



## Understanding the Mental Health of Rural Young Adults: Risk and Protective Factors

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### Abstract

**Objective:** Psychological distress is a serious concern for all young people, with an estimated one in four young Australians living with a mental disorder. In rural communities young adults may face greater challenges in addressing mental health concerns than their urban counterparts with factors such as social stigma, limited availability of services, problems recognising symptoms and confidentiality concerns being significant barriers. Addressing the determinants of young people's mental health is crucial if they are to fulfil their potential and contribute fully in their communities. This presentation will describe risk and protective factors for psychological distress among young rural adults.

**Methods:** Data from the Australian Rural Mental Health Study were analysed, with young adults aged 18-35 completing four surveys regarding mental health and wellbeing over a period of five years. Predictors of psychological distress for young rural adults were determined using generalised linear mixed models.

**Results:** For respondents aged 18-35 years, the strongest predictor of psychological distress across the five years of data collection was unemployment, with findings suggesting that this was independent from its economic value. Unemployment increased the odds of distress by 12-fold even after controlling for key correlates including financial position, gender, and relationship status. Key protective factors included social support, sense of community and level of social involvement, while increased alcohol use was a risk factor for distress.

**Conclusion:** Opportunities for rural young people to connect formally and informally with their community is crucial to mental health. Supporting improved mental health is not exclusively the domain of specialised clinical and community-based mental health services (although these services are important), but also that of the diverse sporting, social, cultural, educational, religious, and vocational groups that operates within rural communities. This highlights the importance of holistic and integrated approaches in promoting mental health.

### Keywords

Mental health; Rural; Young adults; Unemployment; Protective factors

### Introduction

Mental illness is a serious concern for all young people, with an estimated one in four young Australians living with a mental disorder [1]. The prevalence of mental disorders is greater during youth than at any other time point along the life span [2]. Poor mental health is strongly related to physical health and developmental concerns in young people, as well as high rates of disability, school failure, impaired or unstable employment, and poor family and social functioning [3]. Addressing the determinants of young people's mental health is crucial if they are to fulfil their potential and contribute fully in their communities. Young people are less likely than older people to seek help for concerns related to their mental health [4]. In rural communities young adults may face even greater challenges than their urban counterparts in addressing mental health concerns with factors such as social stigma, limited choice of and access to services, costs of treatment, problems recognising symptoms, confidentiality concerns and fear being significant barriers.

More than ever the young adult life stage is important, the time between adolescence and adulthood is lengthening and characterised by diversity of life paths and timing of milestones, such as the increasing average age of leaving the parental home [5], marriage and childbirth [6]. Therefore, it is argued that young adults be considered within their sociological and contemporary context in order to fully understand the mental health of young adults, encapsulating the time period where many life events and transitions occur.

Experiences of mental illness are closely related to socioeconomic and cultural factors such as employment, alcohol use and social capital. This paper assumes a holistic model of mental health, in which physical, social, cultural, economic and environmental factors are intrinsically linked with mental health problems [7]. It draws on data analysis from the ARMHS in providing an empirical understanding of the relationships between psychological distress and a range of potential risk and protective factors for rural young adults' mental health including employment, social connectedness, and alcohol use. This paper aims to understand the correlations between young adults' reported levels of psychological distress and other demographic, socioeconomic or cultural factors, and to consider how these relationships might inform mental health promotion in rural communities.

### Methodology

#### Participants

Participants in this analysis were part of the Australian Rural Mental Health Study (ARMHS). The purpose of ARMHS was to explore factors associated with mental health and wellbeing amongst residents of rural and remote Australia. The methodology is described in [8]. Following baseline data collection, participants were offered follow-up surveys on three additional occasions: 1 year, 3 years and 5 years after baseline. ARMHS received ethical approval from the relevant Human Research Ethics Committees and all participants provided written informed consent to take part in the study.

#### Measures

The outcome for this study was psychological distress; this is a common indicator of mental health and population wellbeing.

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Psychological distress was measured using the K10 Psychological Distress Scale that measured the frequency of ten symptoms of distress over the past four weeks, each assessed on a five-point scale [9]. Scores ranged from 10-50.

Age, gender, marital status, employment status and perceived financial hardship were self-reported. Employment was defined as being engaged in any paid work during the previous month, and also included students, carers, and volunteer workers.

Community involvement was measured by the Berkman Syme Social Network Index [10]. The Interview Schedule for Social Interaction was used to measure availability of interpersonal support [11]. The Sense of Community Index was used to measure the feeling of belongingness in the local community [12]. Alcohol use was measured using the Alcohol Use Disorders Identification Test [13].

### Statistical analysis

Generalised linear mixed models were used to explore factors associated with elevated psychological distress over the five years of the ARMHS study. The K10 was the outcome variable, with scores dichotomised to “low distress” (scores 10-15) and “elevated distress” (scores 16-50), as in previous research [1].

Participants at least completing one ARMHS survey were included in the analysis (baseline, 1, 3, or 5 years). Separate generalised linear mixed models were conducted to explore the relationship between each predictor variable and psychological distress over the period of the ARMHS study, taking multiple study waves into account. All variables were then entered into a multivariate model to explore their independent effect when all other predictor variables were adjusted for. Data were analysed using Stata (Release 11; College Station, TX: StataCorp LP).

### Findings

At baseline there were 284 ARMHS respondents aged 18-35 (10.8% of the total sample). Across the four ARMHS waves there were a total of 502 responses from this age group, with respondents completing an average of 1.8 surveys across the five-year period.

The unadjusted and adjusted correlates of elevated distress are presented in Table 1. The strongest correlate of distress was

unemployment, which increased the odds of elevated distress by 23-fold in the unadjusted model and by 12-fold in the adjusted model. All markers of social support and involvement were also significant; in the adjusted model; higher perceived social support decreased the odds of distress by 43% for each one-point increase on the scale, while higher sense of community decreased the odds of distress by 22% for each one-point increase. Compared in having low social involvement, those with medium-high social involvement had 80% lower odds of distress, and those with high social involvement had 90% lower odds of distress. Each one-point increase on the alcohol use scale increased the odds of distress by 10% in the adjusted model only. While female gender increased the odds of distress on a univariate basis, this was no longer significant when other variables were controlled for.

### Discussion

The findings showed that, while there were a number of important factors associated with psychological distress, unemployment stood out as having a particularly strong relationship with psychological distress among young rural adults. Secondly, the findings suggested the importance of relationships and social activities in local communities to identity-formation among rural young adults, as a mean in achieving and maintaining good mental health. The analysis also confirmed findings from previous studies linking higher levels of alcohol use to higher incidence of psychological distress [14].

### Employment and mental health

The findings indicated a significant relationship between unemployment and psychological distress for rural young adults, suggesting that those who are unemployed are more likely to experience distress. This supported the findings from other studies that highlighted the relationship between unemployment and poor mental health outcomes [15]. The findings also offered insights into the ways by which the young adults value employment. In the present analysis, unemployment was a significant predictor of distress independently of financial status, while financial status itself did not have a significant relationship with psychological distress. In addition, the social support variables appeared to moderate the univariate relationship between unemployment and distress, with the odds ratio reducing from 23 in the unadjusted model to 12 in the adjusted model. It seems, therefore, that young people value employment for its

Table 1: Unadjusted and adjusted correlates of elevated distress, OR (95% CI).

	Unadjusted	Adjusted
Female gender	1.16 (0.43-3.10)	2.37 (0.80-7.01)
Unemployment	23.70 (5.23-107)**	12.41 (2.12-72.46)**
Single relationship status	3.67 (1.61-8.40)**	0.51 (0.16-1.57)
Alcohol use	1.10 (1.01-1.21)*	1.10 (1.00-1.21)*
Perceived social support	0.42 (0.31-0.57)**	0.57 (0.41-0.79)**
Sense of community	0.69 (0.59-0.81)**	0.78 (0.65-0.92)**
Level of social involvement		
Low	1.00	1.00
Medium	0.28 (0.09-0.89)*	0.46 (0.14-1.49)
Medium high	0.11 (0.03-0.37)**	0.20 (0.05-0.83)*
High	0.03 (0.01-0.18)**	0.10 (0.02-0.64)*
Financial position		
Prosperous	1.00	1.00
Comfortable	1.04 (0.37-2.90)	0.53 (0.19-1.46)
Just getting along/poor	2.22 (0.64-7.68)	0.69 (0.20-2.36)

\*\*  $p < 0.01$ , \*  $p < 0.05$

capacity to support social and community connections and perhaps formulation of identity, which may account for the moderating effect observed in the adjusted model. This addresses an important question identified in the research of Reine et al. in which it was shown that unemployment impacts more on young people's psychological health than adults, despite the substantial financial responsibilities older people have [16].

### **Sense of community, social support, social involvement and mental health**

The findings highlighted the protective nature of social involvement and social support. Social and community connections were shown to be particularly important for the mental health of rural young adults. The social capital of rural communities including social connections, trust, appreciation and knowledge of 'place', as well as community engagement could be a contributing or potential resource that provides personal and community benefit. Previous research has demonstrated that interventions should be aimed at improving individual social capital and doing so would have a flow-on effect that contributed to the wider community [17]. This would be particularly useful in health promotion and in increasing mental health literacy. This operationalizes social capital as an interaction between community and individual resources [18]. It is vital for health services to work from 'within' communities while designing service delivery. Having local knowledge about the intricacies of how rural communities operate is the key to success and helps to uptake an intervention or service. Engaging local employers, councils and community groups in such a process will be vital to any successful implementation. It is recommended that further research explores in more detail about these local intricacies and cultural characteristics of areas with high youth unemployment. As part of this a detailed examination of workforce dynamics would also be needed to be explored in order to distinguish how young adults can participate and become engaged in their local labour market. Approaches such as co-production may result in solutions that are acceptable to employers, communities and young adults [19]. For example, there are likely to be differences in how different employers can respond and engage young people in small businesses and primary industries.

### **Alcohol use and mental health**

As predicted in the literature, high levels of alcohol use were associated with a higher likelihood of psychological distress. Previous research has shown that high alcohol use is associated with adverse life events and that there are particular links between psychological distress, alcohol use and interpersonal conflicts, which is confirmed through the findings of this analysis [20]. Importantly, the finding that revealed that the higher levels of psychological distress tends to coincide with higher levels of alcohol use for rural young adults, alongside factors such as employment and social involvement, suggested the importance of complex, multi-modal approaches in improving mental health outcomes. Understanding the relationship between psychological distress and alcohol use is important, and assessing the relationship between this and an individual's capacity to feel rewarded and purposeful in society is key within a social model of health.

These findings suggested that the interventions which aimed to engage young adults in employment or other social activities are intrinsically connected to the development of positive mental health and reduction of the likelihood of experiencing psychological distress. This therefore, sets a challenge for the various stakeholders

within sectors such as employment, industry, health, education, welfare, sport, arts and recreation to collaborate and draw on existing community strengths.

### **Strengths and limitations**

This study provided a unique insight into the experiences of rural, remote and very remote Australian populations over time. As the study included multiple waves, it provided valuable longitudinal data. Further, ARMHS targeted rural, remote and very remote populations, with 28 percent of respondents living in remote or very remote locations. This deliberate skewing towards more remote populations offered a rare source of data for better understanding the enablers and challenges for good mental health in rural settings.

As a study conducted in rural, remote and very remote New South Wales, Australia, consideration needs to be given to the generalizability of the findings to other contexts. It is, however, likely that, given the similar issues, infrastructure, resources and programs throughout Australia, that at the very least the findings are applicable nationally to rural and remote settings.

A limitation of the present analysis is that it does not demonstrate causality between factors. For example, the findings reported here illustrate a clear statistical relationship between unemployment and psychological distress, but the determination whether poor mental health leads to lower levels of employment or whether unemployment leads to poor mental health outcomes cannot be determined from this study (or whether both of these scenarios are true). Further research is required to better understand the causal links and interactions between the factors which have been shown significantly relating psychological distress.

### **Conclusion**

Factors such as employment, social support, community involvement and levels of alcohol use have been shown here to be intrinsic to people's experiences with psychological distress. For young rural adults, the relationships between these factors are particularly pronounced, highlighting the importance of holistic and integrated and sustained approaches to health and wellbeing. Structural factors, including environmental, economic and social changes, continue influencing or impacting the lives of rural young adults, making it important to understand the links between social connectedness, work and mental health.

Mental health does not stand alone. Improving the mental health of rural young people, who are amongst the most likely to experience mental health problems, is not just a responsibility for specialist mental health services and agencies [1]. Sporting clubs, cultural groups, social service clubs, special interest groups, education providers, training services, employers, religious groups, and peer groups are examples of the existing mechanisms by which young people may experience greater community and social connectedness – and therefore better mental health. Having access to specialist support and treatment services for those young people experiencing mental distress is essential, but minimising mental distress and promoting positive mental health is connected to their broader experiences of community and identity within their society.

This paper has highlighted the importance of employment to young rural adults' mental health. The strong relationship between unemployment and psychological distress has implications for economic development, employment, education and training policy

and programs targeting rural young people. Partnerships and capacity building strategies bringing together service providers, community groups and perhaps most importantly, young adults themselves, offer opportunities to maximise the use of existing resources and social capital in the co-production of solutions. This study suggests the need for an integrated and holistic approach for the mental health and employment issues, which have been the responsibility of separate departments within government systems traditionally. It highlights the need for education, employment, welfare and health sectors to cooperate more closely, recognising that the outcomes sought by each sector are interwoven.

#### Authors' Contributions

The contributions of each author were as follows: TH 30%, JR 30%, KD 30%, DP 10%.

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#### Disclosures

The authors declare no competing interests.

#### References

1. Slade T, Johnston A, Teesson M, Whiteford H, Burgess P et al (2009) The mental health of Australians 2. Report on the 2007 National Survey of Mental Health and Wellbeing. Department of Health and Ageing, Canberra.
2. Gulliver A, Griffiths KM, Christensen H (2010) Perceived barriers and facilitators to mental health help-seeking in young people: A systematic review. *BMC Psychiatry* 10:113.
3. McGorry PD, Purcell R, Hickie IB, Jorm AF (2007) Investing in youth mental health is a best buy. *Med J Aust* 187: 5-7.
4. Rickwood DJ, Deane FP, Wilson CJ (2007) When and how do young people seek professional help for mental health problems? *Med J Aust* 187: 35-39.
5. Australian Bureau of Statistics (2009) Home and away: The living arrangements of young people. Canberra.
6. Coast E (2009) Currently cohabiting: Relationship attitudes, expectations and outcomes. Fertility, living arrangements, care and mobility: Understanding population trends and processes (Volume 1). Springer Science & Business Media, Berlin, Germany.
7. Beresford P (2002) Thinking about 'mental health': Towards a social model. *JMH* 11: 581-584.
8. Kelly BJ, Stain HJ, Coleman C, Perkins D, Fragar L et al (2010) Mental health and well-being within rural communities: The Australian rural mental health study. *Aust J Rural Health* 18: 16-24.
9. Kessler RC, Andrews G, Colpe LJ, Hiripi E, Mroczek DK et al (2002) Short screening scales to monitor population prevalence and trends in non-specific psychological distress. *Psychol Med* 32: 959-976.
10. Berkman LF, Syme SL (1979) Social networks, host resistance and mortality: A nine year follow-up study of Alameda county residents. *Am J Epidemiol* 109: 186-204.

11. Henderson S, Duncan-Jones P, Byrne DG, Scott R (1980) Measuring social relationships: the interview schedule for social interaction. *Psychol Med* 10: 723-734.
12. Chipuer HM, Pretty GMH (1999) A review of the sense of community index: Current uses, factor structure, reliability and further development. *J Community Psychol* 27: 643-658.
13. Saunders JB, Aasland OG, Babor TF, De La Fuente JR, Grant M (1993) Development of the alcohol use disorders identification test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption-II. *Addiction* 88: 791-804.
14. Allan J, Clifford A, Ball P, Alston M, Meister P (2012) 'You're less complete if you haven't got a can in your hand': Alcohol consumption and related harmful effects in rural Australia: The role and influence of cultural capital. *Alcohol Alcohol* 47: 624-629.
15. Dorling D (2009) Unemployment and health. *BMJ* 338: b829.
16. Reine I, Novo M, Hammarström A (2004) Does the association between ill health and unemployment differ between young people and adults? Results from a 14 year follow-up study with a focus on psychological health and smoking. *Public Health* 118: 337-345.
17. Rocco L, Suhrcke M (2012) Is social capital good for health? A European perspective: WHO regional office for Europe Copenhagen, Denmark.
18. Carpiano RM (2006) Toward a neighbourhood resource-based theory of social capital for health: Can Bourdieu and sociology help? *Soc Sci Med* 62:165-175.
19. Morton M, Paice E (2016) Co-production at the strategic level: co-designing an integrated care system with lay partners in North-west London, England. *Int J Integr Care* 16: 2.
20. Inder KJ, Handley TE, Fitzgerald M, Lewin TJ, Coleman C, et al. (2012) Individual and district-level predictors of alcohol use: Cross sectional findings from a rural mental health survey in Australia. *BMC Public Health* 12: 586.

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