

# Compositional, Contextual, and Collective Community Factors in Mental Health and Well-Being in Australian Rural Communities

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Jessica Collins<sup>1</sup>, Bernadette M. Ward<sup>1</sup>, Pamela Snow<sup>2</sup>,  
Sandra Kippen<sup>1</sup>, and Fiona Judd<sup>3</sup>

## Abstract

There are disproportionately higher and inconsistently distributed rates of recorded suicides in rural areas. Patterns of rural suicide are well documented, but they remain poorly understood. Geographic variations in physical and mental health can be understood through the combination of compositional, contextual, and collective factors pertaining to particular places. The aim of this study was to explore the role of “place” contributing to suicide rates in rural communities. Seventeen mental health professionals participated in semi-structured in-depth interviews. Principles of grounded theory were used to guide the analysis. Compositional themes were demographics and perceived mental health issues; contextual themes were physical environment, employment, housing, and mental health services; and collective themes were town identity, community values, social cohesion, perceptions of safety, and attitudes to mental illness. It is proposed that connectedness may be the underlying mechanism by which compositional, contextual, and collective factors influence mental health and well-being in rural communities.

## Keywords

mental health; suicide; rural; community; qualitative; Australia

## Introduction

Internationally, one person dies from suicide every 40 seconds, and there are more deaths from suicide than from war and homicide together (World Health Organization [WHO], 2014a). In Australia, suicide accounts for 21% of all injury deaths, and men are 4 times more likely to commit suicide than women (Australian Institute of Health and Welfare [AIHW], Harrison, & Henley, 2014).

The rural–urban disparity in population health outcomes is well recognized (WHO, 2014b), and compared with urban populations, there are disproportionately higher rates of recorded suicides in rural areas, particularly among men (Milner, McClure, & De Leo, 2012). In Australia, age-adjusted suicide rates for all causes are positively correlated with increasing remoteness, and in the decade to 2011, rates for suicide deaths due to hanging and firearm discharges increased with remoteness (AIHW et al., 2014). In the periods 2007–2008 and 2010–2011, suicide rates for Indigenous Australians were approximately double than those of other Australians (AIHW et al., 2014),

but this alone does not explain the rural–urban differential in suicide rates.

Socio-demographic factors and poor access to mental health services have been documented as risk factors for suicide (Cheung, Spittal, Pirkis, & Yip, 2012) but even after adjusting for these, the difference in Australian rural–urban suicide rates remains significant (Page, Morrell, Taylor, Dudley, & Carter, 2007). Beyond the immediate interpersonal and social environment, there is an association between a broader sense of social connectedness, community levels of social capital, and rates of suicide (Daniel & Goldston, 2012; Kølves, Milner, McKay, & Leo, 2012). Social capital, defined by the combined constructs of community participation and

<sup>1</sup>Monash University, Bendigo, Victoria, Australia

<sup>2</sup>La Trobe University, Bendigo, Victoria, Australia

<sup>3</sup>University of Melbourne, Parkville, Victoria, Australia

## Corresponding Author:

Bernadette M. Ward, School of Rural Health, Monash University, P.O. Box 666, Bendigo, Victoria, Australia.  
Email: Bernadette.ward@monash.edu

personal social cohesion, is strongly associated with all aspects of measured health, but most strongly to mental health (Berry & Welsh, 2010). However, community support is more strongly associated with decreased levels of distress for non-farming rural residents than for those who lived and/or worked on the farm, indicating that different groups within rural communities may have different experiences of community and social networks and be affected in varied ways by the impact of community and social connectedness (Stain et al., 2008).

The impacts of climate variability on farm production, population decline in rural towns, low levels of help-seeking behavior, inequitable gender relations, and stoicism have been proposed as factors contributing to the consistently high rates of suicide among men in rural Australia (Alston, 2012; Fraser et al., 2005). The increased risk of suicide among farmers is inconsistently reported and when compared with other occupational groups, farmers have lower rates of suicide (Skegg, Firth, Gray, & Cox, 2010). This variability suggests that there are other factors, beyond the immediate interpersonal and social environment, contributing to elevated rates of suicide in some parts of rural Australia.

A sociological framework for conceptualizing geographic variations in health that included the socio-environmental constructs of compositional, contextual, and collective factors relevant to mental and physical health was proposed by Macintyre (1997). Compositional variables are defined as those relating to the socio-demographic characteristics of individuals living in a certain place, such as age, sex, ethnicity, employment, and income. Contextual variables refer to the broader social and physical opportunities in a region, such as availability of and access to services, and collective variables refer to the socio-cultural and historical features of a region, including norms, values, levels of social cohesion, and area reputation.

This framework was subsequently applied by Judd, Cooper, Fraser, and Davis (2006) to elucidate information on geographic variations in suicide rates. Compositional variables thought to influence geographic variations included prevalence of psychiatric disorders or employment status such as a farmer. Contextual variables included the accessibility of services and the social and economic decline in certain areas. Collective variables included rural culture, stoicism, and stigma (Judd, Cooper, et al., 2006).

We suggest that the application of this framework to suicide rates can provide a comprehensive and testable model for understanding variations in both mental health and suicide within and between rural and urban communities, without losing or distorting the characteristics of individuals and their communities (Macintyre, Ellaway, & Cummins, 2002). It respects the importance of both

individual- and “place”-level variables and recognizes the highly dynamic relationship which is likely to exist between the two.

The aim of this study was to gain an in-depth understanding of the views of key stakeholders on the place effect contributing to disparate rates of suicide in Australian rural communities. We explored how perceived compositional, contextual, and collective community factors might enhance our understanding of different suicide rates in rural towns.

Although patterns and mechanisms of rural suicide are well documented, they remain poorly understood. Suicide is multifaceted (Leenaars et al., 2000), and although the link between psychological disorders and suicidal thoughts is well established (Harris & Barraclough, 1997), large Australian studies have not found any significant difference in the prevalence of anxiety, affective disorders, substance use, or other mental health disorders among rural and urban populations that might explain the rural–urban disparities in suicide rates (Australian Bureau of Statistics [ABS], 2008; Kelly et al., 2010).

## Method

A qualitative approach was used to address the paucity of theoretical explanations around the incidence of suicide in small rural settings. Macintyre et al.’s (2002, 2007) framework has been proposed as a useful tool for conceptualizing the effect of observed geographic variations on rates of suicide (Judd et al., 2002). The “real-world” utility of this model (Macintyre, 1997) and its application (Judd, Cooper, et al., 2006) was used to guide data collection in this study and to generate a better theoretical understanding around the role of *compositional*, *contextual*, and *collective* community factors in mental health and well-being within rural communities.

The study was conducted in four small towns in rural Victoria, Australia. There is considerable variability in the definition of “small rural”; for the purposes of this study, it was defined as towns with a population between 3,000 and 7,000. Thirteen Victorian towns meeting this criterion were identified from the Victorian Australian Standard Geographical Classification Inner Regional towns (ABS, 2003), and from them, we selected the two towns with the “highest” and “lowest” suicide rate (Judd, Jackson, Komiti, Bell, & Fraser, 2012). The descriptive quantitative data (ABS, 2011) that were used to assist in selecting towns were later also used to assist with data analysis. This data supplemented the interviews and strengthened the comprehensiveness of the research (Mays & Pope, 2000).

To understand the perceived impact of compositional, contextual, and collective community variables on the mental health and well-being of residents, we sought to

**Table 1.** Characteristics of Study Towns<sup>a</sup> (Population Compositional Factors).

Town	Total Population in 2011	Unemployment Rate (%) 2011	Fully Owned Private Home (%) 2011	Home Rented (%) 2011	Median Individual Income (A\$)	Median Household Income (A\$)
A <sup>b</sup>	5,413	3.6	34.7	16.6	610	1,445
B <sup>c</sup>	6,678	5.2	30.6	21.4	529	1,203
C <sup>b</sup>	3,462	3.4	47.3	23.2	446	808
D <sup>c</sup>	4,053	6.2	42.6	31.5	445	735

<sup>a</sup>Australian Bureau of Statistics (2011); Census Quick Stats 2012, Canberra.

<sup>b</sup>Town classified as having a "low" rate of suicide.

<sup>c</sup>Town classified as having a "high" rate of suicide.

interview "information-rich" (Patton, 1990) mental health professionals (MHPs) who would provide a breadth of perspectives. These included, but were not limited to, psychologists, psychiatrists, case managers, unit managers, general practitioners (GPs), and psychiatric nurses. Many of the MHPs who serviced the town(s) were also residents and by virtue of the nature of their work, were able to offer focused and theoretically informed perspectives and had extensive knowledge of service availability and access behavior within and around the town.

Details of publicly listed MHPs servicing each town were entered into a database. Information about the study was initially posted/mailed to 52 practices/practitioners, and each of these was followed up with a phone call from the first author to answer any questions about the study. Based on this, formal recruitment letters were sent to 46 people who had expressed an interest in receiving further information about the study. The final sample, which was achieved through convenience and some snowball sampling of these 46 respondents, comprised 17 MHPs, four each from three of the selected towns and five from one town.

The interview schedule was pre-tested and modified following expert feedback. The first author carried out all data collection. All interviews were held in mutually convenient locations where privacy could be assured. Interviews were between 60 and 120 minutes long and were audio recorded and orthographically transcribed. All participants provided written consent and were offered a copy of their transcript for member checking.

The interview focus and probes were modified in an iterative fashion, and data collection continued until thematic and information saturation had been reached. Principles of grounded theory (Strauss & Corbin, 1998) were used with the analysis of the interview transcripts and field notes being compared with themes from previous interviews and being used to inform any changes of content or emphasis in following interviews. This analysis was done manually by the first author using inductive open coding of incidents to generate hypotheses from the

emerging codes (Strauss & Corbin, 1998). Axial coding of the categories was used to make theoretical sense of the relationships between the properties of each category. Major categories and sub-categories were allocated to compositional, contextual, and collective constructs. Selective coding was subsequently used to conceptualize and articulate an overarching theoretical context within which to understand variations in mental health and well-being between the four communities considered. The audit trail consisted of memos, field notes, and visual representations of the emerging relationships between concepts and categories (Charmaz, 2006). These were used at each stage of the coding to facilitate discussion and review of emerging concepts, categories, and relationships with two experienced independent researchers.

The study was approved by the Monash University Human Research Ethics Committee.

## Results

Seventeen MHPs (11 psychologists, 3 GPs, 1 nurse, sector manager, and case manager) participated in interviews in Towns A and C (low suicide [LS]) and Towns B and D (high suicide [HS]). The results (see Tables 1 and 2) are grouped into LS and HS towns using the compositional, contextual, and collective framework (Macintyre, 1997). Details of these with supporting text are outlined below. For confidentiality reasons, respondents are not identified by discipline.

### Compositional Factors

There were little data emerging that could place demographic factors as influencing suicide prevalence in the towns studied (see Table 1). Perceptions of mental health issues, however, indicated that there may have been differences between HS and LS towns in drug abuse and current suicides.

*Population demographics.* As per Table 1, the selected towns had populations of 3,500 to 7,000, but their socio-

**Table 2.** Emerging Themes by Compositional, Contextual, and Collective Factors in Each Study Town.

Socio- Environmental Domains	Theme	Place Characteristics by Town			
		Low Suicide		High Suicide	
		A	C	B	D
Compositional	Population demographics	See Table 1			
	Perceptions of mental health issues	Alcohol abuse Marijuana use Decreased suicide rate	Alcohol abuse Marijuana use Decreasing suicide rate	Alcohol abuse "Harder" drugs	Alcohol abuse "Harder" drugs Current ongoing suicides
Contextual	Physical environment and climate	Harsh winters	"Green drought"	Harsh winters Tourist town	Harsh winters Coastal tourist town
	Employment opportunities	Enhanced by proximity to major city	Need for local employment (farming)	Enhanced by proximity to major city	Need for local employment (tourism)
	Availability of housing	Low housing availability and affordability	Low housing availability and affordability	Increased use of caravan accommodation	Many holiday homes that were often vacant
	Mental health and other services	Services readily available Accessible train service Main youth activities based around sport and "pubs"	Services readily available Accessible train service Main youth activities skate park and sport	Limited services Mainly private and fragmented Limited train service Limited youth activities	General practitioner only Limited other services Limited transport Limited youth activities
Collective	Town identity	Historic "Old-fashioned"	Historic farming	Historic sporting	Sleepy seaside town
	Community norms and values	Conservative values High levels of volunteerism Tendency to gossip Unpretentious Care for each other	Conservative farming Stoicism valued Hard working Tendency to gossip Unpretentious	Conservative Old-fashioned Values heritage	Conservative Traditional Tensions between greenies and developers Tourism "violates" residents Tendency to gossip
	Social cohesion	Supportive Welcoming to newcomers Care for others Separation of locals and "others"	Rich social network for locals Support Friendly and welcoming to "non-locals" but integration can be difficult	Variability in perceptions of support, welcome Cautious of newcomers Potentially isolating	Low social cohesion Cliques social groups can be very isolating Divide between newcomers and locals
	Perceptions of safety	No real sense of danger	No real sense of danger Unspoken history of violence against women but now decreased	Safer than a city or nearby towns Local social problems	Safer than a city Assaults associated with alcohol Fights between locals and outsiders
	Attitudes to mental illness	Perceived as "unwellness" for which help is required	Perceived as "unwellness" for which help is required Stoicism among farmers	Stigmatized but a level of acceptance A degree of fear	Stigmatization Lack of awareness Mental illness reflects weakness of character

economic status differed (ABS, 2011). In LS Towns A and C, the median weekly household income was A\$1,445 and A\$808, respectively, compared with A\$1,203 and A\$735 in HS Towns B and D (ABS, 2011). Median individual and household income appeared to be inversely correlated with home ownership. In all towns, informants commonly referred to the "old" and the "new" populations and how this distinction manifested in their town in terms of socio-economic status.

It's an old place, so they would see the juxtaposition of the old and the new part of . . . you can see now. It's expanding and there's housing developments, and then you've got this

sort of ancient main street with very old buildings on either side. (HS Town B Informant)

LS and HS Towns A and B were characterized by growing populations of young commuter families who had taken up residence in the area due to proximity to a major city and the relative affordability of housing. Informants also reported a dramatic increase in the number of people with very limited financial means moving to the area and living in local caravan parks.

LS Town C, located 190 kilometers from a major city and with a strong agricultural focus, had also seen this shift, but overall, had experienced a decline in population growth.

Many of their properties are now divided and split up and sometimes they have disappeared altogether but . . . there's still a number of properties in the immediate vicinity of the town that are owned and run by members of the original families. (LS Town C Informant)

In contrast, HS Town D, a coastal town located in a tourist area 140 kilometers from a major city, had seen a large influx of wealthy residents and holiday home owners.

. . . quite a wide range of demographic there now because they've still got the people who bought in very cheap and maybe are on pensions and now they are sitting on sort of 450,000 dollar properties, but they're still on a pension. (HS Town D Informant)

In all four towns, the population was predominantly Caucasian with very little influence of any other ethnic group.

**Perceptions of mental health issues.** A common perception of informants was that there were higher levels of mental health issues in the lower socio-economic subgroups within each town.

. . . we certainly see a higher level of mental health problems in the group who have, of late moved into [HS Town C] . . . again often from less affordable areas and often families that are dysfunctional and often fragmented too. (HS Town C Informant)

Mental health issues were often associated with alcohol and drug abuse. Alcohol abuse was presented as the major problem in all towns. Apart from this, informants in LS Towns A and C identified marijuana as the most used drug whereas HS Town B's proximity to a major city meant that it contended with what an informant termed ". . . a lot of affluent drugs . . ." (HS Town B Informant). HS Town D was also characterized by the informants as having major issues with all types of drugs.

The mental health of farmers was a common concern in LS Town C. In HS Town D, there were also reports of a high-risk demographic group.

. . . they tend to be around forty to sixty year-old men . . . businessmen, and when their businesses go a bit funny, . . . their wives walk out on them, they don't tell anyone, and they kill themselves. (HS Town D Informant)

Perceptions of suicide prevalence were that in LS Towns A and C, it was decreasing whereas in HS Towns B and D, it was perceived that suicides were a current ongoing problem.

### **Contextual Community Factors**

A number of contextual factors were identified by informants, and these are clustered under four major sub-categories: (a)

physical environment and climate, (b) employment opportunities, (c) availability of housing, and (d) mental health and other services. Differences in these between LS and HS towns were identified as occurring in areas of transport accessibility, and availability of youth activities and mental health, health and safety services.

**Physical environment and climate.** Across all towns, informants spoke of the impact of climatic and environmental features on the mental health of residents. Cold and harsh winters were a commonly described feature of LS and HS Towns A, B, and D. In HS Towns B and D, reduced winter daylight hours and tourist numbers were perceived to have a detrimental impact on residents' mental health. Informants from LS Town C also referred to the impact of the "green drought" on residents' mental health.

. . . it's a farming community . . . there's water, it's green . . . but some farmers have been incredibly depressed . . . there's just not enough grass to feed the cows . . . all the farmers were having to buy hay . . . they'd have bills in the tens, if not, hundreds of thousands of dollars. (LS Town C Informant)

In contrast, the benefits of the physical environment on health were emphasized. HS Town D informants spoke of the beauty of the beach. LS Town A and C informants spoke of the beauty of local green gardens and of residents being able to have acres of gum trees.

In the LS towns, informants also spoke of the sense of community when there is environmental hardship, such as the threat of bushfires.

. . . the threat of fire and the knowing that you have to prepare . . . you work together . . . people looking out for each other. (Town A Informant)

**Employment opportunities.** The proximity of LS and HS Towns A and B to a major city was seen by informants as providing a viable option for many of the local residents to commute to the city for work. This proximity also meant that these towns attracted tourists from the city, resulting in a "thriving café community" which boosted local employment (LS Town A Informant).

In contrast, the location of LS and HS Towns C and D meant that very few people commuted far to work and that there was a need for local employment. In LS Town C, the impact of the drought on employment opportunities was noted, but it was also reported that dairy farms continued to provide a number of local employment opportunities. Informants reported that HS Town D residents were reliant on the tourism industry for employment.

**Availability of housing.** Reports from LS Towns A and C were that housing affordability and availability had decreased in recent years while in HS Town B the demand for caravan park accommodation had increased.

What I've seen happen is all the caravan parks have filled up with people who basically can't afford to live down here, so you've got that sort of government pensioner side. (HS Town B Informant)

The profile of housing in HS Town D was substantially different. Many holiday homes were vacant for much of the year, and few other housing options existed.

**Mental health and other services.** In each town, informants reported that access to quality mental health services was fundamental to the well-being of residents; however, perceptions of access to these services differed considerably. In LS Towns A and C, informants referred to "youth cafes" that had emerged in the last decade and how local GPs, community mental health services, and private providers had worked hard to provide local mental health services in response to reports of farmer suicides. However, in HS Town B, there were reports of relatively high numbers of private mental health service providers, and in HS Town D, the local GP was reported to be the only local mental health care provider. In both HS towns, it was thought that public mental health services were difficult to access and that many residents would forego care.

In each town, the issue of blurred boundaries between personal and professional life for mental health workers was discussed. In general, it was thought these boundaries were respected, and the nature of life in a small town meant that there was better communication between medical, psychological, and community services.

... you get to know the police personally, you get to know the town and clients, and they'll ring you up and say to you "oh, we just picked up so and so" ... you go out there and ... then look at the supports they have ... and you run it by the psychiatrist and you get it over and done with. (LS Town A Informant)

The importance of access to affordable public/private transport was highlighted, particularly for young people. Although various youth-focused leisure and sporting activities were described, the sense of "connection" with a local school community was noted as being particularly important, but for a range of reasons (e.g., no local secondary/public school), this was not available in all towns.

### Collective Factors

The collective factors identified by informants are clustered under five major sub-categories: (a) town identity, (b) community norms and values, (c) social cohesion, (d) perception of safety, and (e) attitudes to mental illness.

**Town identity.** Each town in this study is "old" and thus has a rich social and architectural history. LS Town A, described as having a "very strong hamlet feel to it," is

renowned for its bushranger history and has a steady flow of tourists. LS Town C remains a largely traditional farming community. HS Town B is famous for its heritage buildings, dating back to the mid-19th century gold-rush era, which continue to convey a sense of history and tradition. HS Town D was thought to mimic an old English coastal town, historically being a "sleepy seaside town."

**Community norms and values.** Informants' accounts of the perceived norms and values that shape their towns provided a rich, complex, and dynamic portrayal of the social fabric of these communities, identifying some marked similarities as well as differences. All towns were perceived as being conservative and traditional with a strong history and historic buildings. In HS Town B and LS Town C, there was reference to a core group of people with a strong commitment to preserving the heritage of the town and its original character. The reportedly conservative, community members of HS Town B were said to reflect "old-fashioned" values around the importance of family and community. There was a sense that the HS Town B's conservative and traditional roots could perpetuate attitudes and policies that are seen as somewhat "behind the times." Similarly, there was a belief that the conservative and traditional farming community of LS Town C led to traditional expectations that residents would be heterosexual, get married, and have children.

It was noted that the same single factor could be either positive or a negative. For example, across all towns, there were reports of a sense of a "small country town" and "people talk." Although this might be viewed negatively, informants described the "flip side" of the lack of privacy, as the community "being there" when someone experiences a tragedy. "... we mightn't live in others' pockets but everybody feels the tragedy" (HS Town D Informant).

LS Town A was described as having a particular focus on supporting the developmental needs of its children and young people. Informants perceived LS Town A children to grow up 'conservatively'. That is, at a slower rate than young people living in the city, first, because they are not exposed to so much, and second, because they are surrounded by consistent community support. High levels of volunteerism and strong local attendance at community events were seen as an opportunity for community social engagement.

In HS Town D, respondents perceived there was a general wariness of success and wealth and expressed concern about "tall poppy syndrome." This was partly tied to the perceived importance of lifestyle over wealth and the connection to the environment. Respondents described a relatively influential and long-standing group of "greenies" (a colloquial name given to conservationists) and others residing in the town who actively lobby for the

environment and against development. These values of lifestyle and environment were also discussed in the context of tourism and were thought to be behind much of the “locals versus tourists” tension.

**Social cohesion.** There were within- and between-town differences in the reports of social cohesion in the four towns. Although LS Town A was described as friendly and welcoming, there were reports of some social groups being harder to join than others. Informants reported local “snobbery” toward newer, less affluent residents and others who had moved from the major city. Similarly, in HS Town B, informants reported a sense of “caution” about outsiders or new arrivals trying to make changes. Unlike LS Town A, informants from HS Towns B and D and LS Town C indicated that people in the town are generally not considered to be local until they have been there for 10 or 20 years. In LS Town C, the rich social network of the original settler families was seen not only as an asset but also as a barrier to change: “. . . if your family is a severely dysfunctional family, you never get away from them” (LS Town C Informant). In contrast, levels of social cohesion in HS Town D were thought to be low. It was observed that there is very little sense of togetherness as a community, perhaps with the exception of children, and instead, the social fabric of the town consists of highly independent, segregated social groups commonly termed *cliques*. It was even noted that these social connections sometimes play out between local businesses, with a focus on keeping business within the group.

**Perceptions of safety.** LS Towns A and C were reported as having few problems with crime, and informants felt that generally residents would feel no real sense of danger. LS Town C informants, however, identified domestic violence as an issue in the past. It was felt that this was now being addressed. All informants believed that their towns were safer to live in than the city. HS Town B also compared itself with other nearby towns that were perceived as being less safe. HS Town D informants reported apparently high rates of alcohol-related assaults and fighting, often between tourists and residents. Burglaries in vacant holiday homes were also identified as an issue.

**Attitudes toward mental illness.** In each town, informants believed that residents were poorly educated about mental health, resulting in ongoing stigma and prejudice toward those with mental illness. Alternatively, there was consensus that media campaigns had increased mental health awareness with a positive shift in understanding and acceptance of mental illness as “unwellness” for which help is required. This was seen particularly in LS Towns A and C, most evidently among newer residents in less affluent areas. In the farming community of LS Town

C, however, respondents commented about traditional stoic (“A man’s got to be a man”; LS Town C Informant) attitudes that could delay or prevent engagement with services. Increased community awareness of these risks has produced responses to high-risk settings such as “So and so’s really distraught, let’s make sure he doesn’t have any guns in the house” (LS Town C Informant). It was perceived that HS Town B attitudes had improved with greater acceptance but still with a degree of fear remaining. Informants in HS Town D reported the perceptions that mental illness was still highly stigmatized and seen as a weakness of character.

## Discussion

This is the first in-depth study to explore the perceived role of compositional, contextual, and community place factors in explaining disparate suicide rates in Australian rural communities. We identified important compositional, contextual, and collective factors that respondents considered to be highly dynamic and interrelated in their contribution to suicide rates in their town.

In Australia, socio-economic disadvantage is consistently reported to be inversely associated with mental ill-health and suicide risk (Page, Morrell, Taylor, Carter, & Dudley, 2006). However, the compositional socio-demographic factors in this study did not provide an explanation for the differences in the recorded rates of suicide in the study towns. There are limits to the aggregation of population data in capturing the lived experiences of individuals (Macintyre et al., 2002). Aggregated socio-economic status data fail to account for within-town differences, or the impact of income inequality and relative deprivation within a community, that are associated with poorer physical and mental health and well-being (Kondo et al., 2012; Wilkinson & Pickett, 2006). Outside of individual level socio-economic disadvantage, living in an area with a declining population independently and negatively affects mental health and well-being (Fraser et al., 2005). However, this does not explain difference in suicide rates between LS Town C, where there has been a decline in population growth, and HS Town D, where population has rapidly increased.

Contextual factors influence well-being. Physical environment, climate, and social determinants of health such as employment and housing are consistently linked with improved well-being (Maller, Townsend, Pryor, Brown, & St Leger, 2006; Wainer & Chesters, 2000; WHO, 2003), and although this is consistent with our findings, these factors alone do not explain the differential in the study towns’ suicide rates.

Our findings suggest that the accessibility of health and other services and mental health services, in particular, provide some of the strongest links with mental well-being. In

LS towns, recent improvements in the availability and geographical access to focused mental health initiatives were associated with a reduction in the historically high rates of both youth and farmer suicides. This is confirmed by prevalence data (Judd et al., 2012). In contrast, in the HS towns, publicly funded health services were described as being very difficult to access, poorly advertised, or as having prohibitive delays for acute care. Poorer access to health care is the most important factor distinguishing rural from urban health service utilization and contributes to the poorer health outcomes of rural and remote populations (Ansari, Laditka, & Laditka, 2006; Archibald & Putnam Rankin, 2013). The perceived availability of, and level of, service integration between mental health, medical, and police service departments was seen as a particular point of difference between the LS and HS towns. Service integration has been identified as an issue of particular importance for rural mental health in communities contending with the challenges of limited services (Bischoff et al., 2014; Staiger, Long, & Baker, 2010), and this is consistent with our findings.

Collective factors identified in this study contribute to our understanding of the differential in suicide rates in towns. Across all four towns, pseudo-prescriptive social norms and values were identified, and consistent with other study findings, it was noted that these can create challenges for both new and old residents in negotiating social norms and maintaining a sense of freedom or autonomy (Harvey, 2007). Interestingly, the traditional "rural values" of stoicism and self-reliance (Alston, 2012; Judd, Jackson, et al., 2006) were described most prominently by informants in LS Town C and HS Town D. It was apparent, however, that for LS Town C, discussion of these values seemed to reflect an emphasis on the strength and functionality in stoicism (Alston, 2012). In contrast, the emphasize of informants in HS Town D when discussing the value of stoicism was predominantly directed toward the intolerance of weakness. It seemed that the impact of agrarian values on mental health and well-being was shaped by the context in which these values were articulated, as well as their inter-relationships with other community factors.

The value placed on community and social cohesion differed between HS and LS towns. In the LS towns, informants expressed a strong sense of community that had been enhanced by the shared experience of natural disasters, a finding consistent with other research (Sartore et al., 2008). Although residents in these towns were not without difference, informants' perceptions about the value of community were much stronger than those seen in the HS-rate towns where there seemed to be little in the way of an overarching sense of the community. The mental health benefits and mediating effects of social capital on contextual variables such as socio-economic deprivation are well

documented (Berry & Welsh, 2010; Congdon, 2012; Stain et al., 2008).

Perceptions of social hierarchies, their integration within towns, and the welcoming of newcomers were stronger in the LS towns. It was recognized that being a non-local in LS Town C may result in more difficulty in infiltrating the social fabric at a very deep level, but this social standing did not seem to carry the same degree of negative connotation observed in HS-rate towns. It appeared that for these towns, there was a greater sense of threat among "old" residents that this change may undermine the culture and way of life that they value as part of their town (Curry, Koczberski, & Selwood, 2001; Jones & Tonts, 2003). The overall sense of community seemed to affect levels of social cohesion and community integration in ways that were protective of the mental health of residents, even in the face of defined social hierarchies. The absence of this sense of community appeared to result in deeply negative impacts of these exclusive social groups for those outside them.

These findings enhance our understanding about the mechanisms by which contextual and collective factors affect mental health and well-being, independent of socio-demographic profiles (Page et al., 2007). As a consequence of these findings, we propose that the underlying mechanism shaping mental health outcomes in rural communities is connectedness, and that the impact of place on mental health is fundamentally exerted through the influence of identified factors that build on or impede one's overall level of connectedness. Higher levels of connectedness are associated with positive mental health outcomes, increased psychological well-being (Berry & Shipley, 2009), and reduced suicide ideation (Daniel & Goldston, 2012; Opperman, Czyn, Gipson, & King, 2015). Connectedness has been positively associated with improved mental health (Pachucki, Ozer, Barrat, & Cattuto, 2015; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000) and improved outcomes for adolescents with respect to substance abuse, mental health and well-being, and academic performance (Bond et al., 2007).

The model proposed by Macintyre and colleagues (Macintyre, 1997; Macintyre et al., 2002) provides a framework within which variables relating to mental health in rural communities can be conceptualized and understood. However, this qualitative study was limited to four towns and one key set of informants (those with expertise pertaining to mental health), and so the findings may not be generalizable to settings outside this context. In addition, it is likely that the underlying mechanisms by which compositional, contextual, and collective factors interact, change over time. Longitudinal mixed-method research that includes resident groups, using the Macintyre et al. model would provide insight into how these factors interact in a setting that is subject to



prolonged social, demographic, economic, and cultural change.

## Conclusion

The rates of suicide for particular population groups in certain rural areas of Australia are alarmingly and disproportionately high (AIHW et al., 2014). Despite being well documented, understanding of these disparate rates of suicide and issues relating to mental health and wellbeing in rural and remote communities remains limited (Judd et al., 2012). Research to date has revealed a number of important issues, including the heterogeneity that exists within and between rural communities and the need to focus on the impact of place over location *per se*, in understanding the mental health experience of residents of small rural communities. Macintyre et al.'s (2002) framework provides three levels of variables for explaining the way in which features of place contribute to health outcomes: compositional, contextual, and collective. The findings of this study, based in two high- and low-rate suicide towns, reinforce the importance of recognizing rural communities as being heterogeneous and the need for small-scale qualitative analysis to access information that is not easily amenable to quantitative enquiry. Contextual and collective factors provided important insight into the diverging mental health pictures between these four communities. Consideration of the mechanisms by which these factors are thought to affect mental health outcomes led to the proposal of a theoretical enhancement to the existing model, which emphasizes the importance of connectedness.

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### Author Biographies

**Jessica Collins**, Dr (Clin Psych), works in organisational psychology in a telecommunications company in Australia.

**Bernadette M. Ward**, PhD, is a senior research fellow in the School of Rural Health at Monash University, Bendigo, Australia.

**Pamela Snow**, PhD, is a professor and a head of the Rural Health School at La Trobe University, Bendigo, Australia.

**Sandra Kippen**, MA, is a social researcher in the School of Rural Health at Monash University, Bendigo, Australia.

**Fiona Judd**, MD, FRANZCP, is a professorial fellow in the Department of Psychiatry at the University of Melbourne, Australia.