

The effect of the 1996 'beef crisis' on depression and anxiety in farmers and non-farming controls

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SUMMARY

This paper looks at the effect of the 1996 'BSE crisis' on the mental health of farmers from one semi-rural practice in North Yorkshire. In 1996, Hospital Anxiety and Depression (HAD) scales were sent to farmers and controls who had participated in a previous study in 1994. Comparative data for the two groups for the two years were obtained and analysed. The data showed that, despite fears raised as a result of the 'BSE crisis', the overall rates of depression and anxiety fell in both groups between 1994 and 1996, with the rates falling significantly more in the control group. However, the farmers were still more depressed and anxious than the controls, and those farmers that had been depressed or anxious in 1994 were more likely to be depressed or anxious in 1996. A longer period of time may be needed to determine the effect of the beef crisis on the mental health of farmers.

Keywords: farmers; depression, anxiety; psychological morbidity; bovine spongiform encephalopathy; Creutzfeldt-Jakob disease.

Introduction

DESPITE farmers having the fourth highest occupational group for suicide,¹ they are not significantly more depressed or anxious compared with controls.² Following the announcement of the identification of a new strain of Creutzfeldt-Jakob disease (CJD) in March 1996, farmers were told that any beasts over the age of 30 months were to be slaughtered, and conflicting reports as to compensation were spread; there were fears that farmers would become financially crippled and develop mental health problems. We sought to determine whether or not this was the case.

Method

The study was carried out in a semi-rural practice in North Yorkshire. Subjects were selected by their inclusion in the 1994 survey.² Farmers were either the 'owner or the tenant of a farm, male and aged 26–65'; they were a mix of arable, beef, and dairy farmers. Controls were age matched, male, and in current employment unrelated to agricultural work. As a result of death and moving away from the practice, the original groups of 154

were reduced to 124 farmers and 110 controls. All subjects were sent a Hospital Anxiety and Depression (HAD) scale³ in June 1996 with an accompanying letter. Within two weeks, non-responders were sent a further questionnaire. Those with significant scores were followed up and psychiatric morbidity treated accordingly. The 1996 data were compared with those from 1994.

Results

One hundred and six replies were received from farmers and 93 from controls (response rates of 85% for both groups). Anxiety and depression were considered together because separate analyses produced results similar to the combined ones presented here. A patient suffering from either depression or anxiety (HAD ≥ 8) was considered a positive result.

The difference between rates of depression and anxiety in farmers and controls in 1994 are still present in 1996 (Table 1). Testing the unpaired difference in proportions showed that 18.9% more (95% CI = 7.3–30.5) farmers than controls were suffering from anxiety or depression in 1996. The results of paired tests of the difference in proportions are shown in Table 1.

The proportion of farmers suffering from anxiety or depression decreased by 3.8% (95% CI from 12.4% decrease to 4.9% increase) between 1994 and 1996, indicating a non-significant change. The proportion of controls suffering from anxiety or depression decreased by 8.6% (95% CI from 0.9% decrease to 16.3% decrease), suggesting that there had been a slight reduction in the proportion of anxiety and depression in the control population.

Logistic regression was performed to see the effect of being a farmer on the likelihood of being depressed or anxious in 1996, adjusting for the effect of being depressed or anxious in 1994. The odds ratio for depression or anxiety in 1996 associated with being a farmer is 2.58 (95% CI = 1.14–5.87), and with being depressed or anxious in 1994, 15.78 (95% CI = 7.12–34.99). Thus the results show that being a farmer in 1994 increases the chance that a subject would be depressed or anxious in 1996, although a HAD score of ≥ 8 in 1994 for depression or anxiety increases the probability much more.

Discussion

The design of this study was a pragmatic one. Because we already had data on the subjects' 1994 HAD scores, a unique opportunity existed to measure the effect of an unexpected life event given the limitations of this study owing to the small sample size and its location in one geographical area.

These data show that the differences in anxiety and depression between farmers and controls found in 1994 still exist, but that the factors that occurred between 1994 and 1996 seem to have had little effect on their depression and anxiety scores, although the reduction in depression and anxiety is much less than that seen in controls. The common perception that the mental health of farmers has suffered as a result of the beef crisis is not borne out by these data. This is either a 'real' finding or the methodolo-

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Table 1. Proportions of patients suffering from anxiety or depression, and paired data in 1994–1996.

	Farmers (n = 106)			Controls (n = 93)		
	1994	1996	No. of pairs	1994	1996	No. of pairs
Number (%) suffering from anxiety or depression (HAD \geq 8)	40 (37.7%)	36 (34.0%)		22 (23.6%)	14 (15.1%)	
HAD \geq 8	Yes	Yes	27	Yes	Yes	11
HAD \geq 8	Yes	No	13	Yes	No	11
HAD \geq 8	No	Yes	9	No	Yes	3
HAD \geq 8	No	No	57	No	No	68
Difference in proportions between 1994 and 1996			-0.038			-0.086
Confidence interval			-0.124 to 0.049			-0.163 to -0.009

gy used in this study was not sophisticated enough to prove these suspicions. One possibility is that a longer period of time is needed for significant changes in mental health problems to be detected by the HAD scale. The long-term effects of the beef crisis (the European Community ban on the export of British beef has only just been lifted) on the mental health of farmers remains unknown, as does the short-term effect on mental health problems other than depression and anxiety.

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