Farmer suicide: data from the Queensland Suicide Register (QSR) and psychological autopsy case studies

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Background

Farmer suicide has become an issue of concern in Australia\(^1\).\(^2\).\(^3\). Researchers have suggested a number of contributory factors to farmer suicide including personality characteristics (higher level of conscientiousness and low neuroticism in farmers); worry associated with economic viability of a farm; enmeshment within small and isolated communities; and, the need to “save face” in front of community members\(^4\). Occupational stresses such as long work hours, as well as other factors such as social isolation, aging population, and poor access to health care services\(^5\) have also been suggested for the high burden of suicide in farmers/agricultural workers. Climatic variability is also a factor that may adversely impact mental health and augment the risk of suicide\(^1\).\(^2\).\(^3\). The main difficulty with previous research on farmer suicide is that much of it is speculative, possibly due to a lack of in-depth data on suicide deaths among farmers. In this study, we utilise data from the Queensland Suicide Register (QSR) to examine characteristics associated with farmer suicide. Specifically, we seek to identify whether the characteristics of farmer suicide differ from those employed in non-farm related occupations. We also present a qualitative examination of a number of farmer suicide case files to provide a closer examination of the individual factors that preceded death by suicide.

Methodology

For the proposed study, we used the term “farmers” or “farm workers” to refer to those employed in ‘farm-related occupations’. Our definition of farm-related occupations is inclusive of farmers who work and/or live on a farm, including farm hands, farm labourers, farming assistants, individuals involved in seasonal work (such a fruit pickers) where the position has been maintained for longer than 6 months and employment is continual (i.e. employment for more than two continual seasons of work), and individuals employed for any farming related tasks (e.g. as a shearer, cotton-picker, harvester etc). We excluded from the definition individuals living on a farm but indicated as ‘unemployed’, casual workers not employed on a farm or in a ‘farming’ role for 6 months or more, and casual workers residing in an urban location.

We investigated the employment records of all suicides contained in the QSR, excluding cases with unknown occupations, those who were unemployed, not in the labour force, and those who were disabled. Suicide cases classified as being in a farm-related occupation [fulltime, part-time/casual/ employed (unknown mode), or retired] \((N=203)\) were compared to non-farm related suicides using a chi-square test of difference. We also conducted a qualitative analysis of farmer suicide by review of police case files and psychological autopsy cases. The period under investigation was 1990 to 2007.

Results

Quantitative investigation

Compared to non-farm related occupations, a greater proportion of farmer suicides were significantly more likely to be male \((85\% \text{ vs. } 96\%)\), \(\chi^2(1)=17.70\), \(p<0.001\). There were also significant age differences, with farmer suicide being more equally distributed throughout the life-span than non-farmer suicides. Unlike non-farmer suicides, where hanging was the major method of suicide \((32.9\%)\), farmer suicides were more likely to die by firearms \((53.2\%)\). \(\chi^2(4)=160.1, \ p<0.001\). In addition, farmers were less likely to leave a suicide note compared to non-farmer suicides \((24.6\% \text{ vs. } 42.2\%)\), \(\chi^2(2)=24.77, \ p<0.001\) or to have made previous suicide attempts \((11.8\% \text{ vs. } 22.1\%)\), \(\chi^2(1)=12.1, \ p<0.001\). A similar proportion of farmers and non-farmers had a psychiatric disorder at the time of death \((31.5\% \text{ and } 32.1\% \text{ respectively})\). There were no significant differences for the presence of life events preceding suicide deaths in either group. However, farmer suicide cases had a higher proportion of relationship \((11.3\% \text{ vs. } 10.4\%)\) and interpersonal conflict \((8.4\% \text{ vs. } 7.2\%)\), as well as financial \((9.3\% \text{ vs. } 8.5\%)\) and work- \((9.8\% \text{ vs. } 7.1\%)\) related problems than non-farmer suicide.

Qualitative investigation

Our qualitative review of farmer suicide cases revealed that psychiatric illness did not appear to be more prominent in next-of-kin reports for farmers versus non-farmers, nor did specific information on work-related factors (see Case examples 1 & 2). However, it is important to note the lack of contextualised questions regarding work-related stressors in investigations of farmer suicide.

Case example 1: 59 years; married. Grazier employed full time. Died by firearm rifle wound to the head. Found at own residence. Had stomach ulcer; thought he had cancer. No mental condition. Deceased was stressed about the running of several farms. His wife claimed that deceased was always concerned with the properties. With the concern of the properties and his health, he appeared on edge.

Case example 2: 24 years; separated. Farmer employed full time for 3 years. Living with parents. Died from rifle wound to the head. Mild discontent with work. No suicide note. No previous attempts; no previous threats to commit suicide. Seeing GP for depression (depression medication, Prozac). Recent relationship separation 4 days prior to death. Had seen GP 3 prior to death. Undertaking part time agricultural studies (Ag Science Degree); good/very good in University performance.

Conclusions

Based on the authors inclusion/exclusion classification system of farmers and farm workers, this study identified 203 cases of farmer suicide from the Queensland Suicide Register (QSR) for the period 1990-2007. Consistent with other studies conducted over the past decade on farmer suicide mortality\(^4\),\(^5\), our study found that the age-distribution of farmer suicides compared to non-farmers was significantly more likely to reflect the whole working age period, and beyond. Since there is no mandatory retirement age for farmers, suicide prevention initiatives should therefore target the whole of the working age population of farmers, perhaps with an emphasis on 15-24 year olds and 65 plus years as supported by our current and previous findings\(^6\).

Our results also indicated no significant differences between farmers and non-farmers in psychiatric morbidity, a finding supported by another UK study\(^6\), which reported in fact, a lower prevalence of psychiatric morbidity in farmers than in the general population. The significantly higher proportion of suicide deaths by firearm for farmers versus non-farmers in our study has also been noted in other Australian and UK studies\(^7\),\(^8\). This finding requires serious attention in suicide prevention, since it has been reported that there has been a decrease in suicide by firearms within the context of general rural suicide trends\(^9\),\(^10\). Easier access to firearms, however, is clearly a difficult-to-change target for suicide prevention in this occupation, since firearms are pivotal to the everyday-on-the-job tasks of a farmer. Our finding that farmers were less likely to leave a suicide note compared to non-farmers, may be indicative of farmer’s having more ‘functional attitudes towards death’\(^11\). This pragmatic approach to death specifically, may lessen the importance and need of the deceased to provide any form of communication or explanation about his actions. Our qualitative findings supported suggestions by Malmberg and colleagues\(^9\) that accumulated stress resulting from a combination of ongoing factors may contribute to farmer suicide\(^11\). Future research is required to identify the causal factors and the pathways that lead to ongoing and increasing distress in farmers, in order to tailor more targeted suicide prevention at this occupational group.

References