley & Read, 2014).

Arson is one of the most complex crimes in the criminal literature, which makes public reporting especially problematic because no easy profile can be communicated to the public and, as a consequence, the public finds it hard to take an exact moral position.

The Crime Stoppers Arson Research Program is the only one of its kind known to the researchers. The total number of research studies on all crime reporting since 1968 is only around 100 papers worldwide. Some of the critical aspects of reporting in the international literature are completely focused on reporting to police, the results suggesting there is an international need for another reporting mechanism when knowledge is merely suspected. The likelihood of reporting crime varies by type of crime, as well as varying across countries and time, and whether the victim knows the offender (Tarling & Morris, 2010).

At least two studies, one in the Netherlands and one in the UK, find that social disadvantage and social cohesion are powerfully superimposed over these reporting rates, such as unemployment, economic downturns, falling social capital and cohesion (Gourdiaan et al., 2006, MacDonald, 2002). Under-reporting (or non-reporting) of crime is influenced by some of the same factors that impact on the amount of crime experienced. MacDonald (2002) showed that the traditional analysis of official police figures fails to tell us anything about the lived experience of true crime in communities because the same factors that produce crime also dampen reporting. Using a completely different method in a completely different nation, the same results emerged in the ground-breaking study by Goudriaan and colleagues (2006) in the Netherlands.

Worldwide, there are only a handful of good studies on reporting crime in local communities, the main studies being in the UK (MacDonald, 2002), USA (Jaehnig et al., 1981) the Netherlands (Goudriaan et al., 2006), and Finland (Kariainen & Siren, 2011). Their findings, and those of others being used in the current project, are summarised in Table 1. This reported iteration of the Crime Stoppers research campaign is the first study to cover all of these factors using the same nested analysis as a new socio-ecological model of crime reporting. This allows testing of changes across time from the earlier waves of the VCARF 1 on the effectiveness of Crime Stoppers, as well as new data across regions.

Three theoretical models have been used in these studies: the economic, the psychological, and the sociological models. The economic model (Skogan, 1984) is largely superseded as it assumes reporting is based only on rational cost/benefit analysis that fails to take into account the burgeoning evidence from the psychological model that distress overlays rational choice because it is outweighed by future vulnerability arising from knowing the offender, fear of reprisal, the perceived seriousness of the offense (influenced by the opinions of self and

The impact on mental health can be severe

Table 1. Factors that influence reporting crime, compiled from the literature

Item	Reporting	Comment (References)
Trust in police and judiciary	↑	Trust based on responsiveness (Van Craen & Skogan, 2015) and shared moral perspective (Jackson & Sunshine, 2007; Jackson et al., 2012; Taylor & Lawton, 2012; Bradford & Myhill, 2015)
Crime type	↓↓↓	Failure to report is due to one of three reasons: incident not serious enough, nothing could be done or fear of revenge (Singer, 1988; Gourdiaan et al., 2006)
Sense of community	↑↑	Interacts with social disadvantage and availability of alternative reporting routes (Gourdiaan et al., 2006)
Social disadvantage	↓↓↓	Communities with the highest rates of crime are least likely to report – this, as MacDonald (2002) says is why official police stats don't work because of under-recording by police and under-reporting by communities, especially by type of crime; for example, rape is only reported to police in 30% of cases and living in a disadvantaged or affluent neighbourhood both decrease the likelihood that simple assault is reported to the police (Baumer, 2002)
Knowing the offender	↓↓	Protecting or fearing offender is the reason given mostly by women and, paradoxically, the more serious the crime, the less likely they are to report (Singer, 1988; Menard, 2003)
Country	↑↑↑	Cross-national comparisons of reporting using the International Crime Victims Survey (ICVS), shows big differences in reporting percentages across countries (Goudriann et al., 2004), with reporting increasing with the perceived competence of the police, institution-alization of the insurance business, the norm of conformity, level of individualism, seriousness of the crime (Skogan, 1984) and structural advantage (Menard, 2003)
Neighbourhood	↓↓↓	Three main factors: sense of community, trust in police and socio-economic disadvantage (Anderson, 1999; Baumer, 2002; Bennett & Wiegand, 1994; Conklin, 1975; Gottfredson & Hindelang, 1979; Laub, 1981; Rose & Clear, 1998).
Crime location	↓↓	Reporting violence is lower for incidents in the public versus private domains. This finding suggests victims experience stronger feelings of injustice and anger if crimes threaten safe locations (Gourdriaan, 2006). Felson et al., (2002) found that victims are more likely to report a violent incident inside their own home versus public spaces (inter-acting with knowing the offender)
Rural areas	↓↓	Reporting percentages between urban and rural areas in the United States suggest informal social control is inversely related to formal (governmental) social control (Boggs, 1971; Laub, 1981).

others) and their expectations of fair treatment by police and the justice system. The reporting process follows three stages (Greenberg & Ruback, 1992) and it turns out that consulting others in the community is more predictive of reporting than a cost/benefit analysis. Beyond this, however, is the sociological model that focuses more on contextual variables on reporting (Lessan & Sheley, 1992), stimulating more recent (and useful) work on community characteristics, equity, sense of community and social capital.

A new model that integrates all three, is the social ecology model spearheaded by Ménard (2003) and Gourdiaan (2006), who note that victims are nested within different social contexts (e.g. social networks, organisations, communities) which have unconscious influences on reporting and all hinge on whether an alternative reporting network exists (such as Crime Stoppers) plus access and ease of reporting (including telephone and Internet), type of crime, local trust in the police force and sense of community. So far, the Crime Stoppers research program has, over the past six years, explored and expanded on the normative account of procedural justice to identify the translation from attitudes and beliefs to actual behaviours in terms of reporting arson to Crime Stoppers. The normative approach was originally used because it is extremely effective in encouraging people's behaviour change in terms of compliance with new laws, and was the same foundational approach underlying the 45-item crime-reporting module in Round 5 of the European Social Survey (see Jackson et al., 2011). Concurrent work on the Jackson model found that support, reporting and cooperation with police occurs when the individual feels moral congruence between themselves and the police force (or justice system), along with motivational anxiety about future victimisation (Gray et al., 2011).

Because this model had never been applied to arson before, the Crime Stoppers research program (which actually preceded the Jackson model) also used community elicitation techniques that allowed people themselves to nominate their normative beliefs about reporting arson in their own local communities. These were successfully clustered (using factor analysis) into community, behavioural and control norms before constructing the broader survey. These positive and negative items were built into the first survey so it could begin to test the comparative strength of all of these social norms on reporting strength. Some of the positive motivators for reporting were the community norms surrounding family, friends and neighbours. Negative motivators were control norms such as not knowing what to look for and not being aware of Crime Stoppers' phone number or that reporting is anonymous. We also found that behavioural norms were much more complex and came out as relating to the type of crime and the type of perpetrator, findings now supported by the international research using the much newer socio-ecological model. For the 2015/16 (henceforth described as the 2015 survey) Crime Stoppers survey, the normative approach has replicated significant normative items from past waves but expands the items to embrace almost all of the factors covered in the latest international literature encapsulated in the VCARF 2.

VCARF 2

The VCARF 2 is a leaner survey that replicates significant items from the VCARF 1, allowing replication of community profiles across six years. In addition to testing reporting profiles for other crimes of interest to both CS and VicPol, it still covers the main arson factors that influence reporting: public benefits versus private threats, community norms, and knowledge of correct reporting pathways under different hypothetical scenarios. Past surveys have helped

> Reporting occurs when the individual feels moral congruence between themselves and the police force

CS develop key messaging by demonstrating that the most powerful factors impacting on community arson reporting included:

- Approval of family, friends and community (Positive Community Norms)
- Saving the lives of family, friends and community (Positive Behavioural Norms)
- Fear of revenge and confusion about CS anonymity (Negative Behavioural Norms)
- Confusion about the actual CS phone number (Negative Control Norms)
- Confusion about what behaviours to report (Negative Control Norms)
- Confusion about when to call CS versus '000' (Negative Control Norms)

The latest version uses more refined scales examining a series of new factors on reporting: personality, sense of community, moral congruence, individualism, authoritarianism, locus of control, other crime reporting including family violence, and an expanded series of hypotheticals for reporting under different conditions relating to relationships and the scale of the fire. Embedded items across several hypothetical scenarios were pretested in early 2015 to minimise variance from the respondent's own psychosocial frame of reference. Through careful design the new survey has moved from 40 to 143 variables in 2015.

CONTENT OF THIS REPORT

The many, and increasing severely adverse consequences of fire, necessitates that society's response to fire prevention needs to be greatly up-graded. Crime Stoppers Victoria has been an early starter in this area, having commenced an evidence-based approach to targeting the reporting of suspicion of fire lighting activity in the community nearly ten years ago. This report seeks to improve understanding about who reports suspicion to Crime Stoppers, what are the circumstances and characteristics of people more likely to report suspicion, whether people recognise what should be reported, how strong their 'evidence' needs to be before they report, and whether they understand the correct avenues for reporting. Such knowledge will inform Crime Stoppers' activities in order to improve the quality and quantity of reports passed on to the police to assist their criminal investigations and charging of arson offenders. If a community member sees what they take to be suspicious activity, there are four choices that can be taken:

- Do nothing
- Take action themselves – e.g. speaking to the person, advising, warning them, threatening them etc.
- Ring Triple Zero, the emergency number when police or fire services are urgently needed to respond to, say, an on-going fire
- Report to Crime Stoppers about suspicion in relation to fire-lighting behaviour of some sort, or have some information about fire that may be useful for the police. This information, where judged to be of value, is added to the police data-base and/or flagged as being of current interest to police.

The following findings are presented in this report. Following this Background Section, Section 3 gives the survey method and description of the regional surveys. Comments made in successive surveys that shape the subsequent questionnaire, which also reflect the respondents' understanding of reporting to Crime Stoppers, are given in the first of the results sections, Section 4 . Section 5 gives the results on reporting strength, that is, the nature of

the arson event that leads to the respondent reporting this event or taking another action. It examines the characteristics, beliefs and judgements of those who make the correct choice between ringing Triple Zero (the police emergency number) and those who contact CS. Section 6 offers another way of examining reporting, that is, whether respondents understand the different reporting lines between witnessing an event and being suspicious of an event. It also looks at the expected influences of perceived outcomes of reporting. Section 7 looks at the findings a slightly different way, modelling both reporting strength and the direction of action taken in relation to the event. Section 8 looks at the presence and propensity to report in relation to the experience of socio-economic problems and a range of crimes. Section 9 reports on where the respondents learned about CS and their preferred method of reporting, while Section 10 looks at community perceptions of CS.

Summary 1
More than 2000 Victorians have been interviewed since Black Saturday. 610 were sampled across in selected Victorian regions in 2015 using VCARF 2. Seven regions were compared. Knox tended towards less fire-fighting volunteerism, as would be expected because it is more suburban and less fire-prone. Males were more likely to have been fire-fighters or police officers across the whole sample, representing 10% of respondents

METHODS AND SAMPLE DESCRIPTIONS

METHOD

Since inception of this research program in 2009, more than 2000 Victorians have been interviewed. From May 2015, a total of 689 Victorians were interviewed in the field (most in Spring), randomly approached in seven Local Government areas:

1. Knox – Melbourne fringe
2. Yarra Ranges – Melbourne fringe
3. Macedon Ranges - rural
4. Surf Coast - rural
5. Latrobe/Gippsland - rural
6. Nillumbik – Melbourne fringe
7. Murrindindi – Rural

Knox has not been directly impacted by bushfires, the other areas being considered at risk of bushfires. Murrindindi experienced significant losses during the 2009 bushfires, with the deaths of 40 people and over 500 houses destroyed or damaged (Victorian Bushfire Royal Commission, 2010). The Yarra Ranges are a high fire risk area, which experienced fire in 2009 where 12 people died, 309 private properties damaged, and 48,293 ha of land were burnt (Houlihan, 2016). Macedon Ranges experienced a severe fire in 1983.

After pre-testing on 33 respondents in Yarra Ranges and Knox, 656 responses from the 2015 survey were coded by trained field workers via a dedicated website that downloaded data to Excel.

Data cleaning was undertaken to detect, remove or adjust inappropriate postcodes, double responses, missing responses and set responding. Q-Q plots are checked as relevant for violations of normality for parametric tests such as t test, ANOVA, regression and correlation. Chi Square and Bonferroni method was generally used to test differences in rates, percentages and incidence. Statistical analyses used SPSS and GNU-R whereas graphs and figures were produced using both SPSS and Excel. Specific methods of analysis are outlined under the specific findings.

DESCRIPTION OF SURVEY RESPONDENTS (2012 & 2015)

The final samples for 2012 and 2015 surveys are described in Table 2. In addition to age, gender and education, Table 2 shows the average period of residency at that postcode (tenure), whether the respondent is, or has been, a member of the police or fire-fighting agencies (internal%), and whether they left a comment on the questionnaire.

610 Victorians provided useable responses for 2015, and 655 for 2012. As can be seen, there are no large systematic differences between the two samples; independent sample t tests confirm that the samples from 2012 and 2015 are effectively identical ($p > 0.05$), although ages for Latrobe and Surf Coast diverge from 2012 ($p < 0.025$). Only 1% and 3% were visiting (that is the postcode was not their residential postcode) in Nillumbik and Murrindindi respectively; while all Surf Coast sample was residents.[1]

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[1] Future research should also include the holiday season to ascertain the beliefs about this non-permanent resident population.

Across the total sample, the average age of respondents was 41 years (± 14 years SD, ranging 18-81 years), of which 62% were women. No gender differences emerged for average age, which was normally distributed. As in 2012, 40% of people had a tertiary education (11% postgraduate), 21% had a trade and 29% had secondary schooling. No gender differences emerged for education. Around 10% of respondents were (or had been) police (1.3%) or fire-fighters (9%), of whom 15% were female. These figures are essentially identical to 2012. Comments at the end of the survey were provided by 15% of the total sample and these are summarised in the next section.

Table 2 Descriptive statistics of 2012

Area	Number	Age±SD	Female (%)	Education*	Tenure	Internal%	Comments%
Total 2015	610	41±14	62	2.1±1.1	17±13	10	15
Total 2012	*655*	*44±15*	*63*	*2.1±1.1*		*10*	*19*
Knox 2015	84	40±15	60	2.1±1.0	12±11	7	11
Knox 2012	*100*	*41±15*	*55*	*2.1±1.1*		*5*	*15*
Yarra Ranges 2015	101	45±14	59	2.4±1.0	15±11	13	17
Yarra Ranges 2012	*103*	*41±9.0*	*61*	*2.6±1.1*		*10*	*28*
Macedon 2015	69	42±14	76	2.3±1.1	19±11	10	17
Macedon 2012	*117*	*46±15*	*63*	*2.1±1.1*		*10*	*20*
Surf Coast 2015	82	39±13	75	2.0±1.0	13±10	16	16
Surf Coast 2012	*78*	*44±17*	*62*	*2.0±1.1*	*-*	*10.5*	*25*
Latrobe 2015	72	38±15	78	1.9±1.0	26±16	3	3
Latrobe 2012	*102*	*48±14*	*73*	*2.0±1.0*	*-*	*7*	*14*
Nillumbik 2015	74	41±16	66	2.2±1.1	18±13	12	17
N/A	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Murrindindi 2015	128	41±14	55	2.0±1.0	19±14	16	14
Murrindindi 2012	*132*	*48±17*	*61*	*2.1±1.0*	*-*	*11.4*	*15*

Average education finishing at secondary level is represented as '1', trade as '2', graduate as '3' and post graduate as '4'.

RESULTS: COMMUNITY ELICITATION (2008-2015)

USE OF COMMENTS IN SURVEYS

This section reports on comments made in successive surveys that shape the subsequent questionnaires and reflect the respondents' understandings of reporting to Crime Stoppers. Community elicitation has been the foundation of this project from the outset. The original surveys were designed from open-ended community questions and consultation whereas subsequent iterations of the survey operationalized community issues and further invited commentary, from which annual surveys were updated and refined in such a way as to pre-serve comparability.

Recall 60% of the original intention to report suspected arson was explained by positive and negative realms of *Behaviour, Norms* and *Control* in the first survey, reported in 2010. Of the 55 issues originally raised by community comments in the first survey, few of these issues were raised again in 2011 and 2012, suggesting the more refined survey successfully covered the great majority of original community concerns. Having then designed and refined successive iterations of the instrument to give voice to these concerns, VCARF 1 (2012) stimulated new and engagingly novel commentary by 20% of respondents. The VCARF 2 (2015) still allows comments at the end of the survey and the pattern has emerged again in 2015, stimulating commentary by 15% of respondents, thus demonstrating greater understanding of the role of CS than in prior reports.

Previous commentary (VCARF 1) centred on offering new, sometimes novel, suggestions about improving the CS service. The biggest group of suggestion themes (12%) argued we need to advertise CS much more in the media, covering radio, television, internet, fridge magnets, phone books and signage (with the phone number in bold lettering) in fire-prone areas. Commentary also suggested the need for the survey itself to include more reporting pathway options, adding the option of handling the situation personally, and more information on whether the respondent has had negative or unsatisfactory experiences in reporting to CS and/or other agencies. All of these suggestions were added to the VCARF 2. Those failing to reach significance for 2015 (for possible removal depending on regional subtests) include:

*   Would probably forget, not enough time (NS, p=0.06)
*   It might cause division in my community (NS, p=0.09)
*   Courts won't properly punish the arsonist (NS, p=0.38)

A total of 63 new comments in response to VCARF 2 are summarised in the next section.

THE COMMENTS

Readiness to provide comments at the aggregate level was predicted by a combination of being older (mid-40's) and a firefighter (p<0.025). Among commentators, 5% had been directly touched by Black Saturday and an additional 5% congratulated both CS and the field workers for an excellent and important initiative. Around 8% of respondents found some of the survey questions challenging and said the exercise forced them to think about the issue in greater detail.

"My Dad was a fire fighter in the CFA and I would do everything I could to keep our firies, people and property safe." Yarra Ranges woman, 55

"My family lost everything in Black Saturday; arson needs to be charged as attempted murder." Nillumbik man, 37

“My family lost everything in Black Saturday; arson needs to be charged as attempted murder.” Nillumbik man, 37

“Our legal system is pathetic in handing out the right punishment and that goes for most crimes, not just arson.” Macedon woman, 52

Some would report suspected arson no matter what (6%) and a larger group (22%) was more vociferous in arguing for no tolerance and tougher penalties (attempted murder/throw away the key/name and shame/have arsonists spend time with burns victims). This exactly matches (23%) the proportion who made similar calls in 2012.

A large group celebrated CS, some saying its anonymity was critical when having to report family or friends (13%).

“I didn't say I would report to CS in this survey as it didn't actually occur to me but after doing this survey I now will make this the first call unless it is an emergency requiring 000.” Murrindindi woman, 56

“Now I feel more comfortable about how CS' work is needed for lots of reasons as I used to think it was only for cases that were advertised to contact CS.” Surf Coast woman, 36

By contrast, preferences for calling Triple Zero, sometimes specifying preferences for police or fire-fighters, were given by 16%, again matching data from 2012 (15%). One respondent argued “Telstra should be abolished” as they have experienced six minute delays in getting through to Triple Zero. But there is also emerging awareness about the correct use of CS.

“The public impression is that of a call centre for non-urgent reporting of information well after the event.” Yarra Ranges man, 65

This is a new area of commentary that suggests people are gaining more sophisticated notions about the role of CS in the broader system. Although two stated they had not thought of calling CS for arson, several openly stated they would call Triple Zero if a rapid response

The need for prevention was highlighted by nearly a quarter of those who made comments

was required and thereafter call CS if they felt they had useful information (8%). This is an important shift from 2012 in community understanding about the complementarity of roles between CS, police and fire-fighting agencies.

Another important shift is the growing call for prevention. Prevention was highlighted by nearly a quarter of those who made comments, and these included some novel suggestions. Technology featured heavily and echoed some of the earlier suggestions from 2012, for example, using phones to take photographic evidence of car registrations and suspects. One suggestion that was considered in early discussions in 2013 was to provide a link to CS directly from Triple Zero, another to use a Triple Zero app, again echoing suggestions from 2012. Other ideas in support of prevention included more burn-offs and clean-ups, one mentioning lack of burn-offs on the Surf Coast, more surveillance of arsonists on high risk days, more police visibility on those days, and to free police from paper work so they can focus on crime. Others suggested extending the fire season to March. Several called for more education in schools starting at the primary level and much more treatment for arsonists was described as critical. This reiterates calls from 2012 where 4% sought counselling for arsonists. Unlike 2012, there were no calls for more support of parents with children who light fires.

The commentary at the end of VCARF 2 represents a fourth phase in the elicitation process that began in 2009 and, given that issues are continually falling away with every release of the survey (e.g. from 20% in 2012 to 15% in 2015), tends to suggest the process is capturing a growing number of community concerns. Only two issues remain intractable, with no change in proportions from 2012 to 2015: 22% of those who made a comment calling for a tougher legal system and 15% cleaving to Triple Zero under all circumstances. More promisingly, content analysis of 63 comments reveals communities are moving away from demanding new services towards sharing more understanding and appreciation of CS' role, with the following comments:

1. Sharing experiences of Black Saturday (8%)
2. Noting the importance of CS' anonymity (13%)
3. Understanding when to call CS versus Triple Zero (8%)
4. A rising awareness of the importance of prevention (21%)
5. An interest in learning more about CS through advertising and media (6%)
6. Sharing a greater understanding of CS' role (11%)

Summary 2
Of those who made a comment (15% in 2015), a large group celebrated CS for the initiative and said anonymous reporting was very important when you know something about locals having lit fires. Although 23% of those who made a comment still take a tough zero tolerance approach, 21% recognize the importance of clever prevention strategies. One in ten has a better understanding of when to call CS versus Triple Zero and want to learn more through the media.

RESULTS: REPORTING STRENGTH

This section examines what is called reporting strength, that is the factors that influence decisions about reporting, in terms of what decision is made about reporting: do nothing, handle the situation themselves, report to the emergency line (Triple Zero) or report to Crime Stoppers. It also examines the type of scenario, or degree of suspicion, that will or will not lead to reporting to either Triple Zero or Crime Stoppers.

METHOD

As recommended by the 2012 report, the VCARF 2 was further refined by removing non-significant items and replacing them with more detailed hypothetical scenarios (size of fire and perceived threat of suspect) reflecting situational context to further reduce variance emerging from the respondent's psychological frame of reference.

Reporting strength tests the grey area by manipulating the seriousness of the event, the relationship to the perpetrator and the role of fear. In 2012, 90% of the sample would report to CS if they knew something that could solve an arson attack. In 2015, this has increased to 93% despite the new instrument being far more challenging in terms of asking them to report even if the perpetrator was friend, family or even their own child in the case of small fires lit on a Total Fire Ban (TFB) day, a Small Bushfire (SB) that burns out a few acres with no damage to people or property or a fatal wildfire (FW) that destroyed property and killed people. Even when strength of reporting is calculated in the same way as the original 2012 sample, overall reporting strength increases by 13% for the full sample ($p < 0.025$).

The new instrument retained older items for reasons of longitudinal comparison but doubled the number of reporting items using two additional vignettes whilst also doubling the reporting options from CS versus Triple Zero (TZ) versus Doing Nothing (DN) or Handling the Situation Personally (ME). This meant the overall strength of reporting could be handled in two ways – one by item and one by subject. The final set of reporting items covered nine original TFB items, six new SB items and four new FW items, one of which is replicated exactly to measure the Impact of Event Scale (a measure of subjective stress caused by a traumatic event) (Weiss & Marmar, 1996). Several manipulate the relationship to the perpetrator, the intentions of the perpetrator and whether the event was witnessed in progress versus suspected; this to measure how much the sample understands the appropriate use of CS versus T Z. Many serve double duty to create tests and additional variables but all were designed to avoid singularity.

To enable a comparison of Reporting Strength across surveys, a rating scale from 0 to 10 was derived, where 0 related to no propensity to report to CS, and 10 related to a definite report to CS. The strength of reporting can be calculated for characteristics and beliefs of the respondent by summing the tick responses for each item across each of the 19 scenarios, resulting in a number that reflected their tendency to endorse each of the four options, DN, ME, CS and TZ. When expressed as a percentage of the total number of items ticked (not always 19 due to some missed questions but always more than 17), a percentage endorsement could be offered for DN, ME, CS and TZ totalling 100%.

The range is zero to 10, the results normally distributed, which means the results of independent and matched sample comparisons can be relatively trusted. It also means that key variables suggested by past surveys, as well as new variables introduced by a review of the

Women were more likely than men to report a known suspect lighting a small fire

international literature, can be used in multiple regression to test the main inputs to reporting strength statewide and within regions. This includes multiple regressions on the original elicitation variables such as community norms, negative and positive expectations.

PROPENSITY TO REPORT

Gender

Independent sample t-tests were applied across the whole sample to assess differences between men and women on reporting suspected arson. Given that the regions had unequal sample sizes, only those findings with equal variance (using Levenes test) are reported, ensuring confidence in the veracity of the results. Age was not a confounding variable as the mean age for women and men was 41 with statistically equal variance of 14 SD each. Women were just as likely to act under threat of personal harm as men. In all other cases, key differences emerged at $p < 0.025$ (two-tailed). Results demonstrated differences in the following variables:

1. Women are slightly happier with their relationships and more likely to endorse the notion that neighbours can solve problems together

2. Women feel much less safe walking after dark in their neighbourbood; this variable is one of several later used to assess community safety perceptions

3. Women were more likely to agree that reporting to CS would be approved of by the CFA and will help stop bushfires, save lives, pets, livestock, taxes and businesses

4. Fear of wasting CS time came close to significance ($p < 0.05$) as the only possible obstacle to reporting to CS that affected women more than men

5. Reporting preferences significantly differed between men and women under certain scenarios, being: an unattended campfire (where men were more likely to do nothing), and two cases where women were more likely to report to CS: a known suspect lighting a small fire; and their own child deliberately lighting a small bushfire that burnt out a few acres with no harm to people or property.

Summary 3
Despite feeling less safe in their communities, women were just as likely to report under threat of personal harm, and more likely than men to report a known suspect lighting a small fire. They are happier with personal relationships and feel their community can work together to solve problems. Women said a report would be approved by the CFA and help stop bushfires, save lives, pets, livestock, taxes and businesses. They would report their child for deliberately lighting a small bushfire.

Scenarios

Table 3 shows the six strongest indicators of the reporting choices, and although there is some response variation, they remain strong indicators of tendencies when analysed together with the other 13 scenarios in the questionnaire. As an example (see Table 3), notice how most people will handle it themselves if they see people leaving a small campfire unattended whereas people are most likely to call Crime Stoppers if they find out something that might help solve an arson attack, especially when the police cannot act due to lack of evidence. In future surveys, a greater shift from TZ to CS on the evidence item will be one of many key measures of increasing awareness of the role and correct usage of the CS phone number.

In 58% of scenarios, repondents said they would call '000'

Table 3. Key scenarios in VCARF 2 distinguishing reporting options, 2015.

Key scenarios	% ME*	% DN	% CS	% TZ
People packing up and leaving a small campfire to burn out on a TFB day	69	2	5	24
On a TFB day, fire grew and was lit by a difficult youth who's lit fires in the past	3	1	13	83
Hear gossip a local man deliberately lit a small bushfire that hurt nobody	3	27	24	45
Find out something that might help solve a small bushfire that hurt nobody	4	4	33	59
A stranger lit a fire on a TFB day and it started to grow	9	1	8	82
Knowing something that might solve a fatal wildfire but the police need more evidence	2	12	47	39

* ME option for handling the situation personally, DN do nothing, CS report to Crime Stoppers, TZ report to Triple Zero

Overall scores across the 19 scenarios were summed and counted for ME, DN, calling CS or TZ (Figure 1). Calling TZ is nominated in 58% of situations, calling CS the next most cited action selected at 17.5%, followed by ME, 17%, usually reserved for small infringements like leaving campfires unattended, and finally, the fourth option, DN accounted for 7.5%, usually reserved for children or seeing someone throw a burning cigarette out of a car window.

Figure 1. Reporting tendency by option
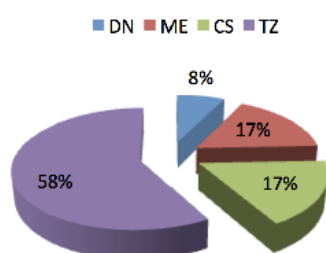
Statewide averages for reporting tendencies expressed as percentages.

Summary 4
From 2012 to 2015, those who would report to CS if they knew something to help solve an arson attack increased to 93% and reporting strength increased by 13%. Across all situations 75% would be reported to either TZ or CS, 17% would be handled by the respondent, and 8% would incite no action at all.

CONTEXT ACROSS THE 19 REPORTING SCENARIOS

The following is a simple way to provide some overall context about how each of the 19 reporting scenarios are ranked by the community, providing some perspective on subsequent analyses that uses much tighter statistical criteria. Here, the whole sample is first ranked by reporting items, where the following values are given to each of the four options:

- Do nothing (DN) = 0
- Handle it myself (ME) = 1
- Call Crime Stoppers (CS) = 2
- Call Triple Zero (TZ) = 3

The 19 scenarios in VCARF 2 are as follows:

You are the only witness to these events on a Total Fire Ban day (TFB):
People pack up and leave a small campfire to burn itself out
A lit cigarette is thrown from a car
A stranger starts a small fire that starts to grow
A person you know starts a small fire that starts to grow
And they might take action against you
What if they could never find out you reported them
What if they were a close friend or relative
What if they were a well-liked child and it was obviously an accident
Or if they were a difficult youth who's lit fires in the past

After a small fire burnt out a few acres of bush with no damage to people or property (SF):
You find out something that might help solve it
You find out the same car was seen in areas where other fires started
You hear gossip a local man lit it deliberately
You suspect a local girl who recently tried to commit suicide
You find out it was your own child and it was definitely an accident
You find evidence it was your own child and it was deliberate

After a fatal wildfire that destroyed property and killed people:

You find out the same car was seen in areas where other fires started
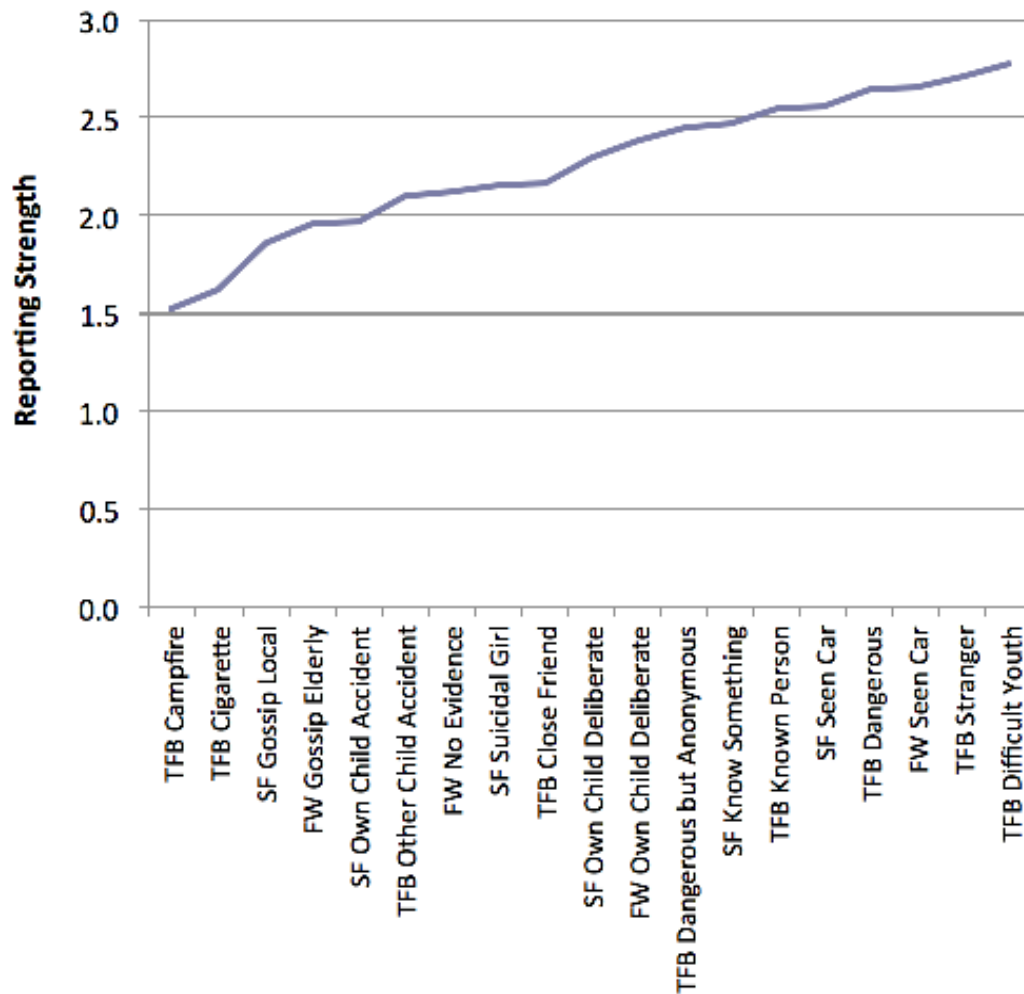
You know something but the police say you have no evidence

You hear gossip it was an elderly couple and was an accident

You find evidence it was your own child and was deliberate

Figure 2 shows the reporting strength for each of the scenarios, ranked from least strength to highest strength.

Figure 2. Report ranking by strength of scenario

At the lowest level, the respondents are less likely to report to anyone for an unattended campfires or a cigarette thrown out of the car, even on a TFB day. Note the word 'gossip' reduces reporting even in the case of a Fatal Wildfire. At the highest level, a difficult youth who has lit fires in the past will incite a report to Triple Zero on a Total Fire Ban day, even more so, for example, than a FW where locals gossip that it was caused accidentally by an elderly couple or, for another example, a FW deliberately caused by the respondent's own child.

On average, CS will be selected if a well-liked child lights an accidental fire on a Total Fire Ban day through most items until Triple Zero becomes more likely for strange cars, dangerous locals or difficult youths with a proclivity for fire-setting. Thus, even the most innocuous behaviours could stimulate some action, whereas in other situations, a personal perspective or value judgement influences the decision about whether to report. Given that the scale per item is merely ordinal, the exploratory curve was re-checked in each region to ensure it was not anomalous. The same curve did emerge in each region and was even predictive across regions, so the ranking of the separate items used to construct the final reporting metrics can be trusted. In other words, the same ranking emerged in all regions (p<0.025, ranging from r^2=0.88 upwards).

CHANGES IN REPORTING STRENGTH 2009-2015

In 2009, willingness to report was sampled using only three items on a 7-point scale and averaged 6.5 (±1.9SD) for Latrobe, Nillumbik and Knox. In 2010, these items were expanded across Yarra Ranges and Latrobe (N=445), and came up with the same result, an average of 6.5. In 2012, these were handled using a larger and different set of items and were expressed, depending on the analysis, using either a 10 point or 15 point scale with the options of doing nothing or reporting to either CS or T Z. For the sake of comparison, converting the 2010 result to a 10-point scale represents a reporting strength of 9.3, which then fell in 2012 to 8.9. The equivalent for 2015 is again 9.3 when the DN option is removed and the remainder treated as willingness to act. None of these are strictly comparable but the new instrument, having been refined over six years, is very strong and will likely need far less adjustments in the future.

In the meantime, past surveys can be further refined for equivalent 2012 and 2015 surveys for Latrobe, Nillumbik and Knox that are compared only on the nine replicated Total Fire Ban items. When this is done for 2015 (N=257), reporting strength amounts to 9.4, an increase of 6% since 2012. Turning to the 15-point scale, a more detailed analysis of sub-items used in 2012 demonstrated an average reporting strength for the entire sample (N=655) of 10 (±0.2SD). This year, 2015, the same analysis was replicated for shared items and the result was 11.3 (±0.3SD). This represents a significant increase of 13% statewide. Thus people are 13% more likely to act on an incident in 2015, when compared with 2012.

Summary 5
When converted to reflect all four surveys of past research, reporting strength in 2015 has reached the same levels as those first detected in 2009 directly following Black Saturday.

REPORTING STRENGTH BY CONDITION

This section examines the propensity to report according to background conditions: a person's sense of community, feeling safe, living in a community with a high crime level, social disadvantage, personal wellbeing, personality measures and moral congruence. Among the 19 reporting items, several are designed to serve double duty as additional tests. All were designed based on an international literature review, balanced with the need to preserve key items from past CS surveys since 2009. These are: sense of community, safety, communities with a high crime rate, social disadvantage, personal wellbeing, personality measures, moral congruence, the scale of the fire, relationship to offender, and how close this relationship is, the interaction between relationship and fire scale, perceived intentions of the offender, the importance of anonymity, when the police say there is no evidence, and perceived vulnerability of the offender.

Independent sample t tests were run across a range of variables on a simple ordinal scale (serving as dependent variables) for the complete sample of respondents – from 2010 to 2015. This analysis should be seen only as a contextual guide before more formal analyses later in the report. The nominal reporting categories were determined by designating all subjects above the reporting strength mean (7.6±2SD)[2] as having a Reporting Tendency (RT) and all subjects below the reporting strength mean as having a Non-reporting Tendency (NT). No further splits are examined (e.g. between DN versus ME or CS versus TZ) until the next section, which is more statistically valid.

In VCARF 1 (2012), the norms relating to the approval of friends and family were much stronger than police, fire-fighters and general community in the decision to report a suspicion This pattern was also present in the 2015 survey. In 2015, the approval of friends and family is also stronger than 'self-approval', which emerges as insignificant. For positive expectations about reporting to CS, the most common of the original beliefs identified in 2010 and then validated in 2012 (p<0.025), were confirmed in 2015. Reporters felt it would help police catch and punish the arsonist, prevent bushfires, save lives, pets and livestock, properties and businesses. In 2012, negative expectations about reporting to CS show some variability to the pattern seen in 2015. In 2012, all surveyed regions raised the top concern as revenge by the arsonist (70%). Rural communities were also concerned about accusing the wrong person and stigmatising the community, which also suggests anonymity is misunderstood.

Sense of community

A person's attachment to community was tested using three of the original 12 items from the Sense of Community Index that simultaneously offered external validity using a 4-point (not 7-point) scale (r^2=0.63, p<0.025) and tended towards significance distinguishing between NT and RT (N=33). The sub-items and their ability to distinguish NT vs RT (Levenes test was insignificant) are as follows:

- I believe most of my neighbours know me well (p=0.07) (More likely to report)
- I feel at home in my neighbourhood (NS)
- People in my area can solve problems together (NS)

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[2] This 2015 value is lower than that reported earlier for comparisons since 2012 because only the DN option was offered in earlier surveys and so the value adjusted accordingly for more exact comparison; the new survey offers much more nuanced comparison of possible actions and will make future comparisons more exact.
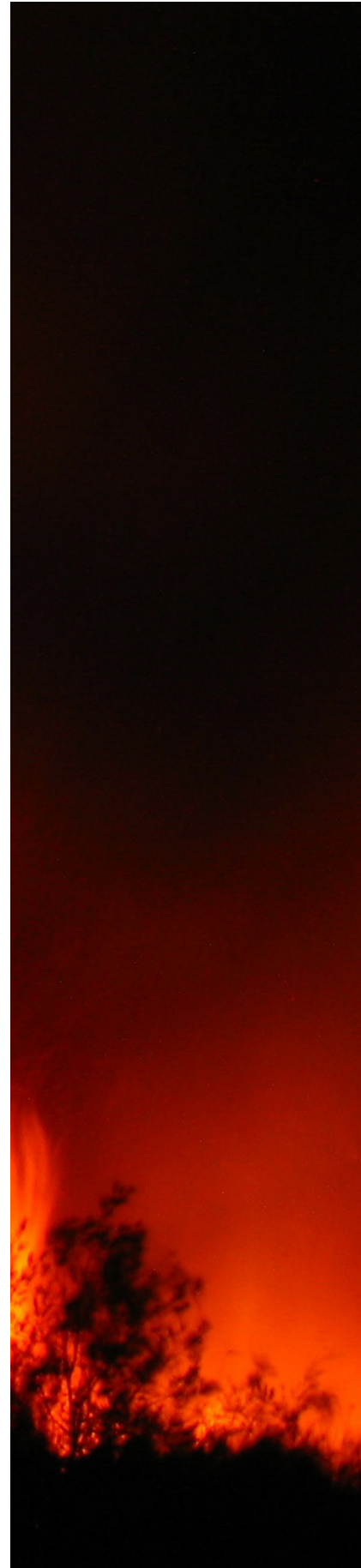
Sense of community can either strengthen reporting among law-abiding groups or weaken reporting among law-breaking groups

This test – and all others in this section – does not preclude the possibility of interaction effects between variables, an exploration that will need more detailed analyses outside the scope of this report. Note that Sense of Community can either strengthen reporting among law-abiding groups or weaken reporting among law-breaking groups. So an interaction is expected based on variables that reflect a new variable, which will be tested later on communities with apparently high levels of criminal behaviour.

Community safety

Three items directly test safety; all items except the new bushfire item have been asked by previous community surveys within Victoria. The sub-items and their ability to distinguish between NT and RT (Levenes test was insignificant), are as follows:

- Feeling safe walking after dark (NS)
- Feeling safe from bushfires during summer (NS)
- Feeling safe at home after dark ($p < 0.025$) (More likely to report)

Perhaps counter-intuitively, reporters are more likely to report if they feel safe, rather than those communities with higher levels of crime having higher reporting rates, thus supporting international findings.

Communities with high crime rates

That communities with high crime rates are less likely to report a crime is suggested by the broad literature but has never been operationalized before. It will be tested and refined in later reports using factor analysis across several VCARF sub-items:

- 'People in my area can be dangerous' AND 'Most people know me well'
- 'People in my area handle crime their own way'
- Incidence but not reporting of 11 crime victimisation estimates
- Past reporting to CS, TZ and Police
- Moral congruence with police AND judges
- The obverse of several 'tough on crime' items
- The obverse of several community safety items
- Some individualism items relating to solving crime and having different beliefs
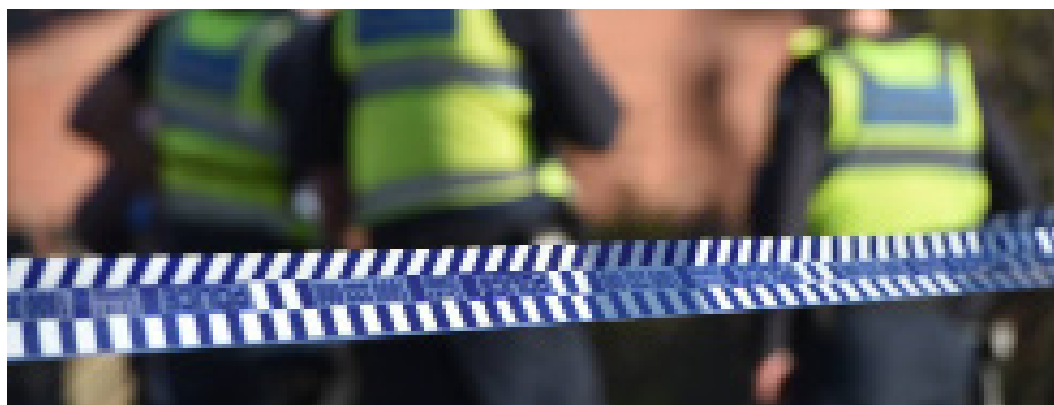
Social disadvantage

In pretesting, a number of items were found to be promising when it came to social disadvantage. Based on literature focused on wellbeing, it is expected that perceptions of poverty are more likely to result in reporting than actual poverty, which is why two items are focused on poverty perceptions, both across, and within, the neighbourhood level. Other items of importance (not included here due to scaling differences) include the rates of reporting for homelessness, lack of income and not enough money for food. These items will need further investigation. When each of the poverty sub-items is compared between NT vs RT, both came close to significance across the full sample, in a negative direction.

Personal wellbeing

The embedded wellbeing items in VCARF 2 were validated by their correlations with two widely used measures of wellbeing, the *Satisfaction with Life Scale* (SLS, r=0.76, p<0.001) and the *Satisfaction with Life as a Whole Scale* (SLW, r=0.86, p<0.001) (International Wellbeing Group, 2013). Per item, there are three items most correlated with the VCARF score that, when averaged, reach high levels of significance (r^2=0.96 (p<0.001)). Comparing RT and NT, the reporting group is more likely to be 'happy with relationships' (p<0.025), but not necessarily more satisfied with life as a whole, their standard of living or feel they have an idealised life (all Not Significant).

Personality measures

Two measures each of Extraversion and Neuroticism, derived from a Ten Item Personality Instrument (TIPI), were included in VCARF 2 (Rammstedt & Oliver, 2007). Testing found that the items were strong in predicting Extraversion and Neuroticism. Findings in relation to these two personality traits and their ability to distinguish between RT and NT across the whole sample are shown below:

- Extraversion sub-items – both suggest extraversion enhances reporting (p<0.025)
- Neuroticism – both sub-items Not Significant

Thus, only Extraversion increases the likelihood of reporting.

Three more personality factors were embedded in VCARF 2. The instrument, *Locus of Control*, was used in the previous version of VCARF (Rotter, 1966). Locus of Control measures a person's belief about whether or not they are able to shape and control their own life. As a construct, *Locus of Control* was almost dropped in the VCARF 2, as the only useful item for *Locus of Control* was the belief in personal luck. However, this item also gave a result in VCARF 2, where those who believed that internal personal agency over-rides external factors like 'luck', are more likely to report.

The personality traits of *Authoritarianism* and *Individualism* were also embedded in VCARF 2 (Hofstede, 1984). While more work is required to fully understand the impact of both these personality traits, in the interim, individualism can be measured by one item below plus two for Authoritarianism:

- (Authoritarian) The law should never be broken (p<0.05)
- (Authoritarianism) We should get much tougher on all crimes (p<0.05)
- (Individualism) Most people have different beliefs to me (p<0.025)

Extraversion increases the likelihood of reporting

Authoritarian metrics are significant at a slightly weaker level than Individualism but all work in the appropriate direction – the reporting group is more likely to be authoritarian and possibly also individualistic, a finding that needs future testing using the additional item 'Crime would be solved if I had my way'.

Moral congruence

Moral congruence (agreed moral beliefs) is shown to have a potent effect on police reporting across countries and is often associated with whether people trust the police to respond quickly to their needs and the law to apply appropriate punishment. Both of these beliefs can be validated by other items embedded in the VCARF, however, in the interim, the sub-items (Brown 1976) are tested alone as follows:

- I trust the police, they share my values ($p<0.025$)
- I trust judges, they share my values ($p<0.025$)
- Local police will act fast if I report a crime ($p<0.025$)

All these beliefs were shown to increase reporting. Note the third item could explain some reluctance to report in Yarra Ranges but this is yet to be tested.

> **Summary 6**
> New items suggested by the international literature were explored comparing reporters versus non-reporters. Reporters (CS or TZ) felt part of their community, they feel safer and wealthier, happier in relationships, extraverted, individualistic and authoritarian, they believe police will act fast if they report and feel moral congruence with both police and the judicial system.

Scale of fire

To test the direct effect of changing the scenario from 'Small Bushfire' to 'Fatal Wildfire', a paired sample t test compares the respondents' changed responses to two separate repeated items matched on 'Small Bushfire' to 'Fatal Wildfire': *You find evidence it was your own child and was deliberate* and *You find out the same car was seen in areas where other fires started*. These were selected because they also vary the extremes of reporting 'a stranger' versus 'your own child' and help test some of the international findings in reporting crimes other than arson. In both cases, there was a significant ($p<0.025$) change in response. On a scale from 0 to 15, when reporting a stranger's car, the strength of reporting increases from 12.8 for a small bushfire to 13.3 for a fatal wildfire. When reporting a person's own child with evidence it was deliberate, the strength of reporting increases from 11.6 for a small bushfire to 12.3 for a fatal wildfire.

Relationship to offender

Note (above) that the seriousness of the consequences do not impair reporting for the child but actually increase it in the same direction as for a stranger, although reporting your own child is still weaker for a fatal wildfire than reporting a stranger for a small bushfire. Under

equivalent hypothetical scenarios, the weaker reporting for a child versus a stranger is significant for both small bushfires and fatal wildfires ($p<0.025$). Two-way ANOVA confirms the same findings. A number of these variables are pretested beforehand by manipulating the same kinds of conditions on a Total Fire Ban day. Repeated measures ANOVA demonstrated both factors significantly shifted the positive reporting proclivity. The shift in scenario, as well as the suspect, significantly altered the reporting choices from handling the situation personally or doing nothing towards reporting to CS ($p<0.025$, two tailed). Correlations between the variables were all significant, although stronger between relationships ($r^2=0.54$) than between scenarios ($r^2=0.32$), as would be expected.

Closeness of relationship to offender

Again results are converted to their 15 point equivalent in the examination of closeness of relationship to offender. The reporting strength is provided in brackets as before. In this case, a small illegal fire is started on a Total Fire Ban day and the situation is gradually altered to reflect:

1. A close friend who is not dangerous (11.0)
2. Someone known (12.7)
3. Someone known and possibly dangerous (13.2)
4. A stranger (13.7)

The four comparisons were significantly different ($p<0.025$). Surprisingly, the potential for danger increases the likelihood of reporting when the person is known, suggesting the respondents were not thinking of *immediate* danger to themselves, in contrast to the situation described in smaller communities described in 2012 when respondents were concerned about danger to themselves. All nine of the TFB situations are designed to be *witnessed events* rather than merely suspected.

Interaction between relationship and fire scale

Within each of the seven locations surveyed, repeated measures ANOVAs were applied. The correlations between identical items across scenarios were found to be especially strong in Macedon, Latrobe, Nillumbik and Murrindindi ($r^2=0.60$); relatively weak but still significant in Knox and Yarra Ranges ($r^2=0.40$, $p<0.025$). However, comparisons using an independent sample t test demonstrated Surf Coast and Macedon Ranges were significantly different in the expected direction when the scenario changed from small bushfire to fatal wildfire on both items ($p<0.025$), whereas when the scenario was matched, differences between the two items were significant across both scenarios ($p<0.025$) in Nillumbik and Murrindindi. These findings are illustrated in Figure 3.

Perceived intentions of the offender

Offender motivations were equalized under the small bushfire scenario by comparing responses to *Finding out it was your own child and it was definitely an accident* versus *You find evidence it was your own child and it was deliberate.* The paired t test used here was also significant ($p<0.025$), the *accidental* score being 9.9 and *intentional* being 11.6. This means the perceived intentions of the offender can alter reporting by as much as 17%.
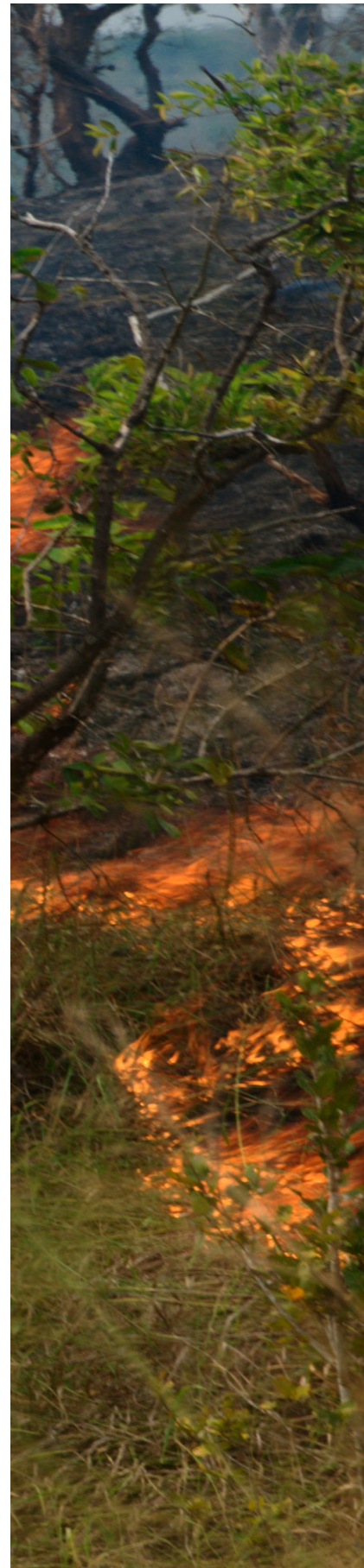
The perceived intentions of the offender can alter reporting by as much as 17%.

Figure 3. Interactions between scale of fire and relationship to offender
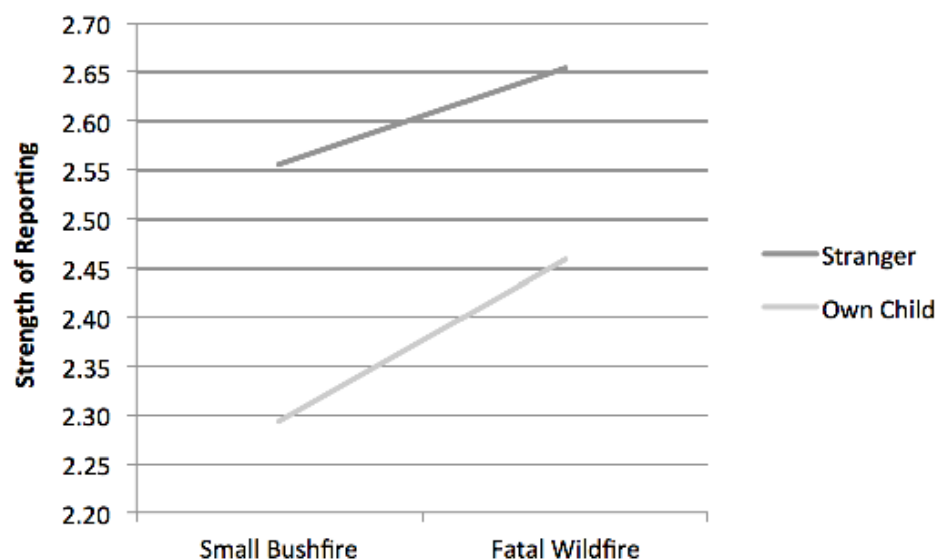
Summary 7
Scale of fire, from small bushfire to fatal wildfire, increases reporting strength by only 6% but from a high base, increasing from overall reporting by 43% for strangers and 32% for a person's own child. So, the scale of incident and relationship to offender interacts.

How important is anonymity?
The importance of anonymity was tested in direct sequence under the TFB condition by comparing *Someone known and possibly dangerous* versus *What if they could never find out you reported them*. The difference is significant and shifts from Triple Zero to Crime Stoppers by 9% for the latter scenario. This is tested later in more detail as it appears that many respondents see value in using Crime Stoppers to anonymously report their own children, family, friends and locals.

When police say there is no evidence
As with the analysis above, this scenario reflects a reporting shift to Crime Stoppers. A direct comparison occurs under the fatal wildfire scenario by comparing, *You find out the same car*

was seen in areas where other fires started, versus *You know something but the police say you have no evidence*. There is a significant response ($p < 0.025$), reflecting a shift from Triple Zero to Crime Stoppers of 21%. Reports to police may be constrained by a reporter's perceived lack of evidence but undertaking a report to Crime Stoppers, especially when reporters know the information is anonymous and will be acted on by detectives who 'join the dots', is a powerful promotion message for Crime Stoppers, given by these results so far.

Perceived vulnerability of the offender
One new item was trialled because the vulnerability of the offender is especially relevant in the case of fire-lighting and as yet no international studies have tested it. Some aspects of this issue are handled by the test for the strength of relationship but here only one item tests whether a respondent would report when they: *Suspect a local girl who recently tried to commit suicide*. This is based on Australian youth fire-setting data but carefully phrased. Two conditions change (but in the opposite direction, making any effect size likely more impressive) when this item is compared to *A difficult youth who's lit fires in the past*. Apart from gender being unspecified in the second item (an issue that should be mended in future) note that the difficult youth was *witnessed* whereas the girl was merely *suspected* of causing a small bushfire. Although the conditions are imperfectly matched, the difference is significant ($p < 0.025$). When reporting strength is compared using the 15 point scale, the youth definitely lighting an illegal fire on a TFB has a score of 14, whereas a 'vulnerable' girl suspected of causing a small bushfire has a score of 11.

Issues with the word 'gossip'
An area where the VCARF 2 needs improvement is around the use of the word 'gossip'. From the content analysis, the survey as it stands, covers all key issues raised by communities so far but fails on two items using the word 'gossip'. Such is the negative connotation of this word that it renders items intended to measure 'suspicion' versus 'witnessed' arson relatively useless when applied to the elderly and/or a local man. In both items, the strength of reporting is significantly weakened, one for a local man deliberately lighting a small bushfire and the other about an elderly couple accidentally causing a fatal wildfire. As such they cannot be used for subsequent analyses and will be rephrased for future waves. In future iterations, changes to these two items will improve the survey without interfering with overall results.

Summary 8
Intentions of offender increase reporting by 17% when shifting from accidental to deliberate. Perceived greater vulnerability of the offender decrease reporting by 27% when shifting from a 'difficult' to a 'suicidal' youth. Anonymity shifts responding from TZ to CS and strengthens reporting by at least 9%.

Intentions of offender increase reporting by 17% when shifting from accidental to deliberate.

RESULTS: REPORTING CHOICE

WITNESS VERSUS SUSPICION

Knowing when to report to Crime Stoppers versus Triple Zero is a complex measure that requires averaging across four items in the same way as it was measured in 2012. Both use two items each that collect responses under conditions of suspected arson before or after the event versus known arson as the event unfolds, the former requires a report to CS and the latter requires a report to Triple Zero. Neither can use the 'gossip' items (as discussed above). Based on international research (confirmed by earlier findings above) both need to be matched on context and relationship to offender but this was not done in 2012. Whereas the 2012 survey used items unmatched on any of these findings, the newer 2015 survey goes some way towards redressing this.

To make some allowances for this analysis the exploratory analysis in the next section was referenced first to make sure each paired set were at least equalized in terms of reporting strength. This is justified because the dependent variable here is not reporting strength (as above) but correct responses (CS versus TZ) exactly matched across four items. Regardless of how disparate they might be in terms of scenario and relationship, witnessed versus suspected items that sat side by side on reporting strength (other than 'gossip') were matched on strength of reporting as shown in Table 4.

Table 4. Items testing correct choices of TZ (witnessing) versus CS (suspected)

Witnessing (Correct Response = Triple Zero)	Suspected (Correct Response = CS)
A person you know starts a small fire that starts to grow on a Total Fire Ban day	You know something about a fatal wildfire but police say you have no evidence
A close friend or relative starts a small fire that starts to grow on a Total Fire Ban day	You suspect a local girl who recently tried to commit suicide lit a small bushfire

Table 5 gives the percentage of correct reporting of an event to CS and TZ, in total and according to each region.

Table 5. Percentage rate of correctly reporting arson via appropriate pathways split by region, 2012 and 2015

Region	CS correctly chosen after suspected arson %	000 correctly chosen during witnessed arson %	Correct on all items	Variation from Regression
Total	41	75	30	-2.09
*Total**	*13*	*57*	*6*	
Knox	42	73	31	-0.25
Knox	*12*	*47*	*5*	
Yarra Ranges	33	71	13	-19.09
Yarra Ranges	*12*	*51*	*6*	
Macedon	42	78	39	+4.38
Macedon	*20*	*61*	*9*	
Surf Coast	46	73	34	+4.44
Surf Coast	*8*	*56*	*3*	
Latrobe	32	76	24	-8.09
Latrobe	*15*	*47*	*6*	
Nillumbik	46	78	37	NA
NA	*-*	*-*	*-*	
Murrindindi	43	77	34	+2.75
Murrindindi	*12*	*70*	*5*	

* The grey items refer to 2012 data

The results for 2015 demonstrate far less public confusion about the role of CS in cases of arson when compared with 2012 as well as a vast improvement in Surf Coast, previously the weakest across all regions for these metrics. Comparing 2012 and 2015 using regression suggests on average a rise of 27 percentage points across regions. In 2012, Surf Coast was the weakest but this year it has made substantial improvements, with 4.44 percentage points more than expected from the regression across all respondents. Surf Coast now appears to be gaining on Macedon, which had the strongest appreciation of the appropriate reporting pathways for suspected versus witnessed arson in 2012. The weakest area, despite doubling its original score, is now Yarra Ranges, which should have gained as much as 19 percentage points more than it has. With all the additional attention given both Yarra Ranges and Surf Coast since 2012, there appears to be something intractable about Yarra Ranges that could be related to media usage.

Summary 9
2015 demonstrates 27% improvement in understanding when to report to CS compared with 2012, especially in Surf Coast. Macedon continues to display the highest correct scores on all items but Surf Coast, previously weakest, has almost caught up to Macedon. Despite extra attention given to both Surf Coast and Yarra Ranges since 2012, Yarra Ranges remains intractable and needs further analysis of media usage in this regard.

POSITIVE AND NEGATIVE OUTCOMES OF REPORTING

Whether a respondent demonstrates a proclivity to make a report to Crime Stoppers was tested based on community norms and behavioural expectations that were factor analysed in 2009 and refined over successive surveys. In 2012, positive outcomes: saving lives, property, pets and livestock, and businesses, were significantly more powerful than negative outcomes: dobbing in a person who is a friend or family, having to be a court witness or fear of revenge from the arsonist (all related to a misunderstanding of CS anonymity). This has not changed in 2015. Where things have changed reside in the relative rankings of negative outcomes.

In 2015 the respondents were asked to rank eight possible positive outcomes that would en-courage reporting and 12 possible negative outcomes that may prevent them reporting. The top three positive outcomes of reporting was the same in each of the seven regions surveyed:

- Saving peoples' lives
- Saving pets and livestock
- Saving property

The top three negative expectations vary a little between regions, although all seven had the same two expectations:

- They would rather call TZ or the police
- The courts won't properly punish the arsonist

Fear of accusing the wrong person, and the arsonist being a close friend or relative, were amongst the top rankings in three regions, accusing the wrong arsonist in two regions, and in one region, not wanting to be a witness in a court case was mentioned. Thus, the reasons for not reporting to CS have moved more to a preference for calling 000 or the police directly, and almost a 'what's the point belief'. Respondents have retained concerns about reporting the wrong person or a known person. This suggests that more work is needed to assist the public in understanding the different outcomes of a report to 000 versus Crime Stoppers.

CORRELATES TO CRIME STOPPERS REPORTING IN EACH LOCATION

This brief analysis focuses on variables that correlate with CS reporting but not TZ reporting. In some cases, it is also informed by supporting material where variables relevant to CS reporting are exclusive to the DN or ME options. Note that while there is a negative sign associated with the r^2 value, the text is described in a positive direction so as to avoid the confusion of double negatives.

Knox

In Knox, the significant but low *positive correlates* that are exclusive to CS reporting strength include:

- being extraverted ($r^2=0.23$, $p<0.05$)
- being concerned about the approval of the community ($r^2=0.24$, $p<0.05$)
- not wanting to report a friend ($r^2=0.28$, $p<0.05$)
- knowing the Crime Stoppers phone number ($r^2=0.24$, $p<0.05$)
- not wanting to accuse the wrong person ($r^2=0.22$, $p<0.05$)

This suggests people in Knox could be using CS to hide reporting that might harm their social relationships but would be helped with more focus on the CS phone number.

Macedon and Yarra Ranges

In both Macedon and Yarra Ranges, there are no significant correlates that are exclusive to CS reporting strength, suggesting continued reliance on TZ. However, both Macedon and Yarra Ranges demonstrate several significant correlates to DN, which suggest some cynicism around reporting to CS. In Macedon, this is much less pronounced as it only involves a belief that a CS report *would not* lead to appropriate treatment for the arsonist ($r^2=-0.28$, $p<0.05$). By contrast, Yarra Ranges residents *do not* believe a CS report would help:

- save lives ($r^2=-0.38$, $p<0.05$)
- save property and businesses ($r^2=-0.39$, $p<0.05$)
- save pets and livestock ($r^2=-0.37$, $p<0.05$)
- prevent bushfires ($r^2=-0.29$, $p<0.05$)
- punish the arsonist ($r^2=-0.42$, $p<0.05$)

This level of cynicism in Yarra Ranges needs further exploration and the current dataset offers several avenues of inquiry.

> Respondents will be more likely to report to CS when there is faith that the report will help police catch the arsonist (LaTrobe)

Surf Coast

In Surf Coast, *positive correlates* to a tendency to report to CS are:

- knowing that CS is anonymous (r^2=0.23, p<0.05)
- having moral congruence with police (r^2=0.24, p<0.05)

In Surf Coast the following conditions make respondents less likely to report:

- feeling unsafe walking after dark (r^2=-0.25, p<0.05)
- feeling unsafe at home after dark (r^2=-0.29, p<0.05)
- no perceived approval of family and friends (r^2=-0.22, p<0.05), CFA (r^2=-0.30, p<0.05), or police (r^2=-0.31, p<0.05)
- if the suspect is a child (r^2=-0.26, p<0.05)
- causing community division (r^2=-0.23, p<0.05)
- feeling that authorities won't follow up (r^2=-0.22, p<0.05)
- not knowing the CS number (r^2=-0.31, p<0.05)
- preferring to call TZ (r^2=-0.24, p<0.05)

These findings point to moral congruence and an understanding of CS anonymity but not feeling safe in the area, not feeling family and friends and authorities would approve of a report, not wanting to report a child, not knowing the CS number and some inconsistencies in beliefs about the role of the police.

Latrobe

In Latrobe, respondents will be *more likely to report* to CS where there is:

- faith that the report will help police catch the arsonist (r^2=0.33, p<0.05)
- belief that a report will punish the arsonist (r^2=0.24, p<0.05)
- not feeling there are dangerous people in the area (r^2=-0.30, p<0.05)
- feeling safe walking after dark (r^2=0.30, p<0.05)
- having similar beliefs to other people (r^2=-0.24, p<0.05)
- moral congruence with police (r^2=0.34, p<0.05)
- not being deterred from reporting to CS because of:
  - a preference for TZ (r^2=-0.38, p<0.05)
  - not knowing the CS number (r^2=-0.35, p<0.05)
  - fear of wasting CS's time (r^2=-0.23, p<0.05)
  - fear of being a witness in a court case (r^2=-0.25, p<0.05), or lack of faith that the legal system will properly punish the arsonist (r^2=-0.32, p<0.05)

All of this points to strong faith and moral congruence with authorities, sense of community and a sense of safety.

Nillumbik

In Nillumbik, not reporting to CS is associated with a belief that reporting is not anonymous (r^2=-0.32, $p<0.05$), but reporting is associated with being extraverted (r^2=0.25, $p<0.05$) and not having a preference for TZ (r^2=-0.25, $p<0.05$). So to gain more insight, a focus on DN is required for CS-related items, as was done previously with Yarra Ranges. Doing nothing is correlated with beliefs that CS are police (r^2=-0.37, $p<0.05$), they would not want to be a witness in a court case (r^2=0.24, $p<0.05$) and would never report a suspect who was a friend (r^2=0.30, $p<0.05$). All of this points towards Nillumbik not understanding that a report to CS is completely anonymous and that it is not part of (although works with) Victoria Police.

Murrindindi

Reporting to CS in Murrindindi is exclusively related to:

- higher education (r^2=-0.20, $p<0.05$)
- having faith that a CS report will help police catch the arsonist (r^2=0.20, $p<0.05$)
- a CS report will help punish the arsonist (r^2=0.18, $p<0.05$),
- a CS report will save lives (r^2=0.18, $p<0.05$)
- save pets and livestock (r^2=0.22, $p<0.05$)
- prevent bushfires (r^2=0.26, $p<0.05$)
- having a sense of isolation - not feeling at home in the area (r^2=-0.25, $p<0.05$)
- not being well known by neighbours (r^2=-0.22, $p<0.05$)
- not believing that neighbours have the same values (r^2=-0.18, $p<0.05$),
- not being happy with personal relationships (r^2=-0.18, $p<0.05$)

These findings suggest CS reporters have faith in the outcomes of reporting but experience social isolation.

> In Nillumbik, not reporting to CS is associated with a belief that reporting is not anonymous

Summary 10
Correlates exclusive to CS reporting differ across regions. Knox appears to report based on social approval but needs more focus on anonymity. Nillumbik, Macedon and Yarra Ranges avoid using CS, possibly due to a failure to understand anonymity and because of a cynical perspective. Both Latrobe and Surf Coast choose CS when they are understand anonymity and have moral congruence with their communities and authorities. They differ in that Latrobe uses CS when they feel safe, Surf Coast when they're scared. Murrindindi reports to CS when they are educated, have faith in positive expectations, however they are socially isolated.

RESULTS: PRELIMINARY REPORTING MODELS BY REGION AND OPTION

This section looks at the findings in a slightly different way, by building a model to examine both reporting strength and the direction of action – ME, DN, CS or TZ.

METHOD

Normally, the danger with having many variables is that spurious correlations emerge purely by chance. However, there are three ways in which the following analyses offer confidence:

1. Each variable is treated using hypotheses generated from the literature a priori
2. Each variable is pre-tested for normality
3. Each variable is tested within each region and consistent findings noted, a form of non-random split-half reliability

Based on these findings, stepwise multiple regression models are tested and can be used to help target CS interventions for the 2017 survey. The dependent variable, as shown earlier, is a continuous interval scale that is normally distributed. Most of the independent variables are ordinal. The model results are provided for the 2015 respondents and for each region to high-light the unique contributors to total reporting strength, followed by each option of, DN, ME, CS and TZ. All reports use adjusted R squared to account for changes in sample size under each condition. This is a far stricter test than earlier matched comparisons between reporters and non-reporters.

ALL RESPONDENTS

Across all regions, the model for overall reporting strength is very weak but still significant (F=15, p<0.001), explaining only 23% of the variance. Respondents with strong reporting are slightly more likely to believe CS are police, that police share their beliefs, that police will act quickly if they make a report, that we should get tougher on all crimes and there are some dangerous people in their community. Where the weakness emerges is that reporting strength is also associated with some opposing beliefs suggesting subgroups are operating that need to be identified, separated and then re-analysed.

Knox

In Knox, the model for reporting strength is strong and simple (F=31, p<0.001) explaining 93% of the variance. People who report are more likely to show high levels of anxiety, to focus on the benefits of saving pets and livestock and to prefer calling Triple Zero (TZ). Turning to those who report to CS versus TZ, the models for Knox reveal more nuanced information. For TZ, four variables explain 98% of the variance (F=148, p<0.001). Added to the factors above is the certainty that a report will be acted upon and that the suspect will get appropriate treatment. Yet for CS reporting the model is vastly expanded to seven variables that together explain 100% of the variance (F=3727, p<0.001). CS reporters are well known by neighbours but feel financially poor by comparison, they believe a report to CS will draw community approval, they feel they know the CS phone number and a report to CS will help make sure courts deliver appropriate punishment. They are not too concerned about whether the suspect gets appropriate help and not concerned about accusing the wrong person.

By contrast, those who do nothing (DN) are more likely to feel their area is wealthier than others, they are reserved, they know CS are not police and have little faith that a CS report

will help police catch the arsonist (r^2=0.98, F=126, p<0.001). Those who elect to handle the situation themselves (ME) feel personally wealthier than their neighbours, that crime would be solved if they had their way, and they have little concern for community approval (r^2=0.94, F=36, p<0.001).

In summary, Knox reporting seems to hinge on personal levels of anxiety, faith in authorities and concern for community approval; those who do nothing are more reserved and have little faith in authorities whereas those who handle the situation themselves have little concern for community approval.

Yarra Ranges

Yarra Ranges is far more complex in relation to reporting strength, with 11 inputs to the model, but still strong (F=12, p<0.001), explaining 77% of the variance. Strong reporters are, like Knox, likely to have higher anxiety. They feel their area is relatively rich (which is apparent in some pockets of Yarra Ranges) but harbours dangerous people. They have faith their report will help punish the suspect and will report no matter what – whether the suspect is a child, if their report causes community division, or even if there is concern they've accused the wrong person. They are less likely to forget to report.

Turning to TZ alone, the model is simplified but explains only 36% of the variance (F=7, p<0.001). They do not feel safe from bushfires during summer, they believe reporting will help save lives and they will report even if it's a child, although they hope the suspect will get treatment. This group does not feel their own lives are especially ideal.

For CS reporting, six variables explain 61% of the variance (F=12, p<0.001). CS reporters have more education and share beliefs with judges and the legal system in general. They believe CS staff members are police and that a report to CS will help police catch the arsonist. On a personal level, they tend to feel their lives are quite ideal but can be unhappy with relationships.

By contrast, those who would prefer to do nothing (DN) have little faith that a report will punish the suspect and disagree that no law should ever be broken; they are also wary of accusing the wrong person (r^2=0.40, F=, p<0.001). Those who would elect to handle the situation themselves (ME) tend to be calm and stable individuals with little concern about dangerous locals or causing community division. They would hesitate to make a report if the suspect were a child, would prefer not to be a witness in a court case and have little faith in a report to CS helping to punish the arsonist anyway (r^2=0.68, F=12, p<0.001).

In summary, Yarra Ranges' tendency to report or not hinges on fear, personal levels of anxiety and faith in authorities, people who do nothing have cognitive dissonance with legal frameworks; people who choose to handle it themselves are more aligned with reporters but concerned about reporting children, unlike those who choose to report.

Macedon Ranges

In Macedon, seven variables explain 44% of the variance (F=7, p<0.001). They are more likely to report if they are anxious, don't feel safe at home after dark and feel there are dangerous people in their community. They want the suspect punished and are more likely to believe CS staff-members are detectives. They are also more likely to be individualistic and extraverted but this requires further refinement of the existing subscales.
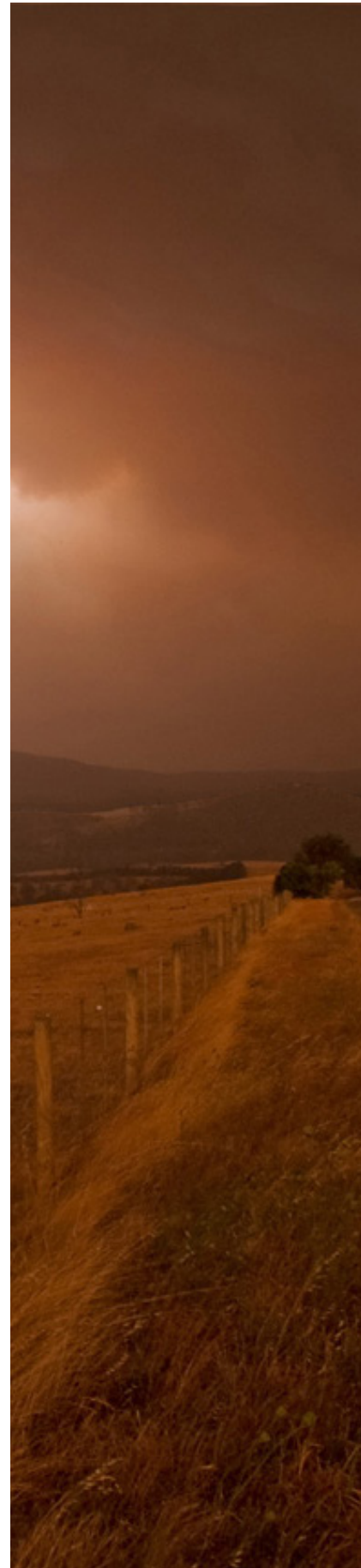
For TZ alone, the model is again simplified to four variables but still explain 41% (F=11, p<0.001), all surrounding perceptions of danger. Again, they are more likely to be anxious, feel there are dangerous people in their area and feel unsafe when walking after dark. They are also less likely to report for fear of revenge by the suspect.

For CS reporting, four variables explain 30% of the variance and they are almost opposite to TZ reporting (F=7, p<0.001). Primarily, they believe a report to CS will help prevent bushfires in the future. They are not at all anxious people, they don't care about the approval of the suspect's community and will not be hampered by fears of revenge.

By contrast, those who would prefer to do nothing (DN) are distinguished by their lack of fear about dangerous people in their neighbourhood (r^2=0.28, F=8, p<0.001). Similarly those who choose to handle it themselves (ME) feel safer at home but are more educated and tend to disagree that people in their community handle crime in their own way (r^2=0.27, F=8, p<0.001).

Again for Macedon, fear and faith determines reporting but the profiles for CS versus TZ are opposite on anxiety and fear of revenge, those reporting to TZ are more fearful whereas the CS group have more faith in CS reports preventing future bushfires. Non-reporters seem to have less generalized fear but those handling it themselves rather than doing nothing are more educated.

Surf Coast

In Surf Coast, five variables explain 42% (F=11, p<0.001). Reporters feel that police share their beliefs and there are dangerous people in their area, such that they don't feel safe after dark. They will report friends. Again, the TZ model is simplified to only three variables but explains much less variance, 20% (F=6, p<0.001). Reporters again feel that police share their beliefs, embrace the approval of the CFA but don't feel others in their area share their beliefs (more individualistic). For CS reporting, five variables explain 34% of the variance (F=8, p<0.001). They are afraid after dark, but unlike the TZ group, they have little interest in the approval of police and feel their community can solve problems together. They are more afraid of bushfires during summer and more confident of knowing or finding the CS number to make a report.

By contrast, those who would prefer to do nothing (DN) in Surf Coast are distinguished only by their lack of concern for pets and livestock during bushfires (r^2=0.14, F=13, p<0.001). Whereas those who handle it themselves (ME) feel safe after dark, don't feel any locals are dangerous but don't share beliefs with police and wouldn't 'dob in a friend' (r^2=0.38, F=9, p<0.001).

In Surf Coast, reporting is determined by fear but the CS group is less concerned with the approval and moral framework of police, with evidence of having more faith in CS preventing bushfires in the future. Those who choose to handle it themselves are also ambivalent about the moral framework of police but again much less fearful than the reporting group. The only characteristic of those choosing to do nothing is an apparent lack of concern for animals during bushfires.

Latrobe

Reporters in Latrobe (r^2=0.44, F=9, p<0.001) are more conformist (less individualistic), less happy with their relationships and more likely to report even at the risk of accusing the wrong person. They are less likely to believe CS are police and more likely to want treatment for the

suspect. This is reduced to three inputs for TZ explaining 29% (F=9, p<0.001). Again they desire treatment for the suspect and have little faith that the suspect will be caught if they report to CS. For CS reporting, four variables explain 38% of the variance (F=10, p<0.001). They are less likely to prefer calling TZ and more confident of knowing or finding the CS number to make a report. They feel a report to CS will help police catch the arsonist and are less likely to believe crime would be solved if they had their own way (again another tendency towards less individualism that could be captured using subscales).

As in Macedon, DN groups are distinguished by lack of fear, feeling safe after dark whilst also not sharing values with police (r^2=0.26, F=8, p<0.001). Likewise those who would handle it themselves (ME) do not share values with the law, but are happy with their lives and more concerned with the approval of family and friends than the broader community (r^2=0.35, F=7, p<0.001).

It seems reporting in Latrobe is related to wellbeing, fear and faith as those that report share a concern for the arsonist receiving treatment but their choice of CS versus TZ depends on faith in whether the report leads to an arrest. Non-reporters are generally happier and don't share moral congruence with authorities but those who handle the situation rather than doing nothing are more concerned about friends and family.
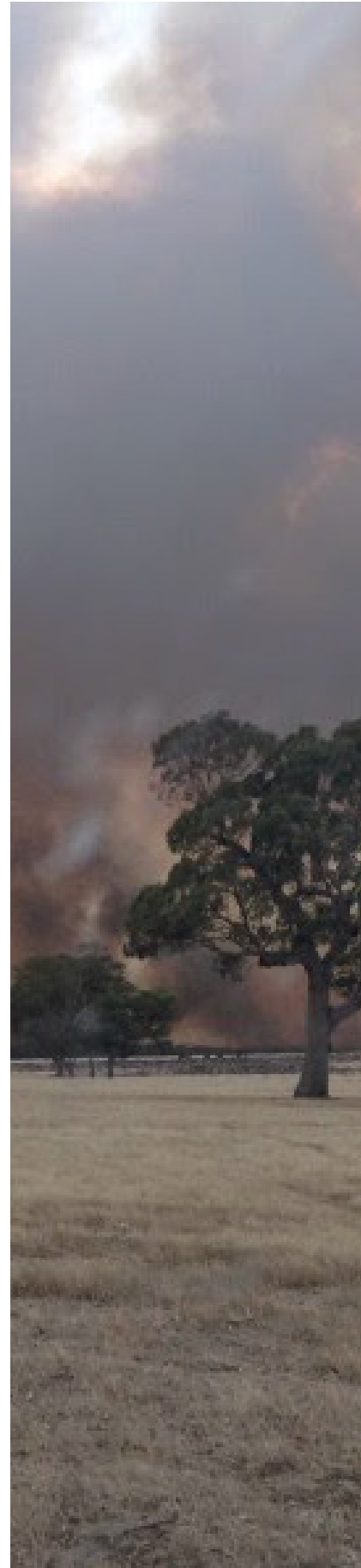
Nillumbik

Similar to Latrobe, Nillumbik reporters are also less likely to believe CS are police, are unhappy with their standard of living and likely to report even at the risk of accusing the wrong person. Of the five variables explaining 43% of the variance (F=10, p<0.001), they also feel neighbours know them well and the area tends to handle crime in its own way. For TZ alone, the model is similar, with four inputs explaining 40% (F=13, p<0.001). Again they feel neighbours know them but here they have little faith that a report to CS will help save lives and they don't believe CS reports are anonymous. For CS reporting, six variables explain 40% of the variance (F=7, p<0.001). CS reporters are more likely to be confident that CS reports are anonymous and less likely to prefer calling TZ, possibly because they are more concerned about accusing the wrong person. They are also more extraverted but feel their neighbourhood has different values to themselves.

By contrast, DN is more associated with feeling wealthier, again feeling safe after dark but not being well known by neighbours (r^2=0.47, F=12, p<0.001). Those who would handle it themselves (ME) also feel at odds with their neighbours, have less faith in a report leading to appropriate punishment and expect they wouldn't have enough time or would probably forget anyway (r^2=0.37, F=8, p<0.001).

In summary, reporting in Nillumbik seems related to wellbeing, fear and faith in authorities. Non-reporters feel wealthier and safer, whereas those who would handle the situation (ME) rather than do nothing have little faith in a report leading to punishment. TZ reporters feel greater connection to the community but, unlike CS reporters, don't believe CS reports are anonymous or helpful in saving lives.

Murrindindi

In Murrindindi, four variables explain only 27% of the variance in reporting strength (F=10, p<0.001). They are also less likely to feel safe at home after dark. They have less fear of ap-

pearing as a witness in a court case and are prompted to report to help save properties and businesses. By contrast, DN is associated with more fear of being a witness in a court case, again feeling their area is wealthier than others and not caring about the approval of the police (r^2=0.20, F=9, p<0.001). When it comes to TZ, Murrindindi is the only area where the model expands to five variables explaining 26% (F=7, p<0.001). Again, they have less fear of appearing as a witness in a court case and they don't feel safe after dark. Added now is not feeling safe from bushfires during summer and feeling that neighbours know them well. Those who choose to handle the situation themselves (ME) are also fearful of bushfires during summer but, opposite to reporters, they fear appearing as a court witness and feel safe after dark. Uniquely, they think crime would be solved if they had their own way (r^2=0.34, F=7, p<0.001). CS reporters (r^2=0.19, F=8, p<0.001) are more educated and confident that a report to CS will help prevent future bushfires. Similar to Nillumbik, there is a sense of feeling isolated, that the community and neighbours don't know them well.

In summary, people in Murrindindi are more fearful of bushfires but CS reporters have faith that a report to CS will help prevent them. Fear of serving as a court witness is important to both types of non-reporters, but those who do nothing feel wealthier and less congruent with the law whereas those who handle it themselves think crime would be solved if they had their own way.

Summary 11
Reporting hinges on fear, faith and fortune – fear in terms of anxiety and local safety, faith in terms of whether authorities follow through on reports and fortune in terms of wealth and wellbeing. Those who report to CS have more faith in authorities acting on reports, much stronger trust in CS anonymity and a belief that a CS report will save lives, prevent bushfires and lead to appropriate handling of the suspect. Those who do nothing often feel wealthier, happier and much safer than others, often with an accompanying lack of faith, moral dissonance with authorities and a fear of serving as a court witness. Those who handle the situation themselves may have more concern for the approval of friends and family rather than the community in general, more concern for child suspects; sometimes more educated, they can also think crime would be solved if they had their own way.

# RESULTS: UNREPORTED CRIMES AND SOCIAL PROBLEMS (2015)

INTRODUCTION

The 2016 community survey sought some new information on the association between concurrent issues and their association with reporting about arson. The 2015 survey asked about the presence of a range of social problems experienced by the respondents and their habits of reporting such problems, plus their experience and reporting of other crimes.

BACKGROUND SOCIAL PROBLEMS

The respondents to the survey were asked whether they had ever experienced any of six types of social problems: Homelessness, Not enough money for food, No income, Not enough money, Overwork, and Not enough time. If they responded, yes, they were asked if they reported the problem to any agency. The findings are shown in Figure 4.

Figure 4. Percentage of total sample affected by selected issues and proportion reported to an agency
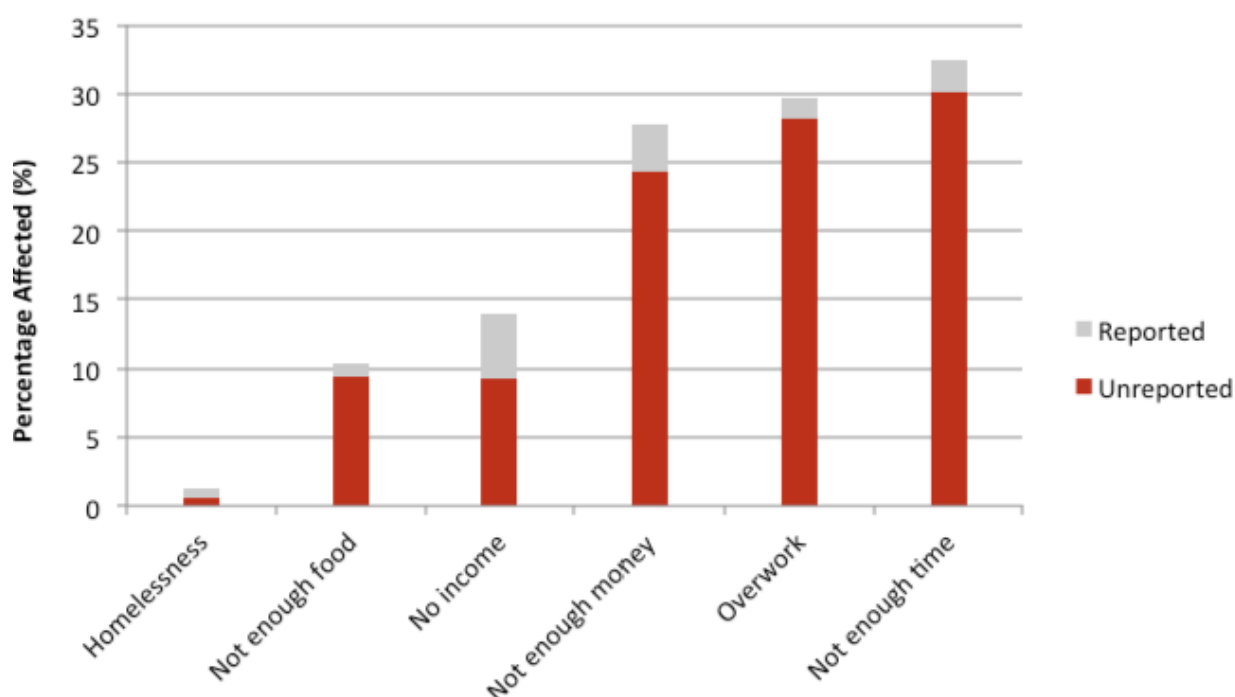
It can be seen that it was rare to report the problem to an agency, across the full range of social problems. While these problems represent 618 isolated incidents, more than half the incidents (347) are attributable to only 100 people with three or more problems, and around 10 people account for 50 incidents. Of concern is that close to 10% of respondents who had insufficient food and no income. 10% more women than men are affected by overwork and six times more likely to suffer homelessness (although the number suffering homelessness is too low in this sample to offer confidence in the result). For all other problems no gender differences emerge. When compared by area, the results are shown in Figure 5.

**Figure 5**. Social problems and reporting these problems by region
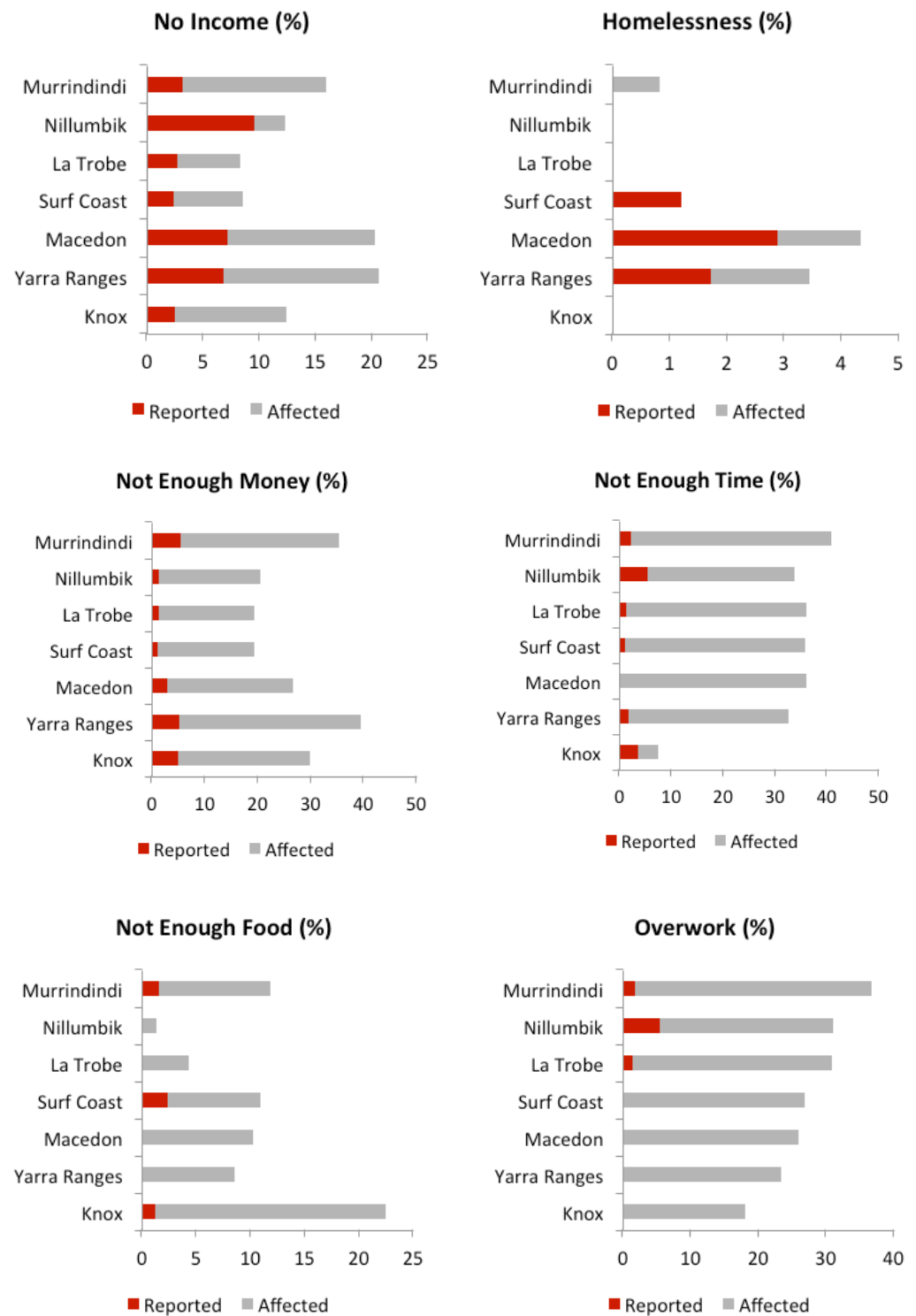
Macedon and Yarra Ranges appear to feature strongly in problems of income and homelessness, although Knox have the highest group with insufficient food. No income is the problem most often reported across the regions. This topic needs greater reflection prior to using it in subsequent surveys.

BACKGROUND CRIMES

Across the 2015 sample, 43% of respondents report that they have suffered one of 11 crimes and adverse experiences covered by the VCARF 2. These crimes were selected based on national and international studies. Figure 6 shows their rates across the total sample, together with the proportion reported. The highest crimes/adverse experiences are property damage, theft, and bullying, experienced by over 12% of all respondents in the past 12 months. Overall reporting rate for these crimes for Victoria is quite strong at 53%. Approximately the same proportion of these events are reported, with burglary, theft and fire having over 50% of events reported. It would be expected that crimes that attract monetary reimbursement through insurance are more likely to be reported, such as property damage, burglary and theft, whereas personal and family violence is more likely to be unreported. 62% of sexual assaults and half of family violence remain unreported. Ideally reporting should be stronger, but international papers suggest reporting falls among the most vulnerable people and communities.

Figure 6. Crimes experienced and proportion reported to police
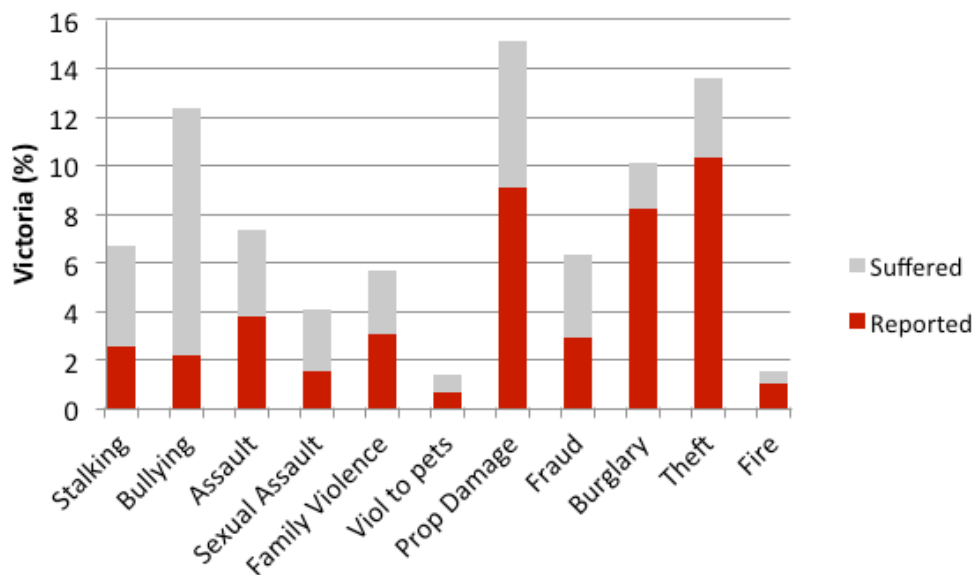
In this sample, 57% of respondents were unaffected by any of the 11 crimes surveyed. One in five (24%) were affected by one crime and their reporting rate was 59%. At two crimes, one in 12 (8%) are affected and 52% are reported. One in 20 suffers three crimes (5% or 22 people)) and their reporting rate is 49%. At four crimes (affecting 3% or 7 people) reporting bottoms out at 42% as predicted by the international literature, but then begins to rise at five crimes (2% or 5 people) where reporting again reaches 56% and rises again to 58% for six crimes affecting 1% (5 people) of the total sample. This suggests there is an inverted U curve for reporting (Figure 7), where reporting is high when victimisation is low, dips for moderate levels of crime, and increases for high crime rates, suggesting two points where reporting is more certain. However, considerable caution needs to be taken with this finding as the numbers of people for the higher crime rates experienced, are very low.

Figure 7. Reporting falls and then rises as people suffer more crimes
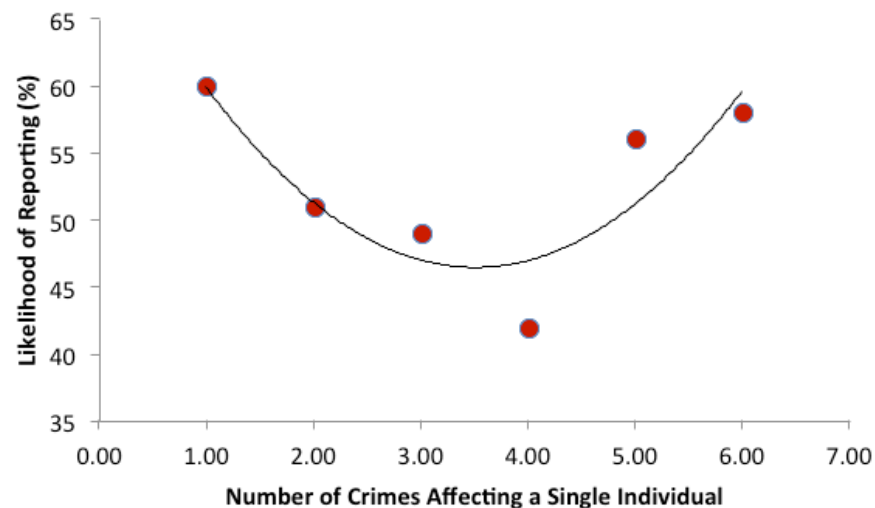
Crime and reporting rates also differ across regions, as shown in Figure 8.

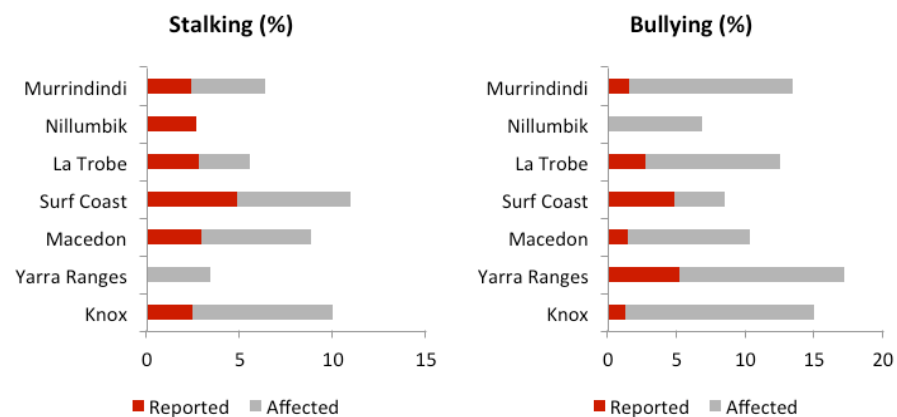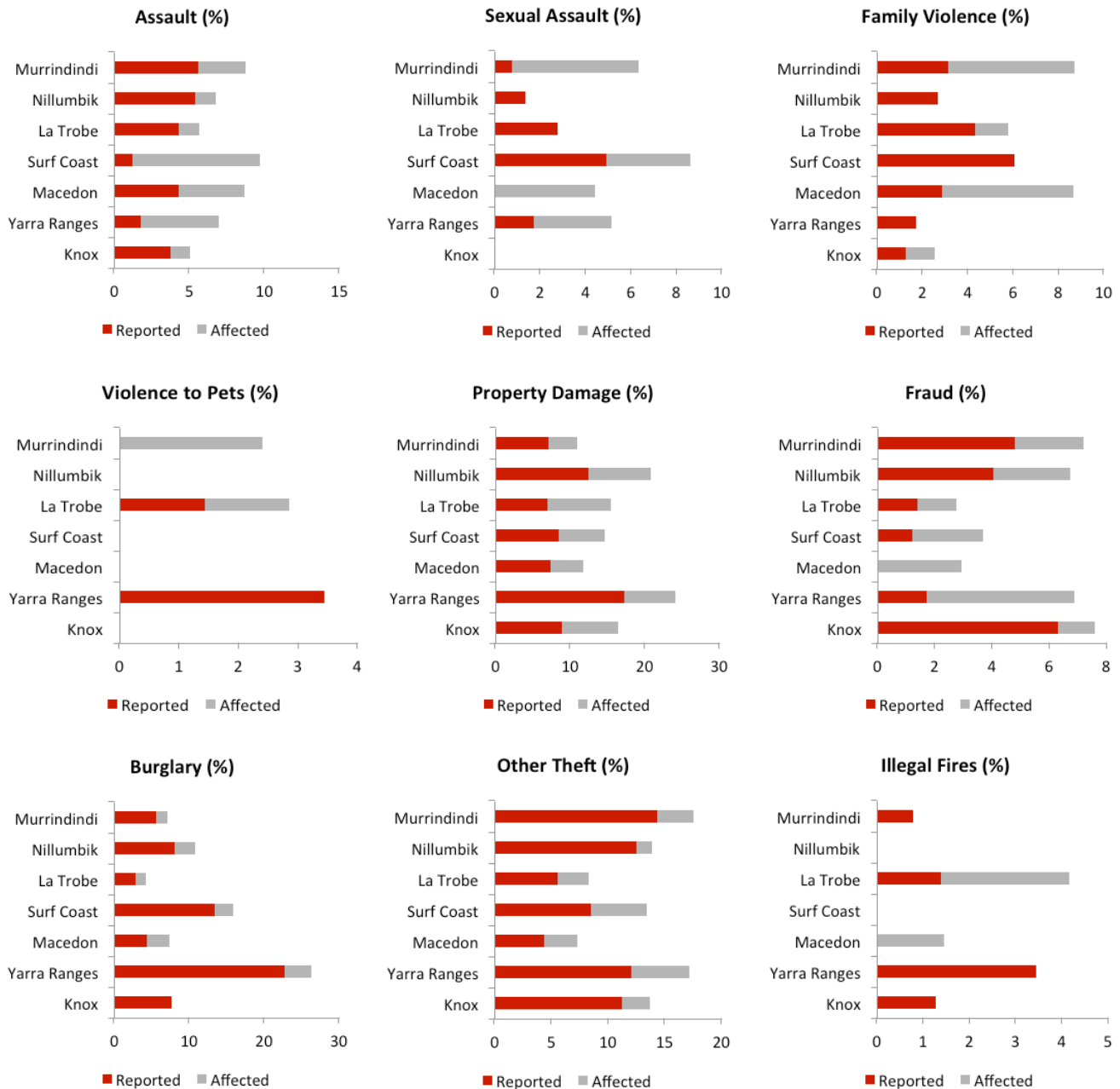**Figure 8**. Occurrence and reporting of crimes according to region

Figure 8 continued...

Assault (%), Sexual Assault (%), Family Violence (%), Violence to Pets (%), Property Damage (%), Fraud (%), Burglary (%), Other Theft (%), Illegal Fires (%) — each showing Reported and Affected data for Murrindindi, Nillumbik, La Trobe, Surf Coast, Macedon, Yarra Ranges, and Knox.

Experiencing illegal fires, from highest to lowest, affect Latrobe, Yarra Ranges, Macedon and Murrindindi. Latrobe and Macedon don't always report them. Property crimes are highest in Yarra Ranges and usually reported across all regions. Fraud is much less likely to be reported. Violent crimes include assault, sexual assault, family violence and violence to pets. Murrindindi, Surf Coast and Macedon all feature prominently among these crimes, although violence to pets seems to be a special case that spikes in Murrindindi, Latrobe and Yarra Ranges. Macedon and Murrindindi have some of the highest rates but lowest reporting of family violence. Surf Coast and Murrindindi have the highest rates of sexual assault. These all deserve further exploration.

Summary 12
One in six people have suffered at least three of six serious social problems yet 90% remain unreported. Women are six times more likely to suffer homelessness. Almost half (43%) have been victimized by at least one of 11 crimes but only half (53%) are reported, mostly those attracting monetary reimbursement. 62% of sexual assaults and half of family violence remain unreported. As predicted by the international literature, reporting falls among those most affected but this work identifies an additional feature that suggests an inverted U curve – reporting falls from 59% if the person suffers one crime (one in four people) down to 42% reported when suffering four crimes, but then increases again to 58% at six crimes.

RESULTS: CS MEDIA AND AWARENESS

SOURCE OF INFORMATION ABOUT CS

The VCARF 2 offers eight different avenues from which people gather information about CS, split by general versus arson-specific messages (Figure 9). Across the whole sample, 99% of of the 610 respondents who answered had heard of CS with an average media saturation of 3.3 separate sources per person in the past year alone, 2.8 for media (when work and friends are eliminated from the analysis). Only 12 people had not seen CS in the media over the past year (2%) but all except one of them (a 20-year old male from Murrindindi) had at least heard of CS. Television had the highest recall for mentioning CS (92%) with 42% of respondents recalling it mentioning bushfires, followed by radio (62% and 30% respectively). The next highest re-called mentions of CS occurred for local newspapers (36% and 19%), social media (35% and 20%) and state newspapers (29% and 15%). Billboards reached 27% of the total sample and more than one in ten people had seen billboards focused on bushfires (11%).

Figure 9. CS awareness by source and bushfire mentions (2015)
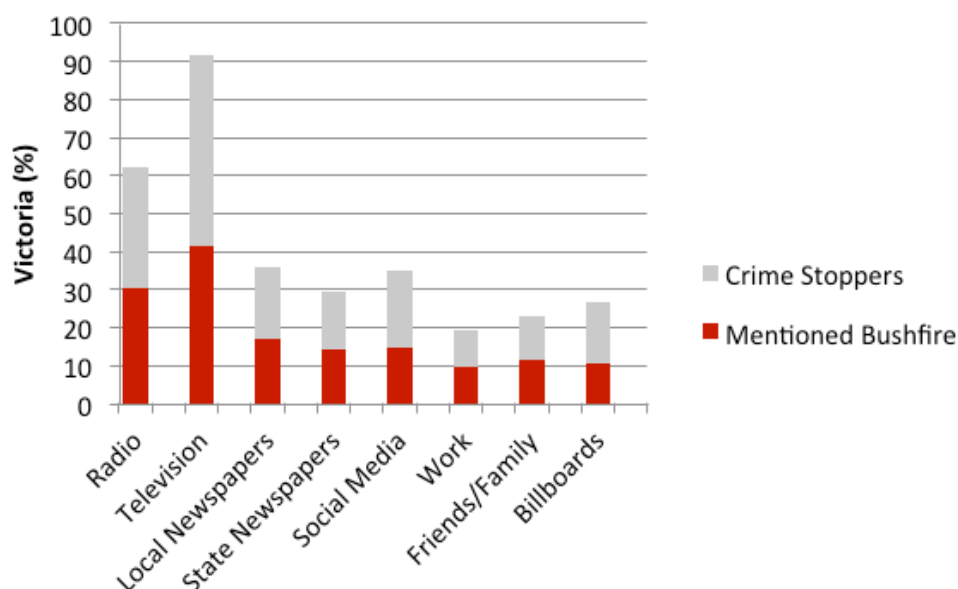
KNOWING THE CS NUMBER

An important measure of CS awareness is whether a respondent can correctly remember the CS phone number without prompting. Across the full sample, 11% knew the number in 2015, essentially identical to the results in 2012. In 2012, those knowing the number were more like-ly to have heard of CS from local newspapers, work and billboards. In 2015 knowledge of the CS number is predicted by increases across all media (Figure 10). When it comes to bushfires, however, it appears that knowledge of the CS phone number is less predicted by those who have been made aware via work or billboards, suggesting billboards might need more promi-nent positioning of the phone number, or else billboards – usually seen while driving – might not be effective in rapidly communicating that level of detail across 10 digits.

**Figure 10**. CS Phone Number Awareness by source and bushfire mentions (2015)
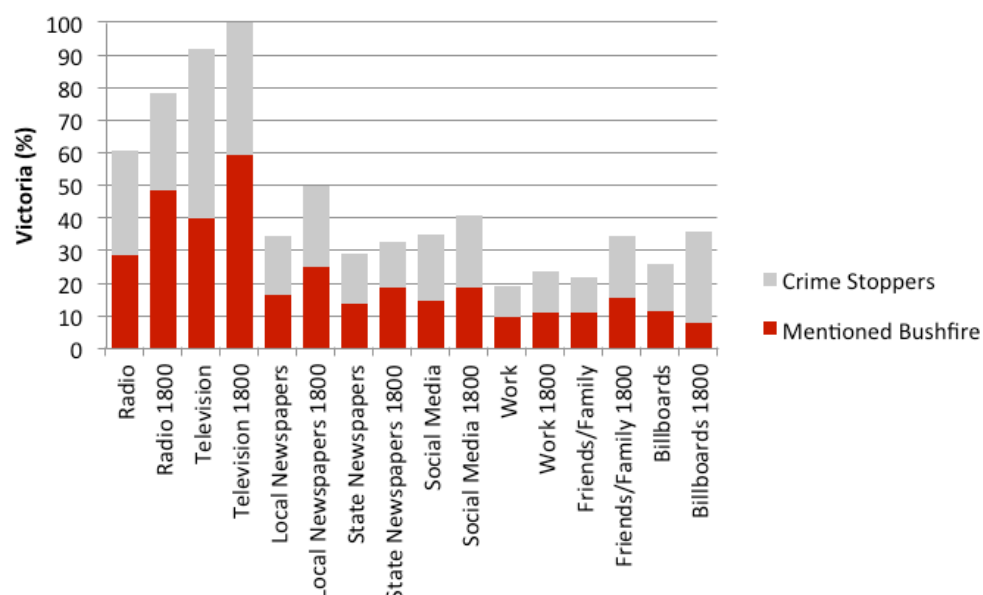
Once again, the most effective media outlets in terms of knowing the CS phone number, whether generally or in terms of bushfires, is always radio and television, followed by local newspapers and social media. Recall the total saturation was 3.3 outlets per respondent (2.8 without work and friends). However, the differences between those 64 respondents who know the number versus 541 who don't remains insignificant. What this means is that the amount of media saturation for knowledge of the number is likely at its maximum and the only way to increase awareness would be to simplify the phone number; turning to bushfire, however, the analysis changes.

Knowledge of the phone number in relation to bushfire are greater among those who interact with radio (41%), local newspapers (34%) and television (33%). Knowing the number is least for billboards (-44%) even though general awareness of CS for billboards increased the most from 2012 (+47%). Again, this suggests billboards are effective for awareness of bushfires but not for the CS phone number. Overall, this analysis suggests that bushfire has a very different profile than for CS more generally and this could be true for other crimes as well. It requires more work to understand this further. Awareness of the phone number is not the only important aspect and the same analysis will be offered later for reporting strength.

AWARENESS OF CS ACCORDING TO REGION

When split between regions, CS awareness is shown in Figure 11. Note the values are percentages based on the entire sample for each region, such that, for example, the percentage of people hearing about CS on radio in the past year for the Knox sample of 84 people is 41% and 23% of the total sample heard CS focusing on bushfires. This means the value is not a percentage of the subsample of people who heard about CS alone but reflects the percentage of the total sample hearing or viewing CS regarding bushfires specifically. So it can be read as simple sample-wide percentage for each region.

Figure 11. CS awareness by media outlet and bushfire mentions, by regions
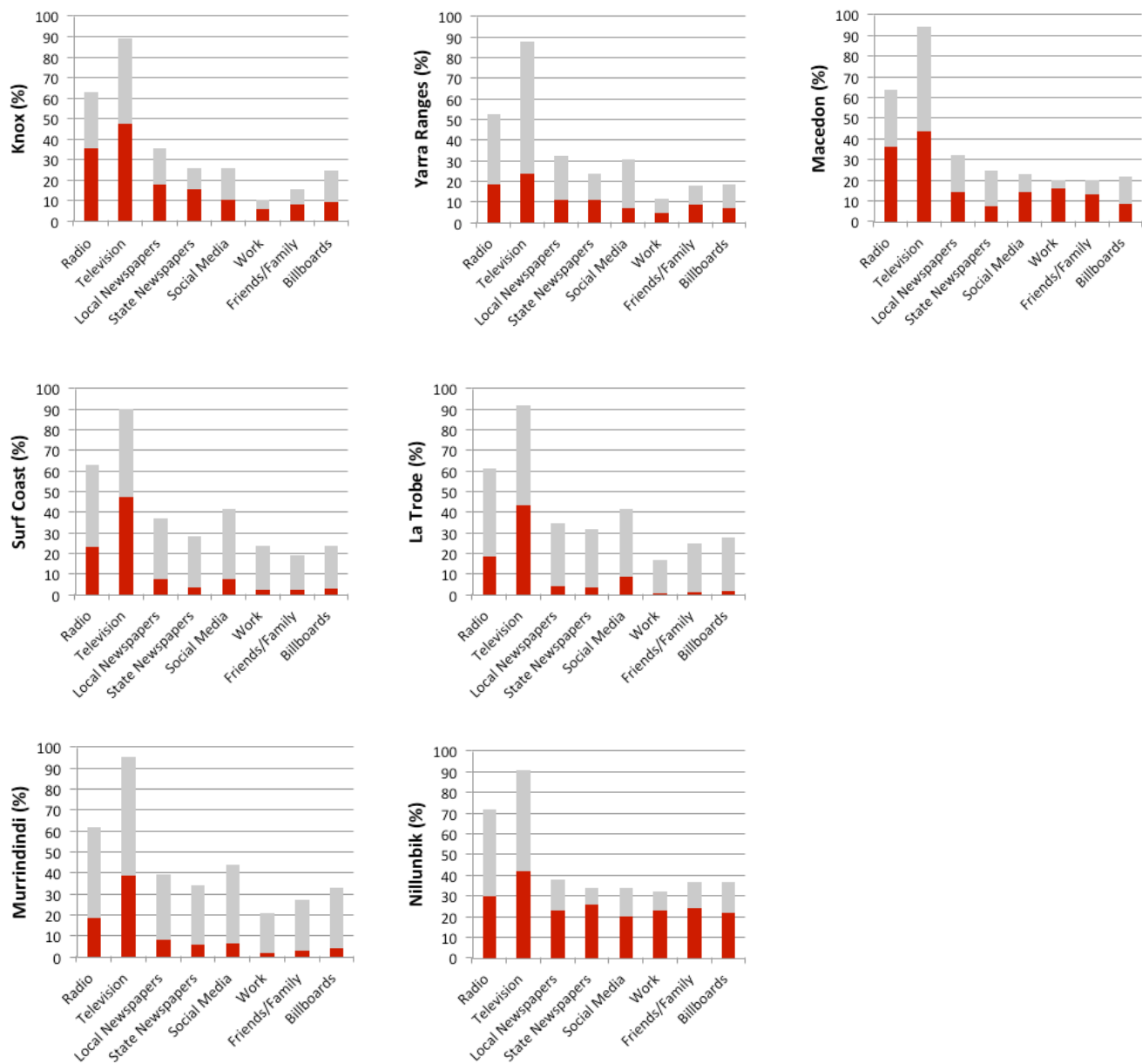
Based on frequency data there is significantly greater awareness of mentions of CS in Murrindindi and Latrobe and less in Knox, even when those aspects beyond the control of CS are removed, such as work, friends and social media engagement. These findings are explained by differential engagement with media sources. The greater awareness in Latrobe is related to larger than usual engagement with billboards and newspapers, both state and local. Murrindindi is higher across all outlets except radio.

When it comes to bushfire mentions, Nillumbik and Knox report the highest percentages across all media sources, Latrobe and Yarra Ranges the least, but for different reasons. Whereas Yarra Ranges is much less aware of bushfire mentions for radio and slightly less for television, Latrobe seems to have less state and local newspaper mentions. Whereas the former is outside of CS' control, the latter could be controllable. For all other media outlets, Yarra Ranges' knowledge of the correct CS phone number has significantly increased by 150% since 2012.

Summary 13
In the 12 months up to the survey, CS achieved 98% media saturation in the surveyed regions. Television had the highest impact (92%) and 42% recalled its mention of bushfires. One in three recalled bushfire mentions by CS on radio, one in five for local papers and social media, one in ten for billboards, although billboards are less likely to convey the CS phone number. The best way to increase media awareness in Yarra Ranges is to encourage more radio vigilance; for Latrobe to increase efforts in local newspapers.

INCREASED AWARENESS 2012-2015

The VCARF 2 replicates the four CS awareness measures of 2010 and 2012 but greatly expands them to identify the most powerful media channels operating in each of the seven regions. Across the full sample of 2015, general awareness of CS increased from 2012 by 2% (to 99%) and media awareness of CS increased across the board, rising by 9% for media mentions of CS and an equivalent 9% for CS media mentions of arson and/or bushfires. The increase of 9% across two separate measures serves to cross-validate the figure and suggests significantly greater reach by CS activities.

Table 6. Percentage of regional samples for CS awareness across measures, 2012-2015.

Area	Heard of CS (%)	Recently seen CS in media (%)	Media mentioned arson (%)	Knows correct CS phone number (%)
Total 2015	99	98	50	12
Total 2012	97	90	46	12
Knox 2015	100	100	39	11
Knox 2012	99	89	36	6
Yarra Ranges 2015	100	100	35	15
Yarra Ranges 2012	99	85	29	6
Macedon 2015	100	97	47	16
Macedon 2012	99	91	42	19
Surf Coast 2015	100	100	38	14
Surf Coast 2012	99	92	30	19
Latrobe 2015	100	96	50	10
Latrobe 2012	96	96	50	15
Nillumbik 2015	100	95	48	1
Nillumbik 2012	-	-	-	-
Murrindindi 2015	99	99	49	8
Murrindindi 2012	96	92	33	10

Knowledge of the CS phone number remains problematic, having remained stable at 12% from 2012 to 2015 but there are differences by regions reflecting falls among some but balanced out by extraordinary gains in others (see Figure 12). Differences in awareness across areas are also provided in Table 6 above. In 2012, every media index of CS awareness was weakest in Yarra Ranges. By 2015, however, increases have been strongest in Yarra Ranges and Surf Coast. Knowledge of the CS phone number increased by 150% in Yarra Ranges, from one in 17 people in 2012, to one in seven in 2015.

Summary 14
From 2012-2015, respondents' awareness of media mentions of CS rose from 90-98%. Huge efforts have been rewarded in Surf Coast and much greater awareness also in Yarra Ranges, including 150% increase in knowing the CS phone number. This is counter-intuitive given general resistance to the message in Yarra Ranges.

Figure 12. Increased CS media awareness 2012-2015
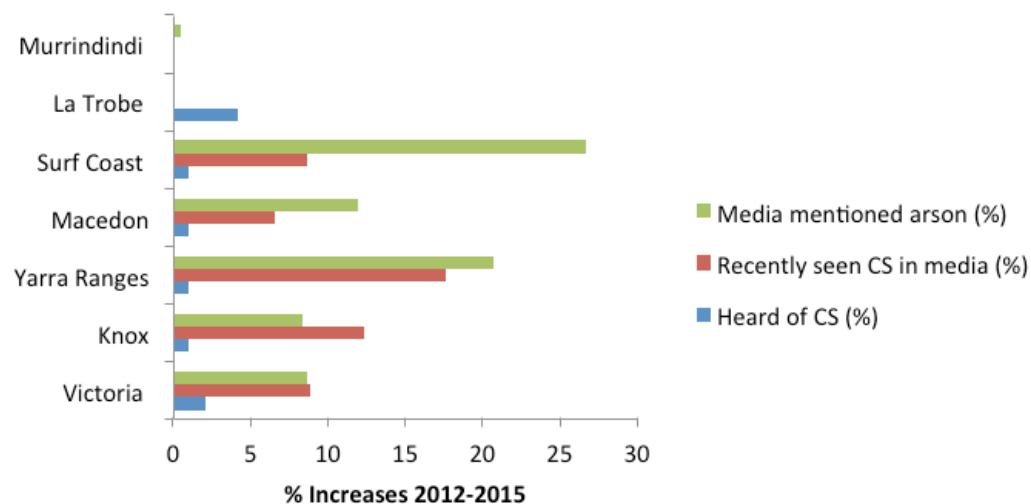

RESULTS: CS CONTACT PREFERENCES

Based on content analysis of community commentary in 2012, the VCARF 2 added a new dimension by asking respondents what their preferred method of reporting to CS would be. The overwhelming preference was to continue making reports by phone call (79%), followed by a respondent's suggestion about the ability to use a mobile app (9%), using the CS website (8%) and by email (4%) (Figure 13).

Figure 13. Preferred methods of reporting to CS by gender
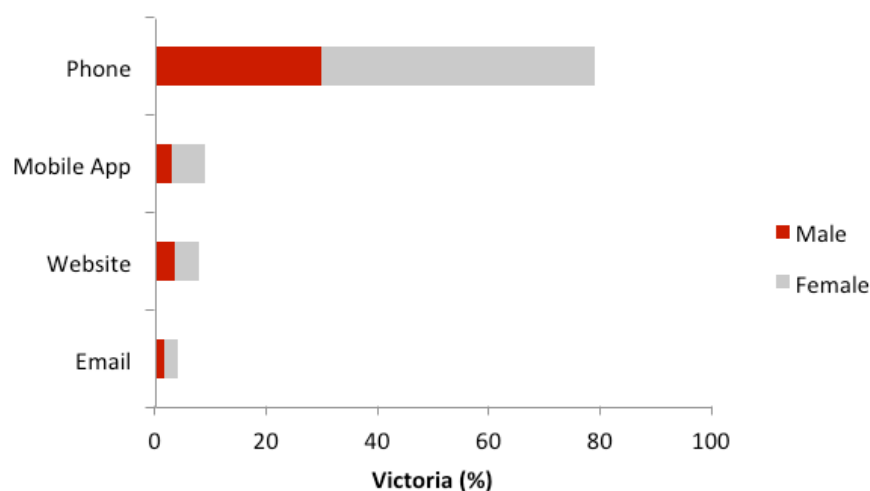
ANOVA was used to check age by gender interactions. While age and gender had no effect together, age on its own did, with those respondents having preferences for the availability of a mobile app being significantly younger (33±12) than those preferring to make reports via phone call (42±14) (p<0.025). For email and website the average age of respondents was 38-39 (±14).

When split by region (Figure 14), there are notable differences in preferences. Macedon is the clear outlier, its preferences for phone contact falling to only 68% compared to, in ascending order, 78% for Nillumbik, 79% for Surf Coast, 81% for both Knox and Yarra Ranges, followed by 83% for Murrindindi and 86% for Latrobe/Gippsland. This analysis suggests that Macedon's move away from preferences for reporting to CS via phone is taken up with a greater preference (suggested by respondents) for using a mobile app (19%) and website or the CS website (12%), together accounting for one in three Macedon residents. Apart from Latrobe/Gippsland, where email is the next major preference after using the phone (7%), most other areas follow a similar pattern where the CS' website is preferred, followed by mobile app and then email. Apart from Macedon, the variants from this pattern also include Yarra Ranges and Surf Coast, both preferring the mobile app above the use of CS' website.

Figure 14. Preferred methods of reporting to CS by region

Electronic Contact Preferences by Region (%)
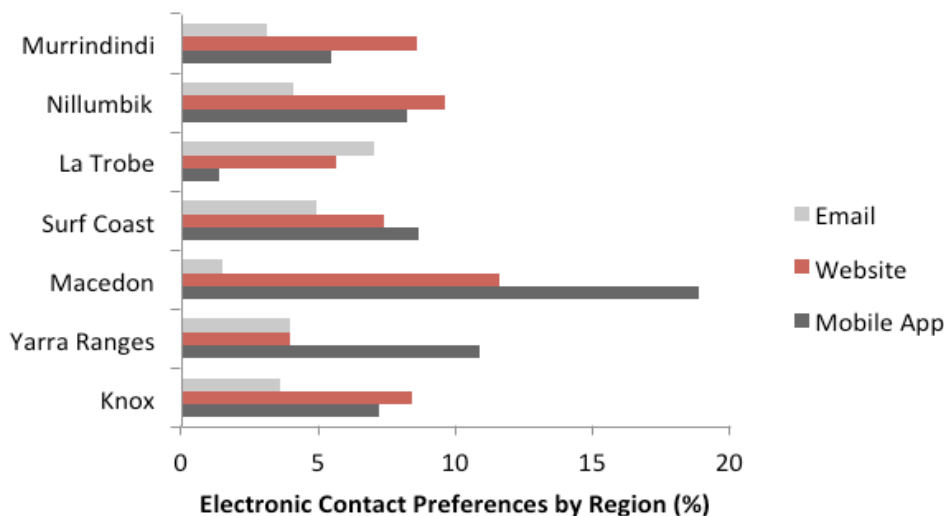
Summary 15
Contacting CS by phone is preferred by 79% of the total sample but a growing percentage would like to report via a mobile app (9%), especially among younger respondents (average 33 years versus 42 years), as well as residents of Macedon Ranges (19%) and Yarra Ranges (11%). After phone, website is preferred by Nillumbik (10%) and Murrindindi (9%) and a large proportion of Macedon Ranges (12%). Email is not often preferred (4%), possibly due to concerns about anonymity.

RESULTS: COMMUNITY PERCEPTIONS OF CS

The idea that a report to CS will help punish the arsonist is powerfully related to community perceptions around CS. For example, the belief that a report to CS will directly help police catch the arsonist is significantly and strongly correlated with the judicial system punishing the arsonist (r^2=0.73, p<0.025). However, it is also almost equally related to the idea that it will help the arsonist (r^2=0.73, p<0.025).

The attitudinal items from the 2015 survey provide two levels of data on community perceptions of CS, one for the percentage of sample supporting beliefs and the other for strength of belief measured on a four-point scale (0-3). As can be seen in Figure 15, the strongest belief about CS is that reports stay anonymous, although this remains uncertain, settling on 'Quite a bit' (1.9) rather than 'A lot' (which would score 3). Across the total sample, absolute certainty about CS' anonymity sits at 41% and those with absolutely no faith in anonymity represent 8%. When compared across regions, it appears Nillumbik needs more focus on the anonymity of reporting to CS whereas Yarra Ranges and Knox need to understand that CS is not run by police. Moral congruence becomes important here because early pretesting found those more likely to report to CS versus police are significantly more likely to distrust the police (p<0.05).

Figure 15. Perceptions of the role of CS.
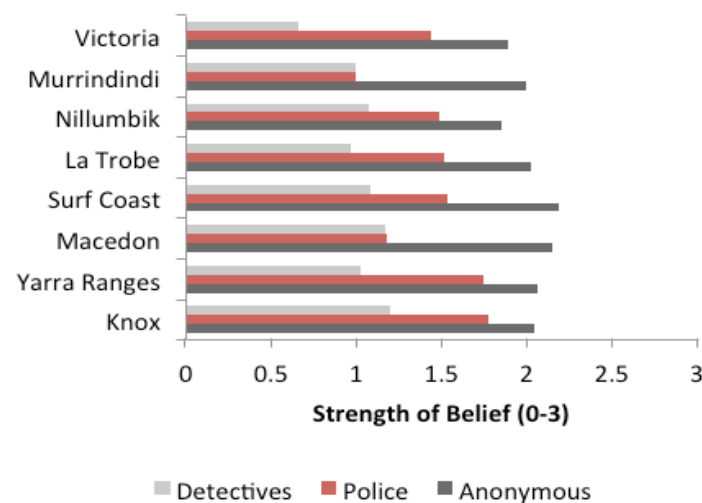
In the interim, beliefs about CS being police or detectives (thought to influence reporting via an interaction with moral congruence) are both weaker than anonymity, which is a positive result. Conflation with CS and police affect 23% of the total sample with a belief strength averaging 1.4, representing somewhere between 'a little' and 'quite a bit'. 20% of the total sample correctly understand that CS are not police, so one in five, which is reasonably strong. As to conflation with detectives, belief strength is very weak (0.7), coming close to 'A little bit' but only 9% of the sample believe this, and those absolutely certain it is untrue represent 36% of the total sample. The correlation between these two beliefs is significant but not wholly perfect (r^2=0.43, p<0.025) which means the two concepts are distinguishable in people's minds.

Importantly, the conflation of CS with police and/or detectives is not always a negative effect on the overall view of CS. Where positive correlations are significant but weak, it means that

interactions are occurring within the dataset, suggesting more than one subgroup is operating but one is more prevalent than the other. This would be expected when authoritarianism is more represented than individualistic criminality.

In this case, the more prevalent subgroup believes that CS' conflation with police/detectives is linked with police acting very fast if they make a report ($r^2=0.23$, $p<0.025$) and police sharing the respondent's own belief system ($r^2=0.14$, $p<0.025$). The same pattern emerges when beliefs about CS being police or detectives are split but only the police belief is upheld by older residents ($r^2=0.14$, $p<0.025$).

Interestingly, beliefs about the anonymity of CS also correlate with the belief that CS are police ($r^2=0.24$, $p<0.025$). Also counter-intuitively, the correlation between sharing beliefs with judges and police is relatively strong ($r^2=0.54$, $p<0.025$), but the positive link between CS beliefs and moral congruence with judges is zero. This is not altogether surprising as many authoritarian respondents display heavy dissatisfaction with the judicial system, both in the survey and its final commentary.

One in ten of total respondents distrusts anonymity completely

Summary 16
The anonymity of reporting to CS is confidently asserted by 41% of total respondents, but one in ten distrusts it completely. One in five knows CS is not run by police and one in three knows it is not run by detectives. Nillumbik needs more focus on anonymity of reporting to CS whereas Yarra Ranges and Knox might need to understand that CS is not run by police, but this depends on further analysis as sometimes those that conflate CS with police or detectives believe this is a good thing reflecting moral congruence with police (but not judges). Cynicism in Yarra Ranges could be due in part to police distrust.

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