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**An exploratory study investigating the help seeking attitudes of farmers : the relationship between stress, coping, attitudes towards seeking help and psychological well being.**

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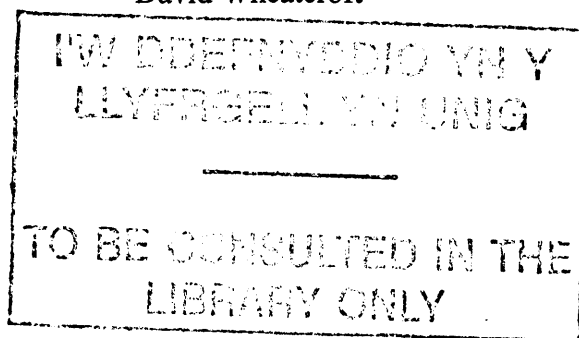
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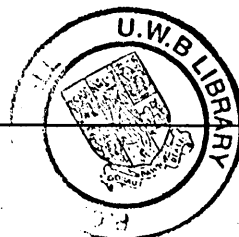
**An Exploratory Study Investigating the Help Seeking Attitudes of Farmers: The  
Relationship between Stress, Coping, Attitudes towards Seeking Help and  
Psychological Well Being**

David Wheatcroft



Submitted in accordance with the requirements for the Doctorate of Clinical Psychology

2000



## **Abstract**

Farming has been identified as one of the most stressful occupations within modern society (Mayer, 1997). It has been argued that this high level of stress contributes to the high level of suicide observed among this population group. American research has addressed this issue by exploring the relationships between stress, coping and help seeking behaviour. British studies have not previously made a full consideration of these factors and have been restricted in their ability to identify relationships between stressors, psychological well being, coping and attitudes towards seeking help among farmers. This research is an attempt to redress that imbalance.

The study was cross-sectional and consisted of two parts. Firstly, the quantitative component involved 129 farmers completing a battery of questionnaires used to determine the demographic profile of respondents; the presence of stress; patterns of coping behaviour; barriers against seeking help and individual attitudes towards seeking help. Secondly, the qualitative component consisted of a semi-structured interview with eight participants exploring their views about stress, coping and help seeking in more detail.

Quantitative data were statistically analysed and discussed in relation to previous research findings. Qualitative data were grouped according to pre-defined themes and used to supplement quantitative findings.

Results indicated that demographic factors were not directly related to stress. Money worries and completing large amounts of paperwork were rated as the most stressful aspects of farming. Qualitative findings highlighted additional stressors relating to beliefs about individual levels of control over difficult circumstances, particularly relating to financial matters.

Results also indicated significant relationships between the use of emotion focussed coping, seeking social support as a form of coping and stress levels. Patterns of coping behaviour were not predicted by demographic factors. Results indicated that social support acts as a buffer in reducing the effects of stress among this population group. Social support was also found to be a useful predictor of help seeking behaviour. Individual decisions to seek help for problems were not influenced by practical barriers but were related to attitudinal beliefs about seeking help. Financial problems were identified as the most significant factor that was likely to lead to future help seeking behaviour.

The implications of these findings were discussed in relation to clinical practice and future research, particularly in the context of offering preventative intervention for reducing high levels of suicide among the sample group.

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**An Exploratory Study Investigating the Help Seeking Attitudes of Farmers: The Relationship between Stress, Coping, Attitudes towards Seeking Help and Psychological Well Being**

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## **1.0 Introduction**

Farming has been ranked within the top ten percent of stressful occupations (Heffernan, 1986; Mayer, 1997; McGregor, Willock & Deary, 1995). In Britain, over the past ten years farmers have faced a number of stress inducing crises. These have included the Bovine Spongiform Encephalitis (BSE) scare and the development of the Common Agricultural Policy (CAP) (Binns, Barnes, Blakey, Bristol, Curwen, Fawcett, Handley, Morris, Slinger & Taylor, 2000). A causal relationship between the presence of such stressors and psychological well being has been documented (Matheny, Aycock, Pugh, Curlette & Cannella, 1986).

Hughes & Keady (1997) argue that stress accounts for the high levels of attempted and actual suicide among farmers. It has been identified that farmers have the fourth highest suicide rate of any occupational group (Kelly & Bunting, 1998). British studies exploring this behaviour have been limited to establishing demographic patterns of suicide. They have failed to account for individual differences between farmers in terms of their reactions to stress and the ways in which they cope with difficulties. As such, a review of the literature (Hawton, Simkin, Malmberg, Fagg & Harriss, 1998; Mayer, 1997) has revealed that a consideration of psychological factors involved in the stress process among farmers has been neglected. The current British literature does not address the reasons why farmers commit suicide. More importantly it does not identify what factors prevent farmers from seeking help for difficulties that they may be experiencing. In accounting for these factors it may be possible to offer interventions aimed at reducing the high rate of suicide among this occupational group.

Research conducted in the United States during the 1980s offered a complex analysis of stress and stress related behaviours among farmers by exploring the relationship between stress, coping and help seeking behaviour. Whilst developing a useful framework for explaining these behaviours, the extent to which these findings can be generalised between different cultures, for example from American research to British clinical practice, has been questioned (Gregoire & Thornicroft, 1998). As such, agricultural stress continues to be under-researched within the British literature.

This research is an attempt to redress that imbalance and will explore the relationships between stress, coping and help seeking among a sample of British farmers. This will be achieved firstly by defining the terminology; stress, coping and help seeking; secondly by exploring the relationship of these factors to each other and to

farmers, and thirdly, in considering all these factors, a model will be produced outlining their potential interactions and implications for clinical practice.

### 1.1 Stress

Definitions of stress (Lazarus & Folkman, 1984; Pervin, 1968; Taylor, 1986) and models outlining its origins and manifestations (Holmes & Rahe, 1967; Shinn, Rosario, Morch & Chester, 1984) have been conceptualised in terms of a relationship between an individual and their environment. Early 'response' models of stress were biologically orientated and only accounted for physiological changes observed in demanding situations (Cannon, 1932; Selye, 1956). Later, stimulus models of stress (e.g. Holmes & Masadu, 1974; Holmes & Rahe, 1967) identified the relationship in terms of physiological strain and psychological consequences. Such models can be criticised for being over simplistic and reductionist, as they do not account for individual differences, for example, cognitive variables such as appraisal in the stress process. Transactional models (e.g. Coyne & Lazarus, 1980; French, Rodgers & Cobb, 1974) of stress provide a more comprehensive account by establishing the presence of an interactive, two-way, relationship between an individual and their environment.

With the development of such models arose more comprehensive definitions of stress incorporating a number of factors including cognitive appraisal and coping (Corr, 1999; Fraise, 1996; Padfield, Roche, Crabbe & Martyn, 1997). One such definition is offered by Walker & Walker (1987) "...the process of appraising events (i.e. stressors) and reacting with personal distress (i.e. stress) in the absence of appropriate coping strategies" (p. 374). As this definition incorporates elements central to the contemporary psychological study of stress, and its effect on an individual's psychological well being, it will be adopted as the main definition of stress in this study.

Stress has been identified as a multi-dimensional phenomenon incorporating physical, behavioural and psychological components (Walker & Walker, 1987). Within each of these dimensions it is possible to identify factors associated with the presence of stress. These will now be considered.

#### *Physical manifestations of stress*

Physical reactions to stress have been associated with the 'fight or flight response' (Cannon, 1932), including changes to heartbeat, muscle tension and other somatic symptoms (e.g. lower back pain). The relationship between levels of stress and

prolonged physical ill health has been well documented (Syme, 1989). Among farmers it has been found that 50 per cent of all physical illness can be attributed to stress (Thu, Donham, Yoder & Ogilvie, 1990). Physical symptoms of stress among farmers have been found to include increased tiredness, back pain and other somatic problems.

### *Behavioural manifestations of stress*

A range of behavioural reactions to stress have been identified (Matheny *et al.*, 1986). These include restlessness, speech dysfluencies, sleep disturbance and avoidance behaviours. Behavioural consequences of stress within farmers include increased agitation and aggression, increased hostility towards their spouse or children and an increase in alcohol consumption (Walker & Walker, 1988). Other studies have not shown a significant relationship between stress and alcohol use in this group (Hsieh, Khan & Chang, 1989; Thelin, 1991). Stress related behaviour disturbance has been associated with the high levels of physical injury caused by industrial accident among this population group (Burnett, 1991; Gerrard, 1998). The literature fails to make a clear distinction as to whether stress is directly responsible for farm accidents or the extent to which it is a contributory factor in that process.

### *Psychological manifestations of stress*

The psychological symptoms of stress have been identified as increased feelings of irritability and agitation, narrowed perception, and concentration and attention deficits (Matheny *et al.*, 1986; Walker & Walker, 1986). Using a cognitive behavioural perspective, it has been identified that such factors are likely to lead to increased levels of depression and anxiety (Blackburn & Twaddle, 1996).

As such, prevalence rates of depression of between 12-35 percent have been found among farming communities (Belyea & Lobao, 1990; Husaini, James, Neff, Harrington, Hughes & Stone, 1980). Depression among farmers has been associated with feelings of hopelessness, a low sense of control and poor personal problem solving (Williams & Pollock, 1993). It has been identified that these feelings are likely to be further reinforced as the individual feels that they have failed themselves or their family (Heppner, Cook, Stroizer & Heppner, 1991). Such feelings are likely to challenge the individual farmer's beliefs about hard work and conformity to group (e.g. family) norms and values (Ford, 1981). Specific factors which have been identified as contributing to stress among farmers will now be explored.

### 1.1.1 Predisposing factors to stress among farmers

A large number of American studies (Belyea & Lobao, 1990; Eberhardt & Pooyan, 1990; Ellis & Gordon, 1990; Jeyne, 1979; Keating, 1987; Kenkel, 1986; Rosenblatt & Anderson, 1981; Thu *et al.*, 1990; Walker, Walker *et al.*, 1986; Walker & Walker, 1987; Weigel, 1981) and a smaller number of British studies (Burnett, 1991; Hawton *et al.*, 1997; McGregor, *et al.*, 1995) have identified specific factors that act as stressors among farmers. These are outlined in Table 1.

**Table 1.** Factors identified as eliciting high levels of stress in farmers

Identified stressors.	Stressor identified according to UK / American studies.	
	UK studies	American studies
Financial investment and risk	✓	✓
Irregular / unpredictable income	X	✓
Worries about market conditions	✓	✓
Personal illness	X	✓
Disease of livestock	X	✓
Working long hours	X	✓
Fuel / stock prices	X	✓
Multi generation family working together	X	✓
Relationship issues	X	✓
Machinery breakdown	X	✓
Modern technology	X	✓
Adverse / unpredictable weather	X	✓
Threat / actual injury to self	✓	✓
Geographical isolation	✓	✓
Time pressures	X	✓
Lack of help	X	✓
Government policy	✓	✓
Changing structure of farming	X	✓
Age	X	✓
Mixed farm enterprise	X	✓

Table 1 confirms that the origins of agricultural stress have been under-researched within the British literature. It is likely that differences in farming practice between the United States and the United Kingdom, for example, geographical dispersion and policy differences, render it difficult to make cross comparisons between these two groups.

While the above factors go some way to explaining the origins of farmer stress they do not account for differences in the way in which individuals respond to these stressors. By reviewing the mainstream literature investigating stress it is possible to

identify specific factors that may lead to individual farmers experiencing different levels of stress (Matheny *et al.* 1986).

Firstly, the effects of stress are cumulative. A positive relationship has been identified between the number of stressors and reported levels of stress (Holmes & Rahe, 1967). Secondly, a relationship between negative environmental factors (for example, economic deprivation) and stress has been identified (Brown & Harris, 1978). Thirdly, research has identified that only life events described as uncontrollable have a positive correlation with the onset of stress, resulting in physical and psychological distress (Hammen 1992; Suls & Fletcher, 1985). In accounting for individual differences (stress levels) among farmers it seems that the frequency, severity and the extent to which individuals can control their environment are likely to be key factors.

### 1.1.2 Levels of stress among farmers

American researchers have attempted to provide accurate records of stress levels experienced by farmers. However, a number of difficulties have been associated with defining and measuring stress (Pearlin & Schooler, 1981), which has made it difficult to say definitively what proportions of farmers are under stress. Previous studies exploring farmer stress have been largely dependent upon self-report measures. Using this method, Geller, Bultena & Lasley (1988) identified that 41.9 percent of farmers report being moderately or seriously concerned about stress levels and 22.5 percent report not being concerned about stress at all. The use of self report measures to record levels of stress has been challenged, particularly as there is a general lack of research exploring whether farmers are able to recognise symptoms of stress within themselves.

British studies have recorded high levels of stress among farmers in approximately 30 percent of cases (Hawton *et al.*, 1998; Hughes & Keady, 1996). However, measures of stress used in these studies are based on the number of individuals who report being worried about specific factors (e.g. money worries) rather than on formal measures. Recent research has identified that 25 percent of the general population are affected by stress, particularly within occupational settings (Easton, 2000). Taken with the previous findings of Geller *et al.* (1988) and Hawton *et al.* (1997) this would suggest that levels of stress are higher among farmers than the general population at large.



Published studies exploring prevalence rates of stress among farmers have failed to delineate individual perceptions as to the causes or severity of specific stressors. Few have explored the relationship between stress and coping, which will now be addressed.

## 1.2 Coping

Coping is the process by which stress is mediated and its effects on psychological well being are ameliorated (Kenkel, 1986; Pearlin & Schooler, 1981). Lazarus & Folkman (1984) define coping as “cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (p.141). It has been argued that coping strategies are not necessarily effective across all situations and therefore, the individual needs to be flexible and use different strategies in different settings (Lazarus & Folkman, 1984; Marotz-Baden & Colvin, 1986; McCrae, 1984). As such, a number of different forms of coping have been identified, which will now be reviewed and discussed.

### *Forms of coping*

Authors have differentiated between different coping strategies according to whether they are cognitive or behavioural (Cooper & Baglioni, 1988), problem focussed or emotion focussed (Lazarus & Folkman, 1984) and preventative or combative (Matheny *et al.*, 1986). Many of these have been further expanded to incorporate the notion of adaptive versus maladaptive coping (Milne, 1997). The literature documents a positive relationship between the use of maladaptive coping strategies (e.g. internal and emotion focussed) and a decrease in psychological well being. For example, Johnson & Sarason (1978) found that stress had a stronger association with depression and anxiety, among those who rated highly on external coping strategies, compared to those who rated highly on internal coping strategies. It has been found that there is an increased relationship between stress and maladaptive coping among American farmers (Hsieh, Cheng, Sharma, Sanders & Thiessen, 1989), with a particular reliance on external methods of control (Hook, 1987). The relationship between coping style and stress among British farmers has not been documented in the literature.

The identification of coping strategies in this categorical way has been challenged (Carver, Scheier & Weintraub, 1989). Carver *et al.*, (1989) have challenged the use of such categories as they reduce a diverse process (i.e. a large number of coping strategies) to a simplistic trait model (e.g. coping styles). In addition these distinctions

can be criticised as they do not specify whether one form of coping is more effective than another. A further criticism of these categories of coping is that they place the responsibility for stress management solely with the individual and do not account for important environmental factors, for example the extent to which individuals can control, or are controlled by outside forces.

In one of the few American studies exploring coping behaviour within farmers, Weigel & Weigel (1987) identified the use of four main coping strategies. These included: faith and attitude; fun and physical activity; talking with others; and cognitive / behavioural avoidance. While these findings add support to some of the main categories of coping identified above, they do not explore the relevance of these coping strategies to psychological well being. In addition they do not account for factors which may lead to differences between individuals and the ways in which they cope with difficulties. These factors will now be addressed.

#### *Factors influencing successful coping*

Seligman (1975) argued that an important factor determining an individual's ability to cope is their perceived ability to control a situation. Thus, once an incident is perceived as being outside of the individual's control this is likely to lead to a state of inaction and coping behaviour is likely to become inhibited. Seligman (1975) argued that this would ultimately lead to a state of learned helplessness where the individual becomes inactive, or unable to initiate change. This increases the impact of their situation and can result in depression.

Hinkle (1974) argues that important factors in coping are cultural beliefs about coping and support. Sociological and ethnographical studies of farmers' coping behaviour have identified that they live and work within a culture of 'privacy' (Mayer, 1997). Further research into this area has shown that farmers are strongly governed by the Protestant work ethic (Weber, 1965) where the prominent belief is one of 'getting on and getting the job done' and 'standing firm in the face of adversity' (Clowes 1997). Given this finding it would be expected that farmers either rely on their own resources for support and advice at times of difficulty or that they do not acknowledge the presence of such difficulties.

A number of specific forms of coping have been identified, and the extent to which these are shaped and influenced by variables external to the individual have been identified above. In addition, a number of internal features have been identified as influential in coping (Matheny *et al.*, 1986) including;

- ❑ The presence of specific cognitive skills
- ❑ Psychological robustness for coping with difficult situations
- ❑ Previous success at dealing with difficult situations
- ❑ Optimism that good things will happen in the future
- ❑ A sense of control over demands that difficult situations generate
- ❑ High levels of self esteem
- ❑ The presence of important life skills (e.g., assertiveness).

The extent to which individuals draw upon social support has been identified as an important factor influencing successful coping (Schwarzer & Leppin, 1991). The role of social support is important in researching agricultural stress, particularly as farmers have been identified as socially isolated. Furthermore this social isolation has been identified as playing a part in psychological disturbance among this population group (Barry, 1997; Gavel, 1997; Hughes & Keady, 1996; Pugh, 1996).

The evidence in favour of a role for social support influencing psychological well being among farmers is mixed. Recent research (Hawton *et al.*, 1997) has found that farmers have high levels of social contact. Others have argued that the strength of these social relationships has been reduced in the face of large numbers of farmers turning to alternative, often urban, sources of employment (Kennedy, 1978; Murray & Kupinsky, 1982; 1989). Mayer (1995) argues that the importance and strength of social networks among farmers is over emphasised and argues that farmers are naturally isolated and choose to remain so through fear of stigmatisation.

In their review, Pearlin and Schooler (1981) cite methodological problems associated with using the term social support. They argue that it does not specify what kinds of problem can be alleviated by support from within the individual's social system. While studies have shown that social support can act as a buffer against stress (LaRocco, House & French, 1980; Lin, Simeone, Ensel & Kuo, 1979), there is no clear understanding of how support networks operate or how effective they are.

Consequently, Pearlin & Schooler (1981) argue against the use of the term social support as it has become oversimplified and undervalued in research. Pearlin & Schooler (1981) postulate that the concept of social support has become synonymous with being part of a social network. As such, they argue that studies exploring the phenomena of social support have failed to appreciate this distinction and have not taken account of the frequency and strength of social relationships;

“support comes when people’s engagement with one another extends to a level of involvement and concern, not when they merely touch at the surface of each other’s lives.” (page 340). The influence of social support needs further investigation in the literature.

Models outlining the relationship between stress, coping and social support have been reported in the literature. The impact of these models and their relevance to farmers will now be discussed.

### 1.3 Models of stress, coping and social support

The earliest models accounting for the presence of stress were biological, and identified a causal relationship between stress and the development of physical illness. One such model was developed by Rahe & Arthur (1978) who proposed that stress would become manifest as physical illness and introduced the idea that it would be mediated by cultural beliefs, social support and past experiences of stress and illness. Although limited by its exclusion of cognitive factors, this model offers some explanation of the stress process in farmers. Thus, while a significant relationship has been found between stress and physical illness in farmers, attributions accounting for the onset of illness have not been explored in the literature.

In applying the model of Rahe & Arthur (1978) to farmers it is possible that cultural beliefs about stress, physical illness and coping will influence stress outcome. Particular beliefs which have been identified around working hard and dealing with problems and difficulties within their immediate environment may prevent farmers from recognising the physical symptoms of stress when they arise. This observation highlights the need for further research exploring the attributions that are made by farmers about their physical ailments.

Cognitive models have been proposed accounting for the relationship between stress, coping and social support (Lazarus, 1966; McGrath, 1970). These models have emphasised individual perceptions about the causes and management of stress. They have incorporated the concepts of control and responsibility and locate the individual as having a more interactive relationship within the stress process (Cooper & Baglioni, 1988). By combining these central constructs and by introducing a role for social support, Davis-Brown & Salamon (1987) have produced a cognitive model of stress for farmers. The ABCX model supposes that stressor events (A) interact with the individual’s ability for avoiding crisis (B) and their own self-definitions / experiences,

which are governed by social interactions (C). This produces a response to the stressor that either maximises or minimises the response to it (X). According to the Davis-Brown & Salamon (1987) model, stress occurs when demands outweigh the individual's capabilities of meeting the demand, causing a state of disequilibrium. Crisis occurs when the individual, in the absence of social support / adequate coping is unable to restore the balance of control.

Bennett (1987) offers an alternative model of stress and coping by drawing on the life cycles approach. This approach suggests that life changes are transient and produce different outcomes for individuals at different times. Bennett (1987) proposed the 'farm enterprise cycle' where it is presupposed that stress is governed by the individual's place in terms of a cycle of business development. He identified four stages along a continuum of business growth; establishment, development, maintenance and redevelopment. The model postulates that stress levels are likely to be higher for individuals at lower stages in the cycle. In support of this, research has found that younger farmers are more likely to be in the establishment phase and face greater levels of economic hardship and higher levels of stress (Bultena, Lasley & Geller, 1986; Harl, 1987; Lasley, 1987).

Factors associated with stress and individuals among higher stages of business development have not been documented in the literature. Rather than being a long term linear development, it is more likely that business growth is constantly going through these four stages, therefore stress is likely to be a repeated factor at different points in time. This observation has not been considered in the literature. In addition, the model presupposes that demographic factors such as age and length of farming experience can be used as predictor variables for stress. A strong reliance on these factors allows little scope for psychological processes, (for example, coping) in the development of stress.

A criticism of the biological, cognitive and life cycle models is that they all locate farm stress within a vacuum. None of the models reviewed accounts for additional stress generated by factors outside of farming, for example family / relationship difficulties. It has been found that the number of life events (external to farming business) increases and exacerbates levels of stress in farmers (Watkins & Watkins, 1984). Such an observation supports the previous findings of Holmes & Rahe (1967) who identify a cumulative relationship between an increased number of significant life events and the manifestation of stress.

None of the models reviewed has taken account of help seeking as a factor in the reduction of stress. Help seeking and its relationship to stress and coping will now be reviewed.

#### 1.4 Help seeking

Bayer and Peay (1997) have argued that, within the mainstream adult population, many people are unlikely to seek help for psychological difficulties. Where individuals are sought out for help and advice these are more likely to include friends and family rather than members of the helping professions (Gourash, 1978). Underutilisation of mental health services has been explored in Britain (Ingham, Rawnsley & Hughes, 1972) and elsewhere (e.g. Australia and the United States; Kendell, 1989). Bayer & Peay (1997) attempted to identify reasons for the low level of service uptake by exploring a number of factors, including psychological, sociological and demographic variables. They found that factors likely to influence an individual's decision not to seek help include:

- ❑ Beliefs that mental health professionals cannot help with the problem
- ❑ When the individual lacks general information about seeking help
- ❑ Lack of appropriate referral from GP
- ❑ Where help is inaccessible (e.g. due to practical barriers)
- ❑ Being male
- ❑ Believing that problems are inappropriate for treatment by mental health professionals

Hughes & Keady (1996) suggest that, owing to the insular nature of rural communities, 'outsiders' offering help will be treated with suspicion. Research by Cook & Tyler (1989) has identified a reliance on the individual's own community for help in times of difficulty. They identified that the most common resources for help were the farmer's partner (91 percent), friend (61.8 percent), family member (58.8 percent), financial advisor (55.9 percent), General Practitioner (44 percent), clergyman (26 percent), and psychologist, psychiatrist or social worker (14 percent). Such a finding raises the question of what specific factors prevent farmers from turning to professional services at times of emotional difficulty. A review of the literature offers some explanations for this.

#### 1.4.1 Identified barriers militating against help seeking behaviour

A review of the literature has revealed a number of barriers that prevent farmers seeking help for stress or mental health related difficulties.

##### *Availability of services / practical barriers*

Flax, Wagenfeld, Ivens & Weiss (1979) argue that one of the major barriers against providing or seeking help is geography, firstly because of service provision where there are fewer services available in rural areas (Ellis and Gordon, 1991). Health professionals are less attracted to work in rural areas and recruitment and retaining staff can be difficult (Martinez-Brawley & Blundall, 1989; 1991). Secondly, access to services in rural areas is affected by individual difficulties associated with attending appointments. Murray & Kupinsky (1989) have found that significant factors preventing farmers from attending services are difficulties with transportation and finding the time to travel to receive help. Mayer (1997) identifies a further factor preventing farmers from seeking help as their difficulty with attending appointments during normal office hours.

##### *Perception / knowledge of services – attitudinal barriers*

A barrier preventing farmers from seeking help is their level of awareness about the kinds of help that might be offered in a crisis. Among farmers, levels of knowledge and awareness about mental health services range between 15 and 73 percent (Fehr & Tyler, 1987; Heinemann, Perlmutter & Yudin 1974; Neigher, Baker & Rosario, 1976; Scott, Balch & Flynn, 1984; White & Suskind, 1980). Variation in these findings may be due to researchers employing different methodologies and accessing different views of those across different geographical areas. Factors influencing levels of awareness have been explored as a phenomenon in their own right (Fehr & Taylor, 1987). These have been identified as including geographical location, gender (females generally being more aware) and education level. For example a greater degree of education was found to lead to higher levels of awareness.

There is evidence to suggest that farmers hold set beliefs about different kinds of difficulty and the most appropriate kinds of help for resolving them. Fehr and Tyler (1987) found that when problems related to physical health the main source of help was seen as medical. When problems related to family or children the main source of help was seen as coming from within the church. Perceptions about the most appropriate

source of help for emotional problems were not explored. When asked to rate the importance of help for psychological problems, farmers did not rate these services as a priority. Thus, in one study, farmers ranked mental health services eighth out of nine different helping professions in terms of their usefulness (Smith, Cullingham & Hurrell, 1988). This finding highlights the need to draw upon farmers' expectations and perceptions in terms of the kinds of help that might be offered in the future.

Within rural communities it has been found that individuals avoid services offering support for psychological well being through a fear of becoming stigmatised, or through a suspicion of helping professionals (Berry & Davis, 1978; Buxton, 1970). It has been suggested that while psychological problems carry more of a stigma in rural rather than urban communities (Mayer, 1997), individuals do talk about their emotional difficulties within rural settings. Thus Sherlock (1995) argues that "Those with mental health problems remain hidden from services ..they are not accustomed to discussing their problems with people from outside the agricultural community. They are even less likely to discuss their feelings, which may only come to the fore with the vet, the auctioneer or the vicar when the farmer is facing a crisis" (page 23).

A further factor identified as reducing the likelihood of farmers seeking help are beliefs about worthiness for receiving help. As such it has been argued that farmers are governed by beliefs in success and hard work, that to ask for help is to fail (Mayer, 1997; Sherlock, 1995). When a difficulty is perceived as originating from outside of an individual's control they are seen as more deserving of help than when the problem is seen as being of their own making (Martinez-Brawley & Blundall, 1991).

Studies addressing help seeking attitudes of farmers within the United Kingdom have not been documented. As the above are all based on the American literature the extent to which they can be applied to a British sample can be questioned (Gregoire & Thornicroft, 1998). There are a number of additional problems with the existing literature exploring farmer stress, which will now be examined.

### 1.5 Problems with existing research and rationale for this study

On reviewing the current literature into the area of farmer stress and psychological well being a number of difficulties are apparent. Firstly, this is a grossly under-researched area. Over the past ten years there has been a systematic decline in farm incomes. This has been exacerbated by the BSE crisis and its ongoing effects (Binns *et al.*, 2000). In addition, farmers have the fourth highest suicide rate of any



occupational group (Hawton *et al.*, 1997). Such an observation challenges the standards aimed at reducing suicide levels in the Department of Health paper 'The Health of the Nation' (Department of Health, 1995). Few, if any, steps have been taken to address this issue in a more direct way than asking how many farmers commit suicide or how they do it (Cornelius, 1996). Few studies have examined the ways in which psychological well being is affected by agricultural crisis (Belyea & Lobao, 1990; Cornelius, 1996; Gasson, 1991; Gerrard, 1998).

Secondly, many of the studies conducted in the United States were undertaken during the 1970's and 1980's and are now outdated; further, the extent to which their findings can be applied between different cultures has been questioned (Fehr & Tyler, 1987; Gregoire & Thornicroft 1998). It is widely acknowledged that British research into this phenomenon is behind its American counterpart (Gay, Donham, & Leonard, 1990; Pratt, 1990).

Thirdly, there is a general lack of literature identifying and exploring the psychological needs among rural communities (Hughes & Keady, 1996). Specifically, the question of why farmers do, or do not, seek help for psychological problems has not been asked or answered (Bayer & Peay, 1997). It has been suggested that, in order for services to be provided, the needs of farmers should be understood and service provision tailored to meet these needs (Murray & Keller, 1991).

Fourthly there are a number of methodological limitations in the current literature exploring this area these are:

#### *The problematic nature of defining and measuring stress*

A variety of different techniques has been used to measure levels of stress. The extent to which different techniques for measuring stress between population groups can be generalised has been questioned (Monk, 1998). Monk has also questioned the extent to which stress can be measured as a binary concept (e.g. a yes or no answer to the question, do you feel stressed?) and then quantified as a normative distribution.

#### *The problematic nature of defining social isolation*

Monk (1998) questions the extent to which other key variables such as social isolation and coping are adequately defined and measured within the existing literature. Such terms are not consistently applied and rigorously or reliably measured and therefore the extent to which firm conclusions can be drawn from their findings is questionable.

### *The problematic nature of defining and measuring coping*

No studies exploring the issue of coping among farmers have been identified in the literature. Studies within mainstream adult research have been criticised for identifying coping as a set of universal skills rather than specific behaviours which vary according to the nature of individual problems and the social roles within which they engage (Pearlin & Schooler, 1981). Pearlin & Schooler (1981) continue to argue that the literature does not produce a complex account of coping and propose that there needs to be more empirical evidence upon which to base judgements about whether behaviours labelled as coping have coping functions or positive effects.

### *Sample size and experimental design*

Many of the studies cited in this review can be criticised for basing their conclusions on small samples. Many do not include adequate controls and have not considered the extent to which findings can be generalised to those who do not respond.

In an attempt to overcome some of these difficulties this research aims to provide a comprehensive and naturalistic study of agricultural stress. It attempts to answer some of the previously unanswered questions in this area. It hopes to achieve this by employing commonly used and validated terminology and established and reliable measures.

## 1.6 Aims and hypotheses

1. To detect the presence and identify the causes of stress among farmers. To explore the relationship between stress and demographic factors.

*Hypothesis 1.1:* There will be a high level of stress among the target population.

*Hypothesis 1.2:* Symptoms of stress will relate to physical rather than psychological or behavioural factors.

*Hypothesis 1.3:* High levels of stress will be related to particular demographic factors. Higher levels of stress will be related to younger farmers, larger farms, mixed farm enterprise and shorter periods of farming experience.

2. To explore specific patterns of coping within the population group and to explore the relationship between coping style and levels of stress.

*Hypothesis 2.1:* Farmers will report high levels of social isolation measured by low levels of social support.

*Hypothesis 2.2:* There will be a positive relationship between the presence of social support and low levels of stress among the population sample.

*Hypothesis 2.3:* High levels of stress will be associated with low levels of control and maladaptive (e.g. external and emotion focussed) coping strategies.

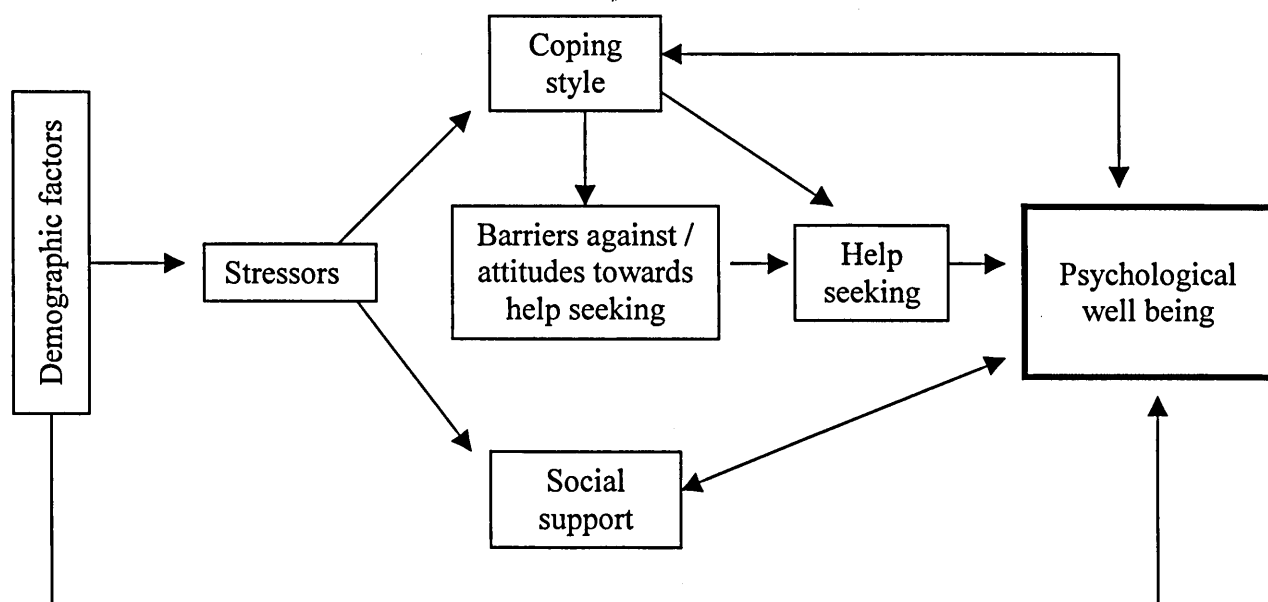
3. To identify patterns of help seeking behaviour among a sample of Northwest farmers.

*Hypothesis 3:* Farmers will display low levels of help seeking behaviour. Where help seeking is in evidence certain sources (external to professional services) will be sought out as sources of help.

4. To identify factors that are influential in individual patterns of help seeking behaviour among farmers.
5. To investigate, by using qualitative techniques, individual experiences of stress, coping and attitudes to seeking help among farmers.
6. To establish the relationship between stress, coping and help seeking among farmers.
7. To produce a model of stress vulnerability, its relationship to coping, help seeking and mental health within this population group. To use this model to draw out implications for clinical practice within this population group.

In order to account for the relationship between these variables it is possible to produce a model outlining the proposed interactions between them, this can be found in figure 1.

**Figure 1.** Summary of hypothesised relationships in the current study



## **2.0 Method**

### **2.1 Ethical approval**

Ethical approval for the research was granted by the School of Psychology – University of Wales, Bangor, in March 1999 (Appendix 1). Additional approval was granted by the National Farmers Union (NFU,) (Appendix 2).

### **2.2 Design**

The design was cross sectional and consisted of two components:

- ❑ A quantitative aspect incorporating a series of structured questionnaires completed by all respondents. The design of this component was a correlational survey.
- ❑ A qualitative aspect involving a selected sample of participants in a semi-structured interview.

### **2.3 Participants**

Participants were members of the NFU who lived and worked as farmers within three different geographical areas (NFU regional branches) of Northwest England.

In the absence of previous research exploring stress and help seeking behaviour among farmers, and the comparison between this group and an adequate control, it was not possible to calculate a sample size based on a power analysis (Lipsey, 1989; Robson, 1997).

The sample size of this study was therefore calculated according to the conditions identified by Tabachnick & Fidell (1996). They cite evidence suggesting that in order for adequate data analysis to occur, resulting in the production of a model, a sample size of 200 would be expected (Boomsma, 1983). Comrey & Lee (1992) identify that for completing correlational analysis of data a sample size of 200 is 'fair'. As most postal questionnaires attract a response rate of 30 percent (Milne, 1987), it was calculated that by sending out 700 sets of questionnaires, approximately 200 should be returned, resulting in enough returns for data analysis to take place.

Participant characteristics can be found in Table 2.

**Table 2.** Participant characteristics for questionnaire and interviews

Participants	Number	Gender	Mean age	Age range
Main study	129	123 males: 6 females	50.5 years	27 - 76 years
Interviews	8	8 males : 0 females	49.7 years	36 - 65 years

Table 2 summarises the descriptive details of participants taking part in the main study and the semi-structured interviews. The high male to female ratio is representative of the farming industry as a whole (Heffernan & Shucksmith, 1996). Little research has been conducted exploring stress among female farmers, including farmers' partners and farmers' wives.

## 2.4 Measures

### *Stress in Farming Questionnaire* (Hawton *et al.*, 1998) (Appendix 3)

The Stress in Farming Questionnaire was made up of open ended and closed questions. Participants were asked about demographic details and factors relating to agricultural stress. The measure was first produced as part of a Department of Health investigation into high levels of suicide among farmers (Hawton *et al.*, 1998). With the permission of the original authors it was administered in this research to collect a detailed demographic profile of each respondent. This information included:

- ❑ Specific demographic details including, age, sex, marital status and number of years in farming.
- ❑ Information about the farm such as type of occupancy (for example, whether the farm was owned, leased or managed); type of farming operation (for example, arable or cattle); number of livestock.
- ❑ Information about causes of stress within farming. This focussed on financial worries and difficulties associated with legislation and completing paperwork.
- ❑ Information about coping strategies / social isolation, including, number of people counted as close friends, access to firearms.
- ❑ In addition, respondents were asked to make additional comments about their feelings relating to stress in farming.

This measure has not been widely implemented and no data relating to its reliability have been documented. As such, within this research, it has been employed solely within an exploratory capacity.

#### *Malaise Inventory* (Rutter, Tizard & Whitmore, 1970a) (Appendix 4)

The Malaise Inventory is a measure concerning physical and emotional health. The inventory is an adaptation of the Cornell Medical Index, a well established and tested measure of psychosomatic symptoms associated with emotional stress (Bebbington & Quine, 1987).

With this measure respondents are asked to answer yes or no to a series of 24 statements. Each statement is scored 1 or 0 in the direction of physical illness, with high scores indicating higher levels of stress and low scores, lower levels of stress. The clinical significance of scores relates to a threshold cut off score of six or above.

The Malaise Inventory has been well used and validated as a measure of occupational stress (Hatton & Emerson, 1993) and health anxiety (Slinger, 1998). Validation studies have shown that the questionnaire can be used as a single, internally consistent measure. Grant, Nolan and Ellis (1990) revealed an alpha coefficient of 0.82 suggesting a satisfactory level of internal consistency. As a measure of reliability Rutter *et al.* (1970b) report figures of 0.74 for test-retest reliability on this measure.

The Malaise Inventory, as a physical measure of stress, was chosen in this study for two reasons. Firstly, given the literature indicating that farmers are unlikely to identify and self report stress levels, it was felt that physical indices would be more sensitive to detecting the presence of stress. Secondly, other measures of stress concentrate on identifying stress levels according to self report. Given the research question and the methodological limitations of measuring stress in this way a physical index was considered to be the most appropriate measure.

#### *Coping Responses Inventory* (Moos, 1990) (Appendix 5)

The Coping Response Inventory (CRI) was used as a 48 item questionnaire aimed at eliciting the coping behaviour of the sample. The CRI is made up of eight subscales, four approach coping responses and four avoidant coping responses (see Table 3).

**Table 3.** Subscales used in CRI measure of coping

	<b>Approach coping responses</b>	<b>Avoidance coping responses</b>
<b>Cognitive coping responses</b>	Logical analysis Positive reappraisal	Cognitive avoidance Acceptance or resignation
<b>Behavioural coping responses</b>	Seeking guidance and support Taking problem solving action	Seeking alternative rewards Emotional discharge

Respondents are asked to focus on a stressful situation and rate their coping behaviour on the 48 statements. Each statement offers a type of coping behaviour (six from each type) where respondents are asked to rate the degree to which each statement applies to them on a four point likert scale. From individual responses it is possible to devise a profile of individual coping behaviour. Higher scores on avoidance subscales are assumed to be indicative of less adaptive coping.

In analysis the CRI was found to have moderate to high internal consistency on all subscales (Alpha range .67). Scores taken over a one year period indicate a high level of test-retest reliability ( $r = .43$ ) (Moos, 1997).

In spite of its popularity as a measure, analysis of individual subscales within the CRI have not been documented in the literature. This research will further investigate the psychometric properties of the CRI.

#### *Attitudes to help seeking questionnaire* (Cook & Tyler, 1989) (Appendix 6)

Permission was granted from the authors to use this measure. The questionnaire comprises two separate components.

- i) Help seeking questionnaire. This is a measure of openness or resistance to receiving help from four different sources. These include: a) help from professionals; b) help from people in general (e.g. spouse and friends) c) educational or vocational training d) the ability of the individual to help themselves by expressing emotion.

In total, over the four areas respondents are asked to rate 24 statements according to whether they agree or disagree with each. Statements were clearly written and unambiguous (e.g. 'I would talk to another person who is in farming about a personal



problem that is bothering me'). Scores are calculated across each of the four categories and an overall 'openness to seeking help' score is produced from their sum.

- ii) Participants are presented with a list of individuals from whom they may have received help in the past and are asked to identify if they have or haven't received help from this source. Participants are then asked to rate the likelihood that they would seek help from this source in the future. This is measured on four point likert scales which are used to calculate a total 'likelihood of future help seeking' score.

Cook & Tyler (1989) demonstrate a high level of internal consistency within the measure by obtaining a Kuder Richardson reliability coefficient of .85. The construct validity of the measure was determined by subjecting it to a principal components factor analysis using varimax rotation. The factor solution supported the original subscales in the measure and accounted for 77.9 percent of test item variability.

Concurrent validity of the measure was evaluated using Pearson product moment correlation between the subscales. Significant linear relationships were found between 'openness to seeking help' scores and both the 'sources of help checklist' ( $r(104) = 0.36, p = .001$ ) and the 'likelihood of future help seeking' score ( $r(113) = 0.56, p < .001$ ).

#### *Barriers Against Seeking Help (BASH) (Appendix 7)*

The BASH was designed specifically for the current study. It was intended to provide insight into the barriers that prevent farmers from seeking help for difficulties they may be experiencing. Barriers against seeking help were identified from the literature (Fehr & Taylor, 1987; Flax, Wagenfeld, Ivens & Weiss, 1979; Murray & Kupinsky, 1982). Thirteen statements were presented and respondents were asked to identify whether they agreed or disagreed with each. Statements were clustered according to whether barriers were practical or related to beliefs and attitudes about seeking help.

As this was a new measure designed for this research it had not previously been validated. This research investigates the psychometric properties of this measure.

#### *Semi-structured interview*

A semi-structured interview was designed in order to collect qualitative information from respondents about issues covered by the questionnaires. This was

aimed at substantiating findings from the quantitative aspect of the research and allowing cross comparison to be made between the two different forms of data.

The interview format was informed by the three main areas covered by the questionnaires in the quantitative part of the study. This led to the development of 13 open-ended questions (Table 4).

**Table 4.** Main question areas covered by semi-structured interview

<b>Topic area</b>	<b>Questions relating to topic area</b>
<b>Stress</b>	<ol style="list-style-type: none"> <li>1. What do you feel stress is?</li> <li>2. How would you know if you are under stress yourself?</li> <li>3. How would someone else (e.g. partner) know if you are under stress?</li> <li>4. What kind of things cause you to feel under stress?</li> <li>5. What do you do when you are under stress?</li> <li>6. What do you think leads to the high rate of suicide among farmers?</li> </ol>
<b>Coping</b>	<ol style="list-style-type: none"> <li>7. Who do / would you talk to if you feel under stress?</li> <li>8. What kinds of things would you talk to these people about?</li> <li>9. What do you think makes one farmer cope better or less well than another?</li> <li>10. What gets in the way of farmers coping with their worries?</li> </ol>
<b>Help seeking</b>	<ol style="list-style-type: none"> <li>11. What qualities would you want to see in someone outside of your family that you turned to for help with a problem?</li> <li>12. What practical / other barriers do you think stop farmers from coming to talk to a professional about difficulties they might be experiencing?</li> <li>13. What could we change about professional services to make them more attractive as a source of help for farmers in the future?</li> </ol>

With respondents' permission all interviews were audio-tape recorded and transcribed for analysis. In order to validate interview codings a second researcher was used to code their content. Ratings between the two sets of coding were subjected to inter-rater reliability coefficients as described by Miles and Huberman (1994).

## 2.5 Procedure

### *Recruitment to the study: questionnaire component*

Participants were selected from three branches of the NFU within the Northwest region. The Northwest sector is made up of 12 branches, and the three branches used in

this research were selected at random by the regional director of the NFU. Once the branches had been selected the researcher contacted each branch chairman to explain the research and gain their approval.

In accordance with the data protection act, the NFU mailed all questionnaires on behalf of the researcher. All participants were sent a battery of questionnaires, together with a pre-paid envelope and a letter explaining the purpose of the research (Appendix 8). Participants were asked to indicate if they were willing to take part in the semi-structured interview exploring their views in more detail.

A number of steps were taken to maximise the response rate in this study. Firstly, all questionnaires and letters sent to participants were analysed for readability by using the Flesch Reading Ease score and Flesch-Kinkaid Grade Level score (Robson, 1997). These revealed that all letters and measures fell within an acceptable range of comprehension and understanding. Secondly, given demands generated by other sources of paperwork, participants were not expected to complete and return questionnaires within a specified time. Thirdly, five farmers representing a range of age and educational background were selected and asked to comment on the questionnaires. At this stage all questionnaires, and the covering letter, were accepted as being understandable and easy to follow.

#### *Recruitment to the study: semi-structured interview component*

Those who indicated that they would be willing to be interviewed were sent a second letter thanking them for their interest and stating that the researcher would contact them shortly to arrange an appointment (Appendix 9). At this stage participants were given the opportunity to opt out of the research if they wished. Once sufficient time had passed for all possible questionnaires to be returned (four months) the researcher selected eight participants at random for interview. A second reserve list of eight participants was devised.

Initial contact between the researcher and those selected for interview was made on the telephone. Seven participants from the original list of eight and one from the reserve list agreed to be interviewed. All expressed a preference to be interviewed in their homes and appointments were made for the interviews to take place within two weeks of the initial contact.

At the start of each interview participants were reminded of the purpose of the research and were thanked for agreeing to be interviewed. Participants were asked for

permission for the interview to be audio tape recorded. The researcher emphasised that any information collected would remain confidential, that it would only be accessible to the researcher and that it would be destroyed after analysis. Once this had been explained and permission to tape the interview had been granted, participants were asked to sign a consent form (Appendix 10). Participants were reminded that they had the right to stop the interview at any point.

Participants were given the opportunity to ask questions about the research at the beginning of the interview. Interview questions were simply phrased and open ended, with prompts and cues used as necessary. Questions followed the same order with each participant and each interview lasted between 45 minutes and one hour. Once the interview had ended participants were asked if there was any information that they would like to add or retract. Each participant was given the opportunity to make any additional comments and was thanked again for their involvement in the study.

Once the interviews had been completed the remaining 21 participants, who identified that they were happy to be interviewed, were sent a letter explaining that the research was now complete and that they would not be contacted again (Appendix 11).

### *Feedback to participants*

Of the eight farmers who took part in the semi-structured interviews four said that they did not want any feedback about the results of the study. Of the remaining four farmers one said he would be happy with a telephone call giving feedback, and three said they would be happy to receive written feedback about the main findings of the study. One respondent invited the researcher to talk about the findings of the study at their NFU local branch meeting.

### 3.0 Results

This section will present information about the psychometric properties of the measures used in this study. This will be followed by an analysis of the data in terms of the hypotheses being tested. Quantitative data are supplemented by qualitative findings where appropriate.

#### 3.1 Psychometric properties of measures used

The psychometric properties of each measure were evaluated using Cronbach's coefficient alpha. Alpha scores of 0.7 or above are usually considered as demonstrating satisfactory internal consistency (Hammond, 1995). Given the exploratory nature of the measures used in this study Alpha scores of 0.65 or above were taken as demonstrating a satisfactory level of internal consistency.

##### *Stress in Farming Questionnaire* (Hawton *et al.*, 1997)

This measure was not made up of individual subscales that were used as part of the final data analysis. As information collected from the measure was used purely in a descriptive form its psychometric properties have not been evaluated.

##### *Malaise Inventory* (Rutter *et al.*, 1970)

The Malaise Inventory attained an Alpha coefficient score of 0.87 suggesting a satisfactory level of internal consistency.

##### *Coping Response Inventory* (Moos, 1990)

All eight sub-scales of this measure were individually analysed (see Table 5).

**Table 5.** Alpha ratings of the eight CRI subscales

Subscales of Coping Responses Inventory	Alpha coefficient score
Logical analysis	.7061 ✓
Positive appraisal	.7001 ✓
Seeking support	.5783 ✗
Problem solving	.6326 ✗
Cognitive avoidance	.5987 ✗
Acceptance	.6295 ✗
Alternative rewards	.5164 ✗
Emotional discharge	.5975 ✗

<p>Key</p> <p>✓ Satisfactory internal consistency</p> <p>✗ low consistency</p>
--

These results indicated that there were low levels of internal consistency on six of the eight subscales. In an attempt to rectify this the 48 items were re-grouped to form four new combined subscales (see Appendix 12). The internal consistency of these new subscales was then evaluated (see Table 6).

**Table 6.** Alpha ratings of four new subscales within the CRI

Reformulated subscales of Coping Responses Inventory	Alpha coefficient score
Problem solving	.78 ✓
Social support	.65 ✓
Positive appraisal	.70 ✓
Emotion focussed coping	.76 ✓

Key

✓ Satisfactory internal consistency

✗ low consistency

*Attitudes to Help Seeking Questionnaire (Cook & Tyler, 1989)*

This measure has shown satisfactory levels of internal consistency across both scales and subscales. On the scale of Help Seeking Behaviour the subscales of past help seeking and future help seeking attained Alpha coefficient scores of .77 and .69 respectively. An Alpha coefficient of .82 was established for the scale of openness towards seeking help, suggesting a medium - high level of internal consistency. These findings are consistent with previous evaluations conducted by Cook & Tyler (1989).

*Barriers Against Seeking Help*

As a new measure this scale showed high levels of internal consistency, attaining an Alpha coefficient score of .85. Results of the analysis when items were grouped according to barrier type were variable, but achieved consistency or borderline consistency on all dimensions (see Table 7).

**Table 7.** Alpha ratings for items grouped according to barrier type on the BASH

BASH subscale	Alpha coefficient score
Practical barriers	0.80
Knowledge / awareness	0.63
Attitudinal beliefs	0.69
Beliefs about stigma	0.72

### 3.1.1 Summary of quantitative analysis

In order to establish the validity of completing parametric tests on the quantitative data the skewness and kurtosis of variables were analysed. This analysis showed that skewness and kurtosis were in the acceptable range (between  $-2$  and  $+2$ ) for seven out of 16 variables (see Appendix 13). Three of the variables which did not meet parametric requirements were transformed and subsequently fell within the acceptable range. As the skewness and kurtosis of the remaining six variables fell outside the range of acceptability and were likely to remain so even with transformation, non-parametric data analyses were employed using these variables.

### 3.1.2 Summary of qualitative analysis

Interviews were transcribed verbatim. Interview transcripts were coded according to the predefined areas of questioning (stress, coping, and help seeking behaviour). Within each area a number of sub themes emerged which formed various categories against which content analysis could take place. A sample of three transcripts were coded separately by an independent researcher. Inter-rater reliability between the two coders was calculated, which produced a percentage agreement of 80 percent. Once coded in this way the qualitative data were used to supplement findings of the questionnaire component of the study.

## 3.2 Participant characteristics

### *Questionnaire component*

One hundred and twenty nine respondents completed the questionnaires (response rate = 18.3 percent,  $n = 710$ ). Demographic characteristics are outlined in Table 8.

**Table 8.** Demographic characteristics of questionnaire participants

Characteristic	Mean	Range	Standard deviation
Age (years)	50.5	27-76	10.2
Size of farm (acres)	270.2	2-2500	290
Duration of farming (Years)	31.8	6-60	11

Ninety five percent of respondents were male. Eighty eight percent of respondents were married, five percent were single, five percent were divorced and two percent were widowed. The majority of respondents were farm owners (76 percent), 23

percent were tenant farmers and only one respondent was a farm manager. There was no noticeable difference between farmers in terms of the amount of time they spent working at different times of the year, with farmers working an average 11-14 hours per day during summer and winter.

### *Semi-structured interview*

Eight participants took part in the semi-structured interview. Demographic characteristics are outlined in Table 9.

**Table 9.** Demographic characteristics of interview participants

Characteristic	Mean	Range	Standard deviation
Age (years)	49.7	36-65	10.15
Size of farm (acres)	179.88	80-350	87.97
Duration of farming (years)	30.13	10-60	16.95

All interview participants were male. Seven were married, one was divorced and cohabiting with a new partner. Six were farm owners and two were farm tenants. There was no difference between those who took part in the interview and the number of hours that they worked in the winter or the summer. All farmers who took part in the interviews worked mixed farm enterprises including beef, dairy and sheep.

## 3.3 Stress

### 3.3.1 Levels of stress among farmers

Quantitative findings revealed a high level of stress among the sample group with 33 percent of farmers reaching a score of clinical significance (threshold score six) on the Malaise Inventory (score range 0-21, mean 5.9, standard deviation 4.8). High levels of stress emerged within the semi-structured interviews where five (62 percent) participants described themselves as feeling under moderate to high levels of stress. All participants who took part in the interview concurred that stress levels and associated difficulties within the farming industry are higher now than at any point in the past.

### 3.3.2 Common symptoms of stress among farmers

Table 10 summarises quantitative and qualitative findings relating to common symptoms of stress among farmers.



**Table 10.** Common symptoms of stress identified from the Malaise Inventory and semi-structured interviews

Malaise Inventory			Semi-structured interview		
Physical	N	%	Physical	n	%
Feeling tired	76	60	Heart problems	2	25
Back ache	55	43	Back ache	1	12
Indigestion	40	32	Sweating	1	12
Bad headaches	32	25	Eczema	1	12
Upset stomach	30	23	Stomach problems	1	12
Psychological			Psychological		
Being worried	78	61	Feeling apprehensive	3	37
Feeling miserable / depressed	58	45	Thought intrusion	3	37
Feeling annoyed	51	40	Feeling unable to control events	3	37
Health worries	18	14	Fear of failure	3	37
Feeling scared	16	13	Difficulty concentrating	3	37
Behavioural			Behavioural		
Early awakening	52	41	Relationship difficulties	1	12
Easily upset or irritated	37	29	Becoming more withdrawn	1	12
Difficulty falling / staying asleep	32	28	Sleep disturbance	3	37
Violent rage	22	17	Increased anger	4	50
Easily annoyed	21	17	Increased anxiety	1	12

Table 10 indicates a high level of agreement between farmers' recorded symptoms of stress and individual perceptions about the symptoms of stress. Hypothesis 1.2 predicted that physical symptoms of stress would be over represented in this study. This has not been supported, particularly during the interviews, where 50 percent of participants identified physical symptoms, 62 percent identified behavioural symptoms and 75 percent identified psychological symptoms of stress.

During the semi-structured interview farmers identified the psychological consequences of stress as relating to an inability to function effectively:

*'...it's the pressure of work, it's when things tend to build up ...I suppose when you feel you're at your limit'.*

A feeling of losing control over events, for example:

*'Stress is where you're in a situation and you have problems, which due to things outside your control, you can't supply the answers to'.*

One farmer interviewed identified a psychological consequence of stress as being rumination:

*'You can't sleep, your mind takes over and you start thinking about things, you're not able to control your thoughts'.*

Only half of those interviewed were able to say if their partner / significant other would be able to tell if they felt under stress. Explanations of this finding were not offered at the time of the interview.

### 3.3.3 Predisposing factors to high levels of stress

Results from the Stress in Farming Questionnaire highlight common sources of stress within farming (see Table 11).

**Table 11.** Factors identified as stressful and percentage distribution of stress factors from quantitative data (Stress in Farming Questionnaire – Hawton *et al.*, 1997)

Factor	% of sample reporting factor as a source of stress
Worrying about money some or all of the time	92
Feeling under pressure from new government regulations	79
Having large amounts of paperwork to complete	57
Having financial problems	51
Being in danger of losing the farm	16

These findings were supported during the semi-structured interviews when five participants (62 percent) cited financial problems as a source of stress, for example:

*'All we want to do is pay our way, how can we do that when we've got nothing coming in'.*

Farmers also talked about possible consequences of their financial difficulties:

*'... thinking back how I managed to borrow the money, get the farm running ...it keeps going through my head what I'm going to lose'.*

Four interview participants (50 percent) confirmed that the amount of paperwork associated with farming was a significant cause of stress:

*'What does cause me stress specifically is the amount of paperwork we've got caught up with'.*

The semi-structured interview allowed farmers to identify additional factors that contribute to their high levels of stress (see Table 12).

**Table 12.** Factors identified as stressors during the semi-structured interviews (Appendix 14)

Stressor	Number of participants identifying stressor
Being in situations over which you have no control	5
Interference from outside agencies	5
European bureaucracy and regulation	4
Uncertainty about the future	3
Never getting a break	3
Feeling of always having to move forwards to stand still	3
Worries about retirement	2
Market forces / market organisation	2
Health worries	2
Weather	2
Modern technology	2
Being self employed	2
Social isolation during the working day	2
Losing pride in workmanship	2

During the semi-structured interviews participants did not identify a relationship between the number of significant life events and levels of stress. The most stressful aspect of farming was identified as having little or no control over difficult situations:

*'It's the forces outside of your control that affect you adversely, they're the things that you get het up about because you can't do anything about them'.*

Particular features over which individuals felt they had little or no control were associated with financial matters and bureaucratic regulations. Other uncontrollable features associated with farming (e.g. the weather and machinery breakdown) were largely unidentified by participants in this study. This is contrary to previous research

exploring agricultural stress (McGregor *et al.*, 1995). During the interviews a lack of control was identified as leading to uncertainty which was an additional source of stress, for example:

*'Uncertainty is an area that causes me stress over and above daily routine. It's the not knowing what the future is'.*

The second most common cause of stress identified during the semi-structured interviews was interference from outside agencies. This was seen as relating to those visiting in a regulatory capacity, including members of planning departments and government and environment agencies. Sixty-two percent raised this as an issue, one farmer said:

*'There are more blooming officials coming around this farm than there are people in farming'.*

Participants felt that through these visits they were being checked up on in some way, for example:

*'You always feel like you are being watched and I don't particularly like that'.*

During the semi-structured interviews farmers identified some of the consequences of stress. The most common feature identified was a 'fear of failure' and 'losing the sense of pride in their work.' This was identified by seven participants (87 percent), to quote one farmer:

*'There's a sense of failure that worries farmers. Maybe you're the second or third generation and you could be the one that fails. The others have all managed it, grandfather's come up from nothing, father developed it and built up a good farm. I'm sure it's not unique I have a lot of responsibility to my elderly parents'.*

This research did not set out to directly explore the issue of agricultural suicides but the majority of interviewees identified that stress was a contributing factor to the high levels of suicide observed in this occupational group.

### 3.4 Coping

Quantitative data collected from the CRI reveal patterns of coping used by farmers. These show an equal distribution across all four regrouped dimensions on the scale (see Table 13).

**Table 13.** Mean distribution of scores on four subscales of coping

Coping strategy	n	Range	Mean	Standard deviation
Emotion focussed coping	91	3-48	18.98	9.46
Problem focussed coping	95	0-32	16.95	6.96
Social support coping	107	0-15	6.94	3.25
Positive appraisal coping	104	0-18	8.58	4.18

Graphs identifying the mean distribution of these scores can be found in Appendix 15.

The range of coping strategies was demonstrated in farmers' responses during the semi-structured interviews. Participants who were interviewed identified a number of different strategies for dealing with difficult situations. These were behavioural, emotional and psychological. The most effective ways of coping identified by farmers during the interviews have been categorised and can be found in Table 14.

**Table 14.** Effective forms of coping identified from semi-structured interviews

Factor identified as important / influential in coping	Number of participants identifying factor
Having interests outside of the farm (e.g. reading computing, socialising, model railway, dogs, football, going to the pub)	7
Tackling the problem head on rather than leaving it until another day	3
Being able to identify the warning signs of stress and being able to act on these (e.g. self talk – cognitive challenge)	3
Personality / strength of character	2
Having other people around you	1
Having a release valve for dealing with stress	1
Feeling like you are in control of a situation	1

#### 3.4.1 Social support as a variable in mediating the effects of stress

Quantitative findings suggest that the sample had a large number of friends from whom they could receive social support. Findings from the Stress in Farming Questionnaire indicate that 90 percent of participants reported that they had at least one

person in whom they could confide, and that the average number of friends for each farmer was 6.5 (range 0-20, standard deviation 5.12). By using data collected during the semi-structured interview it is possible to identify a mixed role for social support in managing stress among this population group. Participants identified that farming is a lonely occupation, for example:

*'This can be a lonely job, sometimes I don't see anyone from seven o'clock in the morning until nine o'clock at night'.*

While this was the case, in the interviews only two individuals described themselves as socially isolated. One farmer said he enjoyed working alone:

*'Sometimes the best bit of the working day can be when you are milking on your own at four o'clock in the morning'.*

Where farmers did talk about social support it was seen as positive in stress reduction, for example:

*'If you've got a problem you can come in and have a cup of tea with your family and everything's all right then'.*

Social support was also seen as helpful when making decisions about problems and this was, in turn, seen as a way of reducing stress:

*'When you can make a decision together it doesn't feel as bad when it goes wrong'.*

### 3.5 Help seeking behaviour

Table 15 summarises quantitative data collected from the attitudes to help seeking questionnaire (Cook & Tyler, 1981). It establishes a pattern of present / past help seeking and the likelihood of individuals, who responded, of seeking help from those sources again in the future.

**Table 15.** Sources of help (currently or previously) used by farmers, identified from attitudes to help seeking questionnaire. Likelihood of seeking help from these sources again in the future

Current / past help seeking			Percentage likelihood of future help seeking	
Source	n	%	N	%
Partner	104	95	94	98
Other family member	85	74	89	88
Friend	81	71	86	85
Financial advisor	73	65	79	83
General practitioner	61	54	80	75
Religious leader	32	28	62	40
Psychologist, psychiatrist / social worker	9	8	58	19
Marriage counsellor	6	5	58	12
Self help group	5	5	49	26
Family counsellor	3	3	55	10

Table 15 shows that partners, other family members, friends, financial advisors and general practitioners were turned to most often for help. It confirms that these individuals are most likely to be turned to for help again in the future. During the semi-structured interviews participants identified that family members were a particularly good source of help for dealing with farm related problems:

*'If I have any problems with the farm or owt like that I just go and talk to father'*

### 3.5.1 Barriers militating against seeking help amongst farmers

By using quantitative data collected from the BASH questionnaire it is possible to delineate barriers which militate against farmers seeking help from professional services (see Table 16).

**Table 16.** Barriers identified as militating against help seeking

<b>Barrier / attitude towards seeking help</b>	<b>n</b>	<b>%</b>
People who are not farmers do not understand my problems	67	57
I would not know what kind of help a professional would be able to give	46	39
I would not want to talk to a professional about my problems	41	36
I don't believe that a professional could help with my problems	35	30
If I go and talk to a professional it means that I can't cope	35	30
I believe that you do not need to talk to people outside your friends and family about your problems	30	26
I do not know who there is outside of my friends and family to talk to about my problems	29	26
I would not be able to talk to a professional about my problems because of the hours I work	23	20
I would not trust someone enough outside of my friends and family to talk about my problems	23	20
I would not be able to talk to a professional about my problems because they only work between the hours of 9.00 and 5.00	21	18
I have tried to talk to a professional about my problems in the past but it did not work out	19	17
Only people with mental illness go to a professional to talk about their problem	17	15
I would not be able to travel to see a professional	17	15

Table 16 indicates that from the quantitative data the most significant factors affecting help seeking appear to be attitudes and beliefs about seeking help from professionals. This finding was substantiated during the semi-structured interviews where six participants (75 percent) said that they felt misunderstood by the public at large and people in the helping professions. For example:

*'...they (the public) just think farmers are thick and whinging bastards'*

Other perceptions of farmers were related to wealth, for example:

*'The majority of people see farmers to have more money than they know what to do with, and a wonderful out door life driving around in a Range Rover'.*

During the semi-structured interviews all participants identified that they would not be willing to open up to an 'outsider' about their problems. Factors contributing to this were beliefs about seeking help. Two participants talked about keeping problems within the family and sorting out difficulties that way:

*'I would try and resolve any problems with me family and friends first'.*



Three interviewees said that farmers are 'stubborn people', and this is influential over individual decisions to seek help, for example:

*'you see farmers are stubborn folk.. they're an 'ard breed really'.*

Finally four of those interviewed said that they would not talk to a professional outside of farming about their difficulties because they did not know or trust the person.

One interview participant felt that a contributing factor in farmers not seeking help was because professionals could not identify with farming. He made the following recommendation for how that problem might be overcome:

*'Well, for a start you'd have to be prepared to get your wellies on and meet the farmer where he was at'.*

### 3.6 Statistical relationships between variables

The statistical significance of results was investigated by computing Spearman's product moment correlations, Mann Whitney tests and Chi Square tests (Appendices 16 - 27). Results were taken to be significant at a level of  $p < 0.05$  and highly significant at a level of  $p < 0.01$ .

#### 3.6.1 Stress

##### *Relationship between the presence of stressors and stress*

Hypothesis 1.3 predicted that there would be a significant relationship between demographic factors (e.g. age, gender, farm size, farm type, duration of farming experience) and the presence of stress, as measured by Malaise threshold scores. No significant relationships were identified between these factors among the sample in this research (see Appendix 16).

The Stress in Farming Questionnaire (Hawton *et al.*, 1997), highlighted three factors as having significant relationships with stress (see Appendix 17). Firstly a significant relationship was identified between individuals who reported that they were worried about their finances and their stress scores (Chi square = 22.12,  $df = 2$ ,  $p = .00002$ ). Secondly a significant association was found between those who reported having financial problems and their stress scores (Chi square = 6.35,  $df = 1$ ,  $p = .013$ ). No significant relationships were identified between stress scores and extreme forms of financial difficulty, for example, losing the farm or the banks becoming heavily involved in the running of the farm business.

Thirdly, a factor significantly associated with stress was the amount of paperwork connected with farming (Chi square = 5.87,  $df = 1$ ,  $p = .023$ ). Other forms of bureaucracy (for example the effects of new legislation), although identified as stressors, were not significantly related to stress among this sample.

These results are supported by findings from the semi-structured interview where individuals reported a high association between stress levels, financial problems and paperwork.

### *Relationship between social support and stress*

Hypothesis 2.1 predicted that there would be low levels of social support among this population group. According to data collected in this research, this hypothesis has not been substantiated, with a large number of farmers reporting the presence of a wide range of social contacts (mean number of friends = 6.5, range 0-20, standard deviation, 5).

Hypothesis 2.2 predicted that there would be a positive relationship between the presence of social support and low levels of stress among this sample. Statistical analysis indicates that there was a significant relationship between reported number of friends and stress levels, as determined by Malaise threshold scores ( $u = 855$ ,  $n = 100$ ,  $z = -2.67$ ,  $p = .008$ ). This finding indicates that social support acts as a buffer against stress among this sample, thus supporting hypothesis 2.2 (see Appendix 19).

### 3.6.2 Coping

#### *Relationships between coping and demographic factors*

An analysis of the data indicated two significant relationships between the coping strategy of seeking social support and demographic factors (see Appendix 18). A significant positive relationship was identified between farm size and seeking social support ( $r = .2$ ,  $n = 105$ ,  $p = .016$ ); and between being a dairy farmer and seeking social support ( $u = 904$ ,  $n = 105$ ,  $z = -1.97$ ,  $p = .049$ ).

#### *Relationships between coping strategies and stress*

##### *A significant difference*

It was identified between the use of emotion focussed coping and stress ( $u = 696.0$ ,  $n = 91$ ,  $z = -2.673$ ,  $p = .008$ ). Significant relationships were not identified between the use of other forms of coping and stress (see Appendix 19).

Significant differences were highlighted in terms of relationships between the presence of specific stressors and the use of particular coping strategies (Appendix 20). For example, the use of emotion focussed coping had a significant relationship with money worries ( $r=.21$ ,  $n=91$ ,  $p=.042$ ), financial problems ( $r=.22$ ,  $n=91$ ,  $p=.032$ ) and difficulties with the amount of paperwork farmers had to complete ( $r=.24$ ,  $n=89$ ,  $p=.022$ ). A positive relationship was identified between farmers' reports of being affected by government legislation and their use of seeking social support ( $r=.221$ ,  $n=107$ ,  $p=.022$ ).

#### *Relationships between coping and help seeking behaviour*

Patterns of coping behaviour and their relationships to help seeking were analysed using Spearmans correlation coefficients (Appendix 21) This analysis revealed positive correlations between social support as a coping strategy and both openness to seeking help and intentions to seek help in the future ( $r=.30$ ,  $n=103$ ,  $p=.002$ ;  $r=.25$ ,  $n=94$ ,  $p=.014$ ). Relationships between other forms of coping and help seeking behaviour were not established as statistically significant.

### 3.6.3 Help Seeking

#### *Relationships between beliefs about dealing with problems and stress*

From the Attitudes to Seeking Help Questionnaire (Cook & Tyler, 1991) farmers identified a number of beliefs about dealing with problems that are influential in the stress process (Appendix 22). These were indicative of reliance on a strong internal locus of control, and are significantly related to stress scores (see Table 17).

**Table 17.** Relationships between beliefs about dealing with problems and stress

Belief	Statistical relationship to stress score
"If I have a problem I will sort it out myself"	(Chi square = 4.89, df = 1, $p = .022$ )
"I would just as soon get away from people when I feel down"	(Chi square = 10.12, df = 1, $p = .002$ )
"If something is troubling me I would rather keep it to myself"	(Chi square = 5.40, df = 1, $p = .023$ )
"I do not like to show my feelings to others"	(Chi square = 5.39, df = 1, $p = .024$ )

These findings offer support to hypothesis 2.3 in that it has shown a positive relationship between the presence of internal coping strategies and high stress levels.

### *Relationship between attitudes towards seeking help and stress*

The third aim of this study set out to establish patterns of help seeking behaviour among farmers and influential factors in individual decisions to seek help for difficulties. Hypothesis 3 predicted that farmers would display low levels of help seeking for professional help and that help for difficulties would be sought from within the individual's friends or family. While the results of this study indicate that farmers showed higher levels of help seeking than might be expected (see Table 15), there was a significant shift towards seeking help from within the individual's immediate social network, for example, partner, friends and family. These findings offer partial support for hypothesis 3 of the present study.

### *Relationships between barriers against seeking help and help seeking behaviour*

No relationships between practical barriers and help seeking behaviour were identified (Appendix 23). Significant relationships were identified between beliefs / attitudes about help seeking and stress. Individual beliefs about negative encounters with professionals in the past ("I have tried to talk to a professional for help in the past but it did not work out") were significantly related to high stress (chi square 5.98, df 1,  $p = .022$ ). There was also a significant relationship between beliefs about suitability of professional help ("I do not believe that a professional could help me with my problems") and high stress scores (chi square 9.89, df 1,  $p = .002$ ). Information collected during the semi-structured interviews suggests that this may be due to both a lack of trust and a lack of knowledge / awareness of what kinds of help a professional might be able to offer. For example, one farmer said:

*'I would not talk to a professional about my problems purely and simply cos I would not know them and I would not be able to trust them'*

Another farmer talked about not knowing what kinds of help to expect from a professional:

*'I would not know what kinds of help a professional would be able to offer, all I know is farming'.*

No significant relationships were identified between demographic factors and openness to seeking help or future help seeking behaviour. In addition no relationships

were established between demographic factors and the presence of particular kinds of barriers against seeking help (see Appendix 24).

Significant relationships were identified between the total number of barriers identified by participants and both their openness to seeking help ( $r = -.44$ ,  $n = 117$ ,  $p = < .001$ ) and their future help seeking behaviour ( $r = -.19$ ,  $n = 105$ ,  $p = .049$ ).

Significant relationships were identified between different types of barriers against seeking help and openness to seeking help and future help seeking behaviour (see Table 18).

**Table 18.** Statistical relationships between barriers, openness to seeking help and future help seeking behaviour

Barrier against seeking help	Openness to seeking help	Future help seeking behaviour
Practical barriers	$R = -.19$ , $n = 112$ , $p = .046$ *	$r = .02$ , $n = 101$ , $p = .87$
Knowledge / awareness	$R = -.29$ , $n = 112$ , $p = .002$ **	$r = -.13$ , $n = 104$ , $p = .20$
Attitudinal beliefs	$R = -.35$ , $n = 102$ , $p = .001$ **	$r = -.23$ , $n = 94$ , $p = .026$ *
Fear of stigma	$R = -.46$ , $n = 112$ , $p = .001$ **	$r = -.01$ , $n = 103$ , $p = .32$

\*  $p < 0.05$ , \*\*  $p < 0.005$

Table 18 shows that barriers from all four domains of the BASH were significantly associated with openness to seeking help. The only factor with a significant negative association with future help seeking behaviour was the domain of attitudinal beliefs.

### *Relationships between different types of help and stress*

No significant relationships were identified between any source of past help and stress (Appendix 25). A significant relationship was found between stress and future help seeking behaviour on the scale of financial advisor (Chi-square = 4.26,  $df = 1$ ,  $p = .038$ ).

### **3.7 Path analysis**

A series of multiple regressions was conducted to produce three models (Figures 3-5) of path analysis accounting for the relative contributions of different independent variables to the outcomes used in this study. In order for this to occur all measured variables were grouped according to the requirements for path analysis to take place (Tabachnick & Fidell, 1996) (see Table 19). Multiple regression analyses were performed with the dependent variables of stress, coping, openness towards seeking help

and future help seeking behaviour. In accordance with the requirements for completing a path analysis non parametric data were transformed by using logarithm and squared formulations (Appendix 13). Criteria for entry included a significant relationship between an independent and outcome variable using tests of statistical analysis (Spearman's correlation coefficient, Mann Whitney, Chi Square). Once significant relationships between variables had been established a series of multiple regressions was conducted (Appendix 26). As Malaise threshold scores were used in the first analysis the first regression was conducted as a forward logistic regression (see Figure 2, page 47). All subsequent regressions were entered stepwise as linear multiple regressions. Scatterplots for each regression were produced (Appendix 27).

**Table 19.** Grouping variables used in multiple regressions for path analysis

<b>Block</b>	<b>Variable</b>
Demographic Factors	Age Farm type <ul style="list-style-type: none"> <li>- Dairy</li> <li>- Beef</li> <li>- Sheep</li> </ul> Size of farm <ul style="list-style-type: none"> <li>- Number of cattle</li> <li>- Number of acres</li> </ul> Length of farming experience Number of hours worked, summer & winter
Stressors	Money worries Financial problems Bank involvement Danger of losing the farm Policy Amount of paperwork Difficulty completing forms Difficulty understanding regulations
Coping variables	Having someone to confide in Number of close friends Problem solving strategies Social support strategies Positive appraisal Emotion focussed strategies
Barriers against help seeking	Practical barriers Knowledge / awareness Attitudinal barriers Fear of stigma Total number of barriers
Help seeking	Cluster 1 professional Cluster 2 people in general Cluster 3 educational Cluster 4 negative emotions Openness to seeking help Future help seeking
Outcome variables	Malaise threshold score

*Path analysis using stress as the dependent variable*

By using the Malaise threshold scores as an outcome measure it was possible to produce a path analysis accounting for the variance between stress and independent variables in this research (see figure 2).

**Figure 2.** Path analysis using Malaise threshold scores as an outcome measure

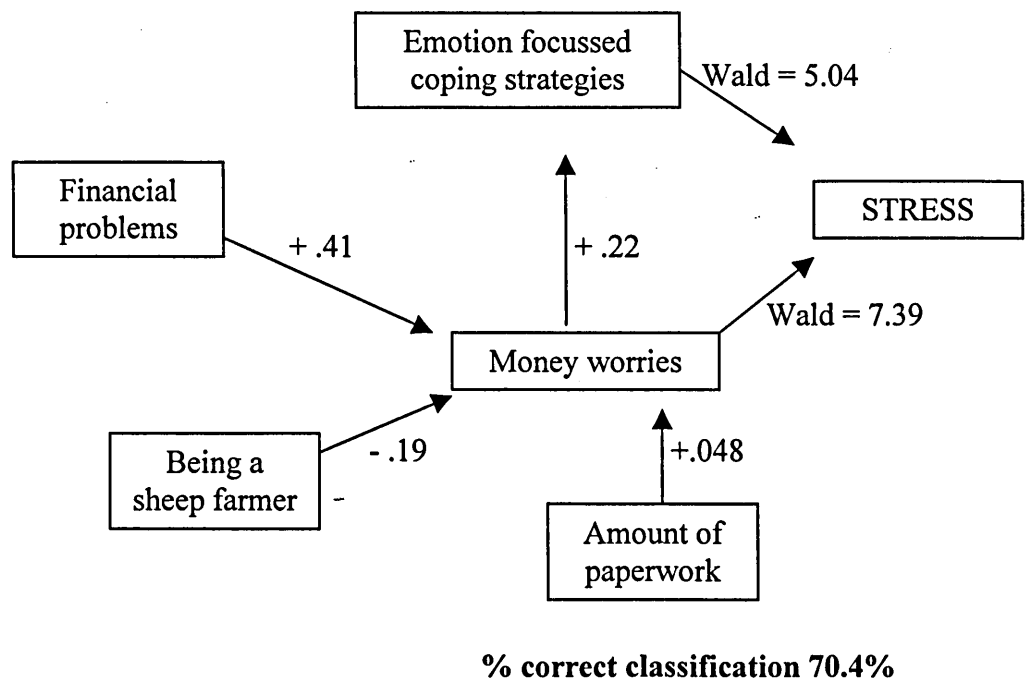


Figure 2 indicates that both money worries and emotion focussed coping have a significant association with high stress scores. The model indicates that the presence of money worries is a significant factor in the use of emotion focussed coping and stress. Financial problems, being a sheep farmer and large amounts of paperwork were all associated with money worries. Thus, figure 2 reveals that as financial problems increase and the amount of paperwork completed by farmers increases stress levels become higher. This analysis highlights that being a sheep farmer is negatively associated with money worries and has an indirect influence over stress.



*Path analysis using openness to seeking help as the dependent variable*

**Figure 3.** Path analysis using openness to seeking help as an outcome measure

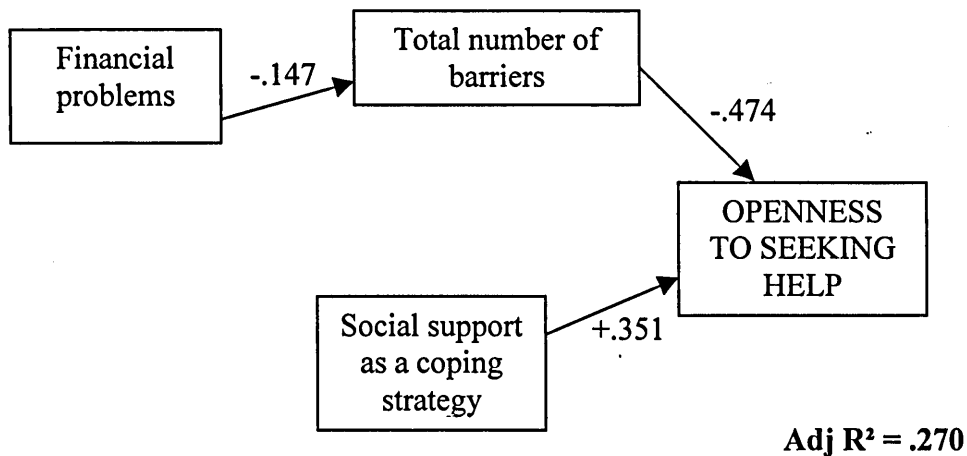


Figure 3 indicates that the factors most significantly associated with individual's openness to seeking help are the total number of barriers against seeking help. When there are more barriers militating against help seeking there is less openness to seeking help. When seeking social support is used as a coping strategy there is an increase in openness towards seeking help. Financial problems are negatively associated with total number of barriers, suggesting that as financial problems increase barriers are broken down as individuals seek help to resolve their difficulties.

*Path analysis using future help seeking as the dependent variable*

**Figure 4.** Path analysis using future help seeking behaviour as an outcome variable

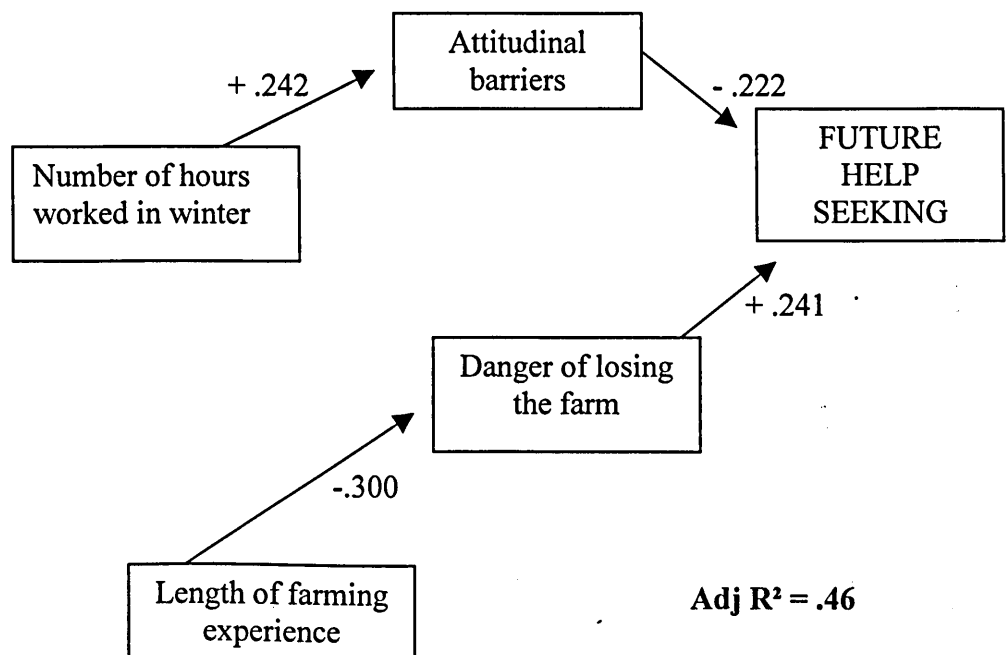


Figure 4 indicates that the most significant practical factor associated with future help seeking behaviour is a danger of losing the farm; danger of losing the farm increases the likelihood of future help seeking behaviour. An increased perceived danger of losing the farm was associated with shorter duration of farming experience. Future help seeking behaviour was negatively associated with attitudinal barriers, where a lower number of barriers leads to an increased likelihood of future help seeking. As farmers work more hours in the winter the number of attitudinal barriers militating against future help seeking rises thus suggesting that patterns of working practice have an indirect influence over future help seeking.

## 4.0 Discussion

The findings of this research will now be summarised and discussed in relation to the main aims and hypotheses of the study. Implications for clinical practice will be considered, and the methodological limitations of the current study will be discussed. Finally, recommendations for future research will be outlined.

### 4.1 Summary of aims

This study had a number of aims, firstly to identify the presence of stress within farmers and to explore factors that contribute to that stress. Secondly, it aimed to identify patterns of coping behaviour, and explore the relationship between the use of coping and psychological well being. Thirdly, the study aimed to establish whether farmers are more likely to seek help from within their community and identify what factors prevent farmers seeking help from outside agencies. Fourthly, the research aimed to provide an account of the ways in which these variables relate to psychological well being.

### 4.2 Stress

The first aim of this research was to identify the levels and causes of stress among farmers and to explore the relationships between these variables.

Hypothesis 1.1 predicted that there would be a high level of stress among the sample in this study. This finding has been supported, with 33 percent of respondents reaching a score of clinical significance on the Malaise Inventory. This figure is slightly higher than previous British research, where it has been identified that 30 percent of farmers are under high levels of stress (Hawton *et al.*, 1997). The present study has provided a more accurate measure of the number of farmers under stress by including a formal measure of it. The study by Hawton *et al.* (1997) was limited by producing stress levels based on the number of specific stressors to which respondents were exposed.

According to the findings of this study the number of farmers presenting with high levels of stress is lower than would be expected on two counts. Firstly, it is lower than would be expected given the American literature exploring this phenomenon. For example, Geller *et al.* (1988) found that 40 percent of American farmers consider themselves to be under a high level of stress. The reasons for this difference are unclear, although the Geller *et al.* (1988) study used a different method of self report (e.g. asking farmers to rate their own stress levels rather than employing a formal measure). It is possible that there was a cultural variation between the studies in their definition and

measurement of stress. Alternatively the results may represent a genuine difference between British and American farmers and the way they respond to stress. These observed differences highlight the need for future studies to adopt universal definitions and measurement of key terms to systematically examine cross cultural variation between different sample groups.

Secondly, given current difficulties within agriculture, it was anticipated that stress levels would have been higher among the current sample, particularly as the sample was made up of beef, dairy and sheep farmers who have been most affected by the current crises. A true prevalence of stress levels may have been concealed by the large number of respondents who did not reply to the study. A conclusion of this finding is that stress levels among farmers should not be under estimated.

Hypothesis 1.2 predicted that farmers would report more physical and less psychological and behavioural symptoms of stress. This prediction has not been supported as farmers self report an equal number of physical, psychological and behavioural symptoms of stress. Symptoms of stress reported in the current study are consistent with previous research. This study supports the findings of Walker *et al.* (1986), who demonstrated common physical symptoms of stress among farmers to include tiredness, back pain and other somatic problems.

This study offers support to previous research where it has been found that a common psychological symptom of stress is a fear of failure (Heppner *et al.*, 1991). In addition to supporting this finding, the current research has identified other important psychological symptoms / consequences of stress among farmers. This is particularly true of their beliefs about coping and control (e.g. beliefs about stress being caused by events outside of their own control), which has previously been identified as an important factor in psychological well being (Suls & Fletcher, 1985). Participants talked openly and spontaneously about control during the semi-structured interviews; the nature of these discussions suggested openness to the psychological processes involved in stress which have not previously been identified in the literature.

From this finding two observations can be made. Firstly, the psychological impact of stress and the psychological control over it have been under-estimated in the literature exploring farmers' behaviour. This may be due to the present study having a psychological bias in the way that questions were phrased or the way that the data were analysed. The responses of the current sample might reflect a particular openness to psychological interpretations of stress. Alternatively, previous studies may have been

conducted without a full consideration of the underlying models of stress before embarking on a measurement and analysis of it.

Secondly, this finding suggests that farmers hold a psychological interpretation of stress and make links between thoughts and behaviour. This implies that psychological therapies based on these principles (e.g. cognitive behaviour therapy, Blackburn & Twaddle, 1997) could be used effectively to reduce distress and improve well being among this group.

The present study offers support to previous research exploring the behavioural manifestations of stress among farmers. These include increased tiredness / sleep disturbance (Matheny *et al*, 1986) and increased irritability (Walker & Walker, 1988). This study has not found evidence supporting the relationship between stress levels and farm accidents (Burnett, 1991; Gerrard, 1998). It does, however, offer an account of the relationship between these two variables. The extent to which stress is directly responsible for an increase in farm accidents is debatable. The consequences of stress, however, such as distracted thought and increased tiredness, are more likely to lead to loss of attention and concentration. These may increase the chance of accidents occurring. In addition, the current study has not been able to establish behavioural manifestations of stress consistent with the literature reporting an increase in alcohol consumption and stress levels (Walker & Walker, 1988).

Previous research exploring farmer stress has not identified whether farmers are able to recognise and label the symptoms of stress within themselves. The findings of this study suggest that this sample were good at identifying their own symptoms of stress, particularly as there was a good range of overlap between recorded symptoms of stress on formal measures and during the semi-structured interview. This finding implies that the difficulties associated with dealing with stress are more likely to relate to individual knowledge about how to manage it rather than recognising it in the first place.

The fact that fifty percent of farmers identified that their wife / partner would not be able to recognise symptoms of stress is worthy of consideration. It raises the question of whether this reflects a genuine inability or whether it reflects a desire of the farmer to protect his wife from his true feelings. This is clearly an area that needs to be further researched and has implications for outside agencies that come into contact with farmers. For example, they are likely to be more defended against their true feelings in the presence of a stranger (Sherlock, 1995). It also has implications in terms of working

alongside farmers' wives in an attempt to help them learn and respond to symptoms of stress in their husband / partner.

Hypothesis 1.3 predicted that high levels of stress would relate to particular demographic factors. This finding has only been partially supported as the present study has shown that demographic factors can have an indirect effect on stress. The relationship between demographic factors and stress levels has not been previously explored in the British literature. However, previous American research has found that younger farmers (Walker & Walker, 1987), those working larger farms (Ellis & Gordon, 1990) and those running mixed farm enterprises (Walker & Walker, 1987) are more likely to suffer a higher level of stress. This finding has implications as it calls into question the use of generalising the findings of research into clinical practice, for example saying that because a farmer is young or works with dairy cattle implies he will suffer a high degree of stress. This highlights the complicated nature of stress and emphasises the need to consider other variables that are influential in leading to high stress levels. It can also be argued that this finding supports the suggestion of Coyne & Lazarus (1980) for a more comprehensive and interactive model of stress, as previous models have been based around simple ABC paradigms.

Due to the under-representation of some characteristics in the sample, it was not possible to analyse the relationship between some demographic factors and stress, for example, gender, marital status and type of farm occupancy. It could be argued that each of these factors may have an independent effect on stress levels. Exclusion of these variables highlights the limited nature of the current analysis and calls for further research to be undertaken exploring the relationships between these variables.

The current research, by including a formal measure of stress, was able to identify statistical relationships between specific factors and stress levels. This has been neglected in previous research where results have simply reported percentage rates of farmers worried by specific factors (e.g. Deary, Willock & McGregor, 1997; Walker & Walker, 1987). As such the present study highlights two factors which have a significant association with stress scores.

Firstly, these relate to situations and events over which individuals feel they have little or no control, especially with regard to government bureaucracy and completing large amounts of paperwork. Secondly, financial problems and money worries were significantly associated with stress. The results of this study have indicated that the ways in which individuals cope with these difficulties is, in itself, a contributory factor to

stress. As such the use of emotion focussed coping strategies for dealing with money worries has been associated with higher levels of stress.

These factors have not previously been identified as sources of stress in the American literature. The reasons for this are unclear but may be governed by the current climate within British farming. For example, in light of the BSE crisis there has been a shift towards increased regulation and monitoring by external bodies. American farmers may have always worked under strict bureaucratic regimes and is therefore the norm. Or it could be that American farmers are not subjected to the same degree of rigour in their work.

In addition to stressors identified from the quantitative analysis, participants identified stressors during the semi-structured interviews. These related to a high degree of interference and monitoring from outside agencies. Stressors also related to self-generated beliefs about the success or failure of the business, particularly in relation to individual beliefs about respecting the hard work of previous generations in establishing and maintaining the farm business. Many farmers were governed by a fear of failure and identified this as the predominant driving force behind their work. This finding is in contrast to previous research where it has been found that the concept of farm families working together has been a source of stress (Rosenblatt & Anderson, 1981).

In establishing psychological factors that are influential in the stress process this research has reviewed earlier studies exploring the development of stress. In analysing the questionnaires and semi-structured interviews in this study it is possible to offer some validation of these early findings.

Firstly this study offers support to the work of Holmes & Rahe (1967) who identified that the effects of stress are cumulative. Farmers readily identified that the extent to which they feel stress is directly proportional to the number of stressors to which they have been exposed. Secondly, this study supports the work of Brown & Harris (1978) where a relationship between negative environmental factors, for example, in this research financial problems, and stress have been identified. Thirdly, this research has supported the work of Stern *et al.* (1982) with the finding that only events classified as being outside of the individuals' own control are described as stressful. As such the frequency, severity and the extent to which individual farmers are exposed to stressors and can control their environment are key factors in the stress process.

### 4.3 Coping

The second aim of this research was to explore patterns of coping behaviour within the target population and to explore the relationship between coping and stress.

Hypothesis 2.3 predicted that there would be a relationship between maladaptive coping and stress levels. A significant association was found between the use of emotion-focussed coping and high stress levels and between the use of social support and lower stress levels. Hypothesis 2.3 has been supported.

Previous research has indicated that farmers show a strong reliance on 'hoping and praying' and 'fun and recreation' as coping strategies (Weigel & Weigel, 1987). The results of this research do not suggest that farmers are particularly reliant on one form of coping over another, although it could be argued that 'fun and recreation' may equate to seeking social support as a coping mechanism. However, as the Weigel and Weigel (1987) study does not elaborate on this concept, it is difficult to make this comparison. This difficulty highlights the need for consistency between studies when defining and employing different measures of coping.

This research has found evidence to suggest that social support as a coping strategy is significantly associated with openness to seeking help and the likelihood of engaging in help seeking behaviour in the future. This implies that farmers are appropriately able to identify and utilise different forms of help when they have a strong social support based coping strategy. The clinical implication for this is how best to identify and modify coping strategies that are more reliant on individual and maladaptive strategies such as the strong reliance on the use of emotion focussed coping.

Anecdotal evidence from the semi-structured interviews suggested that farmers who appeared to display greater levels of psychological well being adopted a problem solving approach to difficulties and considered a wide range of solutions to resolve them. There was a general belief in not allowing problems to escalate or delaying responses in dealing with difficulties. Where farmers were seen to delay dealing with difficulties or adopt a less structured approach to dealing with them, levels of psychological well being appeared to be lower. This finding has implications in terms of the kinds of therapy that might be offered to farmers, for example, approaches where there is an emphasis on identifying and solving a problem compared to exploratory approaches.

Hypothesis 2.2 predicted that there would be a positive relationship between the presence of social support and low levels of stress among the current sample. This



prediction has been supported as a significant association was found between individual numbers of close friends and stress. This finding suggests that social support acts as a buffer against stress and, as such, offers partial support to the literature where social isolation has been identified as playing a large part in stress and mental health disturbance among farmers (Barry 1997; Gavel, 1997; Hughes & Keady, 1996; Pugh, 1996).

The current research shows that the role of social isolation may be over emphasised in the current literature; it emerged that, for many farmers, being alone can sometimes be the best part of their job. In addition, many of the sample in the current study reported having a range of close friends and social contacts. A possible explanation for this may be in a response bias, in that those who responded may be more socially active.

The current research is not able to delineate what farmers understand by the terms 'social isolation and support.' Whilst this leaves a gap in the existing literature it does not dispute these research findings which suggest that any notion of farmers being socially isolated needs to be approached with caution.

#### 4.4 Help seeking

Aim three of this study was to identify established patterns of help seeking behaviour among farmers. It also aimed to identify whether particular factors influence individual decisions to seek help.

Hypothesis 3 predicted that farmers would display low levels of help seeking behaviour and that where help was sought it would be from within the farmer's immediate social network (e.g. family and friends) rather than sources external to the individual (e.g. professionals). Consistent with the American literature (Bayer & Peay, 1997) this study has identified that there are low rates of uptake for professional services among farmers. This research supports the notion that individuals, in general, are more likely to turn to members of their own family or friends for help rather than members of the helping professions.

These findings offer support to hypothesis 3 of the present study. They may also account for the association found between the use of social support as a coping strategy and low stress. In addition, this finding highlights the need for existing support networks to be maintained and encouraged. This has implications for farmers who do not have

access to these traditional support networks or whose support networks have broken down.

Within this sample the divorce rate of respondents was only five percent, around 30 percent lower than the national average (Frude, 1991). It can be speculated that this is a reflection of the commitment that farmers and their families have to providing support for each other and confirms their traditional views of staying together.

Where help was sought from outside the individuals' immediate social network (e.g. friends and family) it was limited to financial advisors, General Practitioners and members of the clergy (Cook and Tyler, 1981). This was also reflected in farmer ratings of future help seeking behaviour. This finding has implications in terms of the kind of individuals who should be targeted for recognising and responding to psychological difficulties within this population group. On rating future help seeking behaviour, farmers were 25 percent more likely to go to a self help group. This has implications for service delivery as a group approach seems to be favoured over sources of help on an individual basis. This is further reinforced by findings of the semi-structured interviews where it was highlighted that farmers want to be with individuals with whom they can identify, and who understand their needs.

While the findings of this research support the previous research of Cook & Tyler (1981), identifying common sources of help and future help seeking behaviour, there is a vast difference between this study and the American literature exploring the type of barriers that prevent individuals from seeking help. While the American literature identifies practical barriers as the most significant factor in help seeking behaviour (Bayer & Peay, 1997), this research has highlighted that attitudinal beliefs are more likely to act as barriers against individual decisions to seek help.

The current research has found that individual farmers' 'openness' to seeking help was affected by knowledge / awareness of services, beliefs about stigma, practical barriers and attitudinal beliefs. The latter related to beliefs about not showing your feelings to others and beliefs about not being able to establish trusting relationships with people outside the family.

Factors significantly associated with future help seeking were danger of losing the farm, when individuals perceived that they would be more likely to ask for help. The only factor militating against future help seeking behaviour was attitudinal beliefs. Taken together, these two findings suggest that farmers are willing to seek help when there is a clear problem for which a solution needs to be sought. The findings also imply

that farmers who have the attitude that seeking help is useful (e.g. score highly on the openness to seeking help scale) are more likely to seek help again in the future.

This observation carries two implications for clinical practice; firstly that farmers will only take advantage of services if they can identify a need. Given the fact that psychological difficulties may be unidentified in this population group, interventions may need to focus on identifying and responding to symptoms of stress. Secondly there are likely to be difficulties in engaging farmers in accessing help, particularly as the attitudinal beliefs most significantly associated with help seeking related to dealing with difficulties alone, getting away from people at times of difficulty and not showing your feelings to others. This finding suggests that the difficulty not only relates to keeping individuals with these kinds of beliefs on task but also engaging them in the first place.

This research offers an explanation of the difference between barriers against seeking help identified in the British and American literature. Firstly, America covers a much wider geographical area. This means that there will be a number of natural, unavoidable, practical barriers, for example, having greater distances to travel. Secondly, there may be a cultural difference between British and American farmers in that general British beliefs about having a 'stiff upper lip' may be represented among this group. Fear of failure previously identified may be exacerbated by beliefs about having to receive external sources of help.

#### 4.5 Evaluation of existing models of stress

The findings of this research have demonstrated that stress is a complex process reflecting the interaction of different variables with a number of possible outcomes. The findings indicate that stress is more than a physiological mechanism outlined in early biological models. At the same time the physical effects of stress have been demonstrated. This research has highlighted the need to include psychological variables into the stress process and has therefore demonstrated the utility of adopting a more psychological interpretation of the phenomenon. As such, this research has highlighted the need for a comprehensive and integrated model locating stress within all of these domains.

The findings of this research allow for an evaluation of models relating specifically to farmers. The life cycles model of Bennett (1987) draws heavily on beliefs about the relationship between demographic factors and stress. As these associations have not been found in this study the validity of that model is questioned. As the results

of this study show that stress is related to environmental factors and individual appraisals of stressful situations (e.g. feelings of control) it is well accounted for in the ABCX model of stress formulated by Davis-Brown and Salamon (1987). A continued limitation with the model of Davis-Brown and Salamon (1987) is that it fails to account for the role of help seeking behaviour in the stress process.

This section will now consider factors important in the development of an alternative model of stress and coping among farmers by considering the relationship between the main variables in this study.

#### 4.6 Path analysis

The fifth aim of the present study was to establish relationships between the variables of stress, coping and help seeking behaviour. By completing a path analysis on the data, it has been possible to identify specific factors that contribute to the high levels of stress among this population group and factors that contribute to an increased openness to seeking help and future help seeking behaviour.

The path analyses support the findings of this research that financial problems / money worries are a significant factor in both stress and help seeking among farmers. The results of the path analyses suggest that once a clear problem has been identified farmers are more likely to see help as a viable option, and are more likely to seek help to resolve the difficulty. The path analyses have shown that the areas where difficulties are most likely to be defined are financial problems and danger of losing the farm. These findings imply that once a problem has been identified farmers are quick to identify and act upon a solution. This suggests that they either employ a problem-focussed approach to addressing difficulties or that they only seek help when situations reach a crisis point.

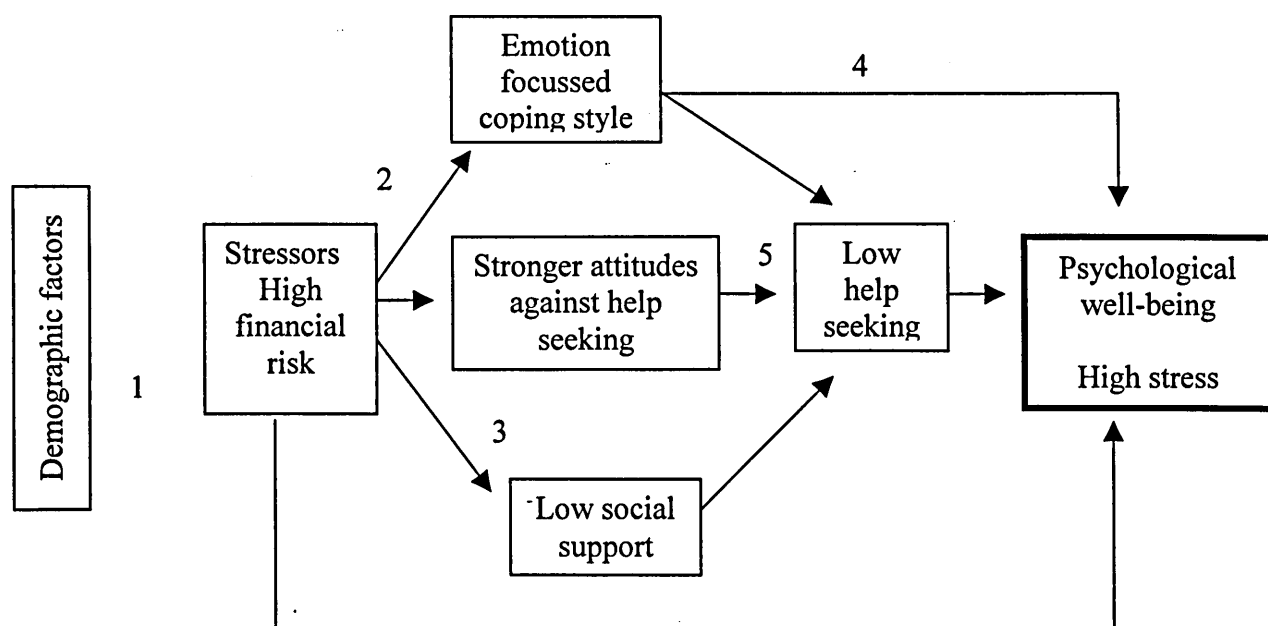
Findings from the path analysis indicate that demographic factors are influential in an indirect way over stress levels and over future help seeking behaviour. This reinforces findings from the main data analysis that demographic factors should not be used as predictor variables in stress but that they are contributory factors.

The high use of emotion focussed coping was influenced by the presence of money worries, indicating a secondary role for the effects of money worries on stress levels. This finding illustrates that there is an interactive and reciprocal relationship between stress and stressors. This finding has not previously been documented in the literature within farmers.

Path analysis offers confirmation for the role of social support in the stress process in that openness to seeking help was influenced by the coping strategy of social support. This implies that social support may mediate the effects of stress by predisposing the individual towards seeking help rather than in the direct form as previously thought. Further research is needed to define an exact role for social support and the use of seeking social support as a coping strategy in the stress process.

In light of the path analysis and an analysis of the relationship between the variables in the current study it is possible to produce a revised model of the relationship between variables in the present study (see Figure 5).

**Figure 5.** Revised model outlining the main findings of the study



#### Key

- |   |
|---|
| <p>1. Relationship between demographic factors, stressors and stress outcome:<br/>No direct relationships were found between the presence of specific demographic factors and stress scores or between specific demographic factors and the presence of particular stressors.</p>   |
| <p>2. Relationship between stressors and coping:<br/>The presence of financial worries leads to the use of more emotion focussed coping strategies<br/>Beliefs about adopting an internal locus of control, not showing emotions to others leads to an increase in stress scores</p>  |
| <p>3. Relationship between social support and psychological well being:<br/>Higher levels of social support act as a buffer in reducing the effects of stress</p>   |
| <p>4. Relationship between coping style and stress outcome:<br/>High use of emotion focussed coping strategies leads to an overall increase in stress levels<br/>High use of social support as a coping mechanism leads to a decrease in stress levels</p>  |
| <p>5. Relationship between barriers / attitudes towards seeking help and help seeking behaviour<br/>Increased number of barriers against seeking help leads to decrease in openness to seeking help and future help seeking behaviour.<br/>Presence of negative attitudinal beliefs about seeking help leads to reduction of future help seeking behaviour.</p> |

#### 4. 7 Implications for clinical practice

The seventh aim of this research was to establish a model of intervention targeted at a group of individuals whom, in spite of an established need, have historically failed to engage with mental health services (Naylor, 1997). From the findings of this research it is possible to identify a number of implications for health professionals working with farmers and their families.

Firstly, this research has shown that farmers are a group of individuals who need, or are likely to need at different points in time, support and assistance from outside agencies. This support may take place at a number of different levels. For example, it may take the form of lobbying for changes to be made to the system that adds to the stress and pressure of farming. Alternatively it may take the form of helping individuals who are facing difficulties to cope better and improve psychological well being.

Secondly, if services are to be made accessible to farmers a number of barriers need to be overcome. In encouraging farmers to take advantage of services health care professionals need to work towards building bridges between established support agencies and the farming community. Given the findings of this research this would need to take place from within the farming community rather than externally to it. It is possible that those health care professionals who currently have direct contact with the families of farmers, particularly school nurses and health visitors, may be able to act as an indirect source of help for emotional difficulties or refer individuals to the appropriate organisation for help. The fact that farmers who took part in the semi-structured interviews were willing to talk openly and honestly, with an outsider, about their thoughts and feelings indicates that there are good opportunities for building up relationships with this population group. This observation also reinforces the fact that once a clear aim or purpose has been identified (e.g. talking to a researcher about stress) farmers are happy to engage with outside agencies.

Thirdly, an additional group of individuals who have regular contact with farmers are business representatives. It was suggested during one of the interviews in this research that these people are an invaluable source of information for farmers and they could be given information about professional services to pass on to farmers. It was also suggested that professional services might consider printing information on auction mart slips and the receipt printed from the milk tanker. It is important to note that professional help need not be limited to established NHS mental health services. There

are now a wide range of organisations offering support and advice to farmers facing difficulties, for example the Samaritans and the Rural Stress Information Network.

This research has identified that an invaluable source of support to farmers is their wives / partners. Health professionals need to be aware of this support and utilise this form of indirect contact, particularly as farmers' wives are more likely to come into contact with other health care professionals as a result of children (e.g. health visitors). The development of support groups for farmers' wives / partners may provide opportunities for professionals to identify and act on observed difficulties.

Fourthly, the findings of this research have implications for the general practitioner and the process of referring individuals to health care services. Findings suggest that farmers would not talk about their difficulties in an ordinary GP consultation. It is possible that GPs may not be aware of, or identify, psychological difficulties among farmers or they may not readily identify stress according to the physical symptoms of the patient. The introduction of a simple screening device such as the Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983) would allow for the identification of psychological problems.

This research highlights other implications for clinical practice that need to be considered once contact has been established between helping services and the farmer. Farmers should not be treated as a homogenous group with the same needs and aspirations. This research has shown that, while farmers share some common characteristics, they are all unique and each case should be taken on its own merits.

A finding of this research is that farmers' reactions to difficult life situations (coping) do have a psychological impact. Health professionals need to develop awareness and focus on more positive aspects of coping. In working alongside the problem focussed behaviour of farmers it may be necessary for health care professionals to work alongside other agencies for support and advice, for example financial and employment advisors.

Finally, this research has implications for a large number of farmers who do not have access to either social support or health services as a source of help. As these are likely to be the most vulnerable it is suggested that steps are taken to establish and meet their needs. One farmer suggested that this might be achieved in terms of setting up social support groups at the auction mart or by establishing a befriending scheme.



#### 4.8 Limitations of the study and implications for future research

This research has been limited by its low response rate. However, this does not militate against the production of a model based on power calculations but reduces its effective impact. Previous studies using postal questionnaires among farmers have attained response rates of between 51 and 80 percent (Belyea & Lobao, 1990; Fehr & Tyler, 1989; Geller, Bultena & Lasley, 1988; Hawton *et al.* 1998; Heppner, Cook, Stroizer & Heppner, 1991).

The low response rate in this study may have been caused by a number of factors; firstly many of the studies cited above involved follow up telephone interviews for those who did not respond. The current research was limited in that it did not have access to names and addresses to send out a follow up letter. Secondly, the results of this research have shown paperwork to be a significant source of stress for farmers. Given this it is likely that completing a set of questionnaires, with no obvious benefit to the farmer, would not have been rated as a high priority. It is also possible that the questionnaires were seen as lengthy and awkward to complete.

Thirdly, a number of participants stuck a stamp on the reply paid envelope and commented that it would have been nice to have a stamped addressed envelope in which to return the questionnaires. The design of the envelope should have been rearranged to make it clearer that it was a prepaid return. Alternatively this could have been made more prominent in the covering letter or added at the end of the last questionnaire.

Fourthly, a number of potential respondents may have been unable to respond to the questionnaire because of high levels of illiteracy observed in this population group (Monk, 1997).

Fifthly, the questionnaires were mailed to participants before the first of August 1999 when the ban on the exporting of British Beef was lifted. At the time there was a general feeling of malaise among the farming industry and completing a set of questionnaires for a research project may have not been perceived as beneficial at the time. A large number of respondents added additional comments to the effect that it was nice to see someone from outside the farming industry taking an interest but that they doubted it would make any real difference.

The design of this research has been limited in that, while it has raised some key issues it has failed to address them in great detail. For example, while it raises the practical barrier of knowledge in help seeking it does not address the constitution of this

knowledge base. For example it does not ask respondents to identify what they see as being the key characteristics of different professionals.

Given the association between stress and anxiety and depression it would have been useful to include a brief measure of these factors in the questionnaire component of the study, for example the HADS. It is likely, however, that the inclusion of another measure would have led to a further reduction in the response rate of this study.

The design of the semi-structured interview could have been improved by exploring the attributional style of individual farmers. This would have been particularly useful in terms of assessing perceptions about the cause of physical health problems. It could be that farmers were unable to recognise symptoms of stress because they were attributing physical illness to the manual nature of their work rather than stress. It is recommended that if General Practitioners are to identify the symptoms of stress in farmers these attributions are explored more fully.

The sample did not include a sufficient number of female farmers to make comparisons between variables based on gender. As such the findings of this study may represent a gender bias in help seeking, rather than reflecting the help seeking attitudes of farmers *per se*. Particularly as a barrier identified as militating against help seeking was maleness (Bayer & Peay, 1997). In addition, the present sample was restricted to livestock farmers in the Northwest of England. It is likely that these farmers, although sharing some common characteristics with others, are likely to have different needs and views to those running different kinds of farming enterprise in different geographical areas. Future research might consider exploring these factors in more detail, given the difficulties in generalising findings between different cultures and subcultures this would be an essential component of future studies.

The current research is limited in that it has only established a short term snapshot of a long term and complicated series of behaviours. It is likely that as the nature of farming changes and it presents new challenges the nature of coping and help seeking would change. Future research might consider employing a longitudinal approach to studying this phenomenon.

Finally, in completing the data analysis for this study it has become apparent that a formalised qualitative approach (for example Interpretative Phenomenological Analysis – Creswell, 1998) would have complemented these findings by locating the phenomena within the real world and by providing a richer description of it. Future research might consider employing a purely qualitative approach to exploring this area.

It is anticipated that this might facilitate a greater understanding of what is a difficult and complicated phenomenon and has major implications for the ways in which clinical services are organised and delivered.

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## Appendix 1



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c.c. Dr. H.Frost

April 19, 1999

David Wheatcroft  
Clinical Trainee  
Lancashire Clinical Psychology Course  
Department of Clinical Psychology  
Whitegate Drive Health Centre  
156 Whitegate Drive  
Blackpool FY3 9HG

Dear Colleague

**A study to determine the attitudes of British farmers towards seeking help for mental health difficulties: A causal analysis.**

Your research proposal (referred to above and on the attached sheet) has been reviewed by the School of Psychology Research Ethics Committee and they are satisfied that the research proposed accords with the relevant ethical guidelines, provided that the following points are dealt with before proceeding.


1. Copies of the questionnaires to be used should be submitted to this Research Ethics Committee.
2. It will be necessary for you to obtain ethics approval from the local Health Authority before approaching, through a CPN, those who have already had contact with mental health services.
3. You should keep your data at least until after your thesis has been accepted and the consent form should reflect this.
4. The consent form and questionnaire should include the name and contact details of the person to whom complaints should be directed, and this is Professor C.Fergus Lowe, Head of School, School of Psychology, University of Wales, Bangor, Gwynedd LL57 2DG.

5. Your support for the farmers is inappropriately worded on the questionnaire. The sentence "I believe that farmers... extra support" should be deleted.

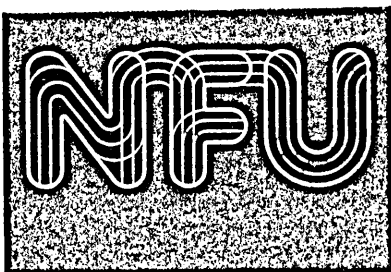
Please forward copies of questionnaires and amended documentation as soon as possible.

If you wish to make any substantial modifications to the research project, please inform the committee in writing before proceeding. Please also inform the committee as soon as possible if participants experience any unanticipated harm as a result of taking part in your research.

Good luck with your research.

A handwritten signature in black ink, reading "Kath Chitty". The signature is written in a cursive, flowing style.

Kath Chitty  
Coordinator -School of Psychology Research Ethics Committee



Appendix 2

**NORTH WEST REGION**  
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Skelmersdale, Lancashire WN8 9TL

78

Telephone: 01695 554900  
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Our ref: SJH/KO  
Your ref:  
Direct line:  
E-mail: [NFU.North.West@nfu.org.uk](mailto:NFU.North.West@nfu.org.uk)  
Date: 15 February 1999

Dear David

It was good to have the opportunity to meet you on Friday, 12 February. I thought it would be helpful if I just set out the things which we agreed so that we can put together an action plan to help you.

You very kindly explained to me the background to your research and how you hoped to provide a body of evidence which related to the issue of mental health as it in turn related to the level of suicide and stress amongst farmers.

You plan to send out a questionnaire with four different elements to it which you anticipated would take 30 to 40 minutes for someone to complete and then you hoped to follow up that questionnaire with some qualitative research with individuals.

We discussed the various methods of distributing your questionnaire. I agreed that we would be happy to circulate the questionnaire to members in the Kendal, Lancaster and Clitheroe group areas (about 1,000 in all). The ideal from my point of view would be that we would receive from you pre-sealed envelopes so that we could merely stick on the relevant labels. We would then run them through our postal system and invoice you for the postage costs. Clearly the cost would depend upon the weight of the material and whether you wished us to send it first or second class.

You might wish to aim from a farming point of view to phase the distribution and that would also help me in planning to resource the distribution.

I would also write to my colleagues John Ascroft at Lancaster, Derek Lomax at Kendal and Stephen Fawcett at Clitheroe to advise them of your proposed research and inform them that you may well wish to get in touch to brief them further. Each of them will also probably be able to give you a contact at the local auction market.

Depending upon the outcome of the mailshot we could carry out additional mailshots in other areas later in the year. You might also find benefit from attending at the auction

markets to ask individual farmers face to face to assist you with your questionnaire. If you are still collecting research data when the Westmoreland Show takes place in September then it may be possible for you to spend time in the NFU marquee at the show asking for assistance with the questionnaire.

Finally, we discussed whether it would be appropriate to have a covering letter from the NFU in the envelope. On balance I think it would be better simply to mention that the research has been discussed with the NFU and that if the recipient has any queries he should take it up with his NFU group secretary. I offered to look at a draft letter including such a statement if you would like me to do so.

As far as the mailshot is concerned I also have to reserve the right to inspect the contents of one of the sealed envelopes so that I know precisely what members are receiving. This is primarily for commercial reasons and I can't envisage it causing a problem in this case but purely for the record I have to state that my position is reserved on this.

I hope this accurately reflects the various points which we discussed and I look forward to hearing from you.

Yours sincerely

Kath Ormeslar

pp Steve Heaton  
Regional Director

kor-15299-wheatcroft.doc



Appendix 3

STRESS IN FARMING QUESTIONNAIRE

Reproduced with the kind permission of Professor Keith Hawton – February 1999

PLEASE COMPLETE ALL THE QUESTIONS.

1. What is your age? .....

2. Are you male or female Male ☐ Female ☐

3. What is your marital status? Single ☐  
Married ☐  
Widowed ☐  
Divorced / separated ☐

4. Are you a farmer or farm manager?  
Please tick the main box which applies to you  
Farm owner / occupier ☐  
Tenant farmer ☐  
Farm manager ☐

5. What type of farming operation do you run?  
Please tick all the boxes which apply to you and fill in how many animals you have

NUMBER OF ANIMALS

Arable	<input type="checkbox"/>	.....
Cattle –dairy	<input type="checkbox"/>	.....
Cattle – beef	<input type="checkbox"/>	.....
Sheep	<input type="checkbox"/>	.....
Pigs	<input type="checkbox"/>	.....
Poultry	<input type="checkbox"/>	.....
Horticulture	<input type="checkbox"/>	.....
Other	<input type="checkbox"/>	.....

(Please specify)

6. What size is your farm altogether in acres? .....

7. How many years have you been farming? .....

8. How many hours a day do you usually work?

	SUMMER	WINTER
1-7	<input type="checkbox"/>	<input type="checkbox"/>
8-10	<input type="checkbox"/>	<input type="checkbox"/>
11-14	<input type="checkbox"/>	<input type="checkbox"/>
15 or more	<input type="checkbox"/>	<input type="checkbox"/>

9. Do you have financial problems? - Yes ☐ No ☐

10. Is there any danger of you losing the farm? Yes ☐ No ☐

11. Has the bank become involved with running the farm?  
Yes ☐ No ☐

12. Has your financial situation been affected by changes in agriculture policy or new legislation?

Yes, made worse ☐  
Yes, made better ☐  
No ☐

13. Have you had any problems with new legislation or regulations?

*Problems with the amount of paperwork involved* Yes ☐ No ☐

*Problems understanding or completing the forms* Yes ☐ No ☐

*Problems with the effects of legislation or regulations* Yes ☐ No ☐

14. How much do you worry about money  
Most of the time ☐  
Some of the time ☐

Not at all ☐

15. Do you have a shotgun on the farm?

Yes ☐ No ☐

16. Do you have any other firearms?

Yes ☐ No ☐*If yes, What type?*

17. Is there anyone you can confide in or share your worries with?

Yes ☐No ☐

18. How many people would you count as close friends?

19. Do you work with organophosphates (OP) sheep dips?

Yes ☐No ☐*Which compounds do you use?**Do you think that your health has been affected by organophosphates?*Yes ☐No ☐

20. Please feel free to add any other comments that you think might help me.

**Thank you for answering these questions**

If you have any complaints to make about this research please contact Professor C. Fergus Lowe, head of School, School of Psychology, University of Wales, Bangor, Gwynedd, LL57 2DG.

## Appendix 4

### Malaise Inventory

**PLEASE TICK YES OR NO FOR EACH ITEM**

Do you often have backache?	<b>Yes</b>	<b>No</b>
Do you feel tired most of the time?	<b>Yes</b>	<b>No</b>
Do you often feel miserable or depressed?	<b>Yes</b>	<b>No</b>
Do you often have bad headaches?	<b>Yes</b>	<b>No</b>
Do you often get worried about things?	<b>Yes</b>	<b>No</b>
Do you usually have great difficulty in falling asleep or staying asleep?	<b>Yes</b>	<b>No</b>
Do you usually awake unnecessarily early in the morning?	<b>Yes</b>	<b>No</b>
Do you wear yourself out worrying about your health?	<b>Yes</b>	<b>No</b>
Do you often get into a violent rage?	<b>Yes</b>	<b>No</b>
Do people often annoy and irritate you?	<b>Yes</b>	<b>No</b>
Have you at times had a twitching of the face, head or shoulders?	<b>Yes</b>	<b>No</b>
Do you often suddenly become scared for no good reason?	<b>Yes</b>	<b>No</b>
Are you scared to be alone when there are no friends near you?	<b>Yes</b>	<b>No</b>
Are you easily upset or irritated?	<b>Yes</b>	<b>No</b>
Are you frightened of going out alone or of meeting people?	<b>Yes</b>	<b>No</b>
Are you constantly keyed up and jittery?	<b>Yes</b>	<b>No</b>
Do you suffer from indigestion?	<b>Yes</b>	<b>No</b>
Do you often suffer from an upset stomach?	<b>Yes</b>	<b>No</b>
Is your appetite poor?	<b>Yes</b>	<b>No</b>
Does every little thing get on your nerves and wear you out?	<b>Yes</b>	<b>No</b>
Does your heart often race like mad?	<b>Yes</b>	<b>No</b>
Do you often have bad pain in your eyes?	<b>Yes</b>	<b>No</b>
Are you troubled with rheumatism or fibrosis?	<b>Yes</b>	<b>No</b>
Have you ever had a nervous breakdown?	<b>Yes</b>	<b>No</b>

**Thank you for answering these questions.**

## COPING RESPONSES INVENTORY

**Dealing with a problem or situation**

Please think about the most important problem or stressful situation you have experienced *DURING THE LAST 12 MONTHS* (for example, having troubles with a relative or friend, experiencing the illness or death of a relative or friend, having an accident or illness, having financial or work problems). Describe the problem in the space provided below. If you have not experienced a major problem, then list a minor problem that you have had to deal with.

**Describe the problem or situation** .....

.....

.....

**Part I**

Please answer the following questions about the problem you have listed.  
Place an 'X' in the appropriate box.

	Definitely No 0	Mainly No 1	Mainly Yes 2	Definitely Yes 3
1. Have you ever faced a problem like this before? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Did you know this problem was going to occur? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Did you have enough time to get ready to handle this problem? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. When this problem occurred, did you think of it as a threat? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. When this problem occurred, did you think of it as a challenge? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Was this problem caused by something you did? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Was this problem caused by something someone else did? ..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Did any thing good come out of dealing with this problem? ..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Has this problem or situation been resolved? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. If the problem has been worked out, did it turn out all right for you? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# COPING RESPONSES INVENTORY

## Part II

Please think again about the problem you described at the beginning of this Inventory; indicate which of the following you did in connection with that situation.

Did you:	NO 0	YES, once or twice 1	YES, some- times 2	YES, fairly often 3
1. Think of different ways to deal with the problem? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Tell yourself things to make yourself feel better? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Talk with your partner or other relative about the problem? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Make a plan of action and follow it? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Try to forget the whole thing? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Feel that time would make a difference – the only thing to do was wait? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Try to help others deal with a similar problem? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Take it out on other people when you felt angry or depressed? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Try to step back from the situation and be more objective? ..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Remind yourself how much worse things could be? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Talk with a friend about the problem? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Know what had to be done and try hard to make things work? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Try not to think about the problem? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Realize that you had no control over the problem? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Get involved in new activities? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Take a chance and do something risky? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Go over in your mind what you would say or do? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Try to see the good side of the situation? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Talk with a professional person (e.g. doctor, lawyer, clergy)? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Decide what you wanted and try hard to get it? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# COPING RESPONSES INVENTORY

Questions about how you handled the problem you described at the beginning of this Inventory (continued)

Did you:	NO 0	YES, once or twice 1	YES, some- times 2	YES, fairly often 3
21. Daydream or imagine a better time or place than the one you were in? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Think that the outcome would be decided by fate? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Try to make new friends? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Keep away from people in general? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Try to anticipate how things would turn out? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Think about how you were much better off than other people with similar problems? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Seek help from persons or groups with the same type of problem? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Try at least two different ways to solve the problem? ....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Try to put off thinking about the situation, even though you knew you would have to at some point? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Accept it; nothing could be done? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Read more often as a source of enjoyment? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Yell or shout to let off steam? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Try to find some personal meaning in the situation? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Try to tell yourself that things would get better? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Try to find out more about the situation? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Try to learn to do more things on your own? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Wish the problem would go away or somehow be over with? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Expect the worst possible outcome? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Spend more time in recreational activities? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Cry to let your feelings out? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Try to anticipate the new demands that would be placed on you? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## COPING RESPONSES INVENTORY

Questions about how you handled the problem you described at the beginning of this Inventory (continued)

Did you:	NO 0	YES, once or twice 1	YES, some- times 2	YES, fairly often 3
42. Think about how this event could change your life in a positive way? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Pray for guidance and/or strength? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. Take things a day at a time, one step at a time? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. Try to deny how serious the problem really was? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Lose hope that things would ever be the same? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Turn to work or other activities to help you manage things? ..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Do something that you didn't think would work, but at least you were doing something? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

This completes the Inventory. Thank you very much for your help.

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### Appendix 6

#### Attitudes Towards Seeking Help questionnaire

Please answer the following questions by putting a circle around whether you agree or disagree with each item.

I would not be willing to take extra training for work	<b>Agree</b>	<b>Disagree</b>
I like to talk to other people when I feel down	<b>Agree</b>	<b>Disagree</b>
I would be willing to talk over my problems with a clergyman.	<b>Agree</b>	<b>Disagree</b>
When I am upset I let people know about it	<b>Agree</b>	<b>Disagree</b>
If I have got a problem I will sort it out myself.	<b>Agree</b>	<b>Disagree</b>
I would be willing to discuss my problems with an accountant.	<b>Agree</b>	<b>Disagree</b>
A counsellor would be a good person for me to share my problem with.	<b>Agree</b>	<b>Disagree</b>
I would just as soon get away from people when I feel down.	<b>Agree</b>	<b>Disagree</b>
I believe I would like to learn some new job skills	<b>Agree</b>	<b>Disagree</b>
It doesn't bother me to show my feelings in public	<b>Agree</b>	<b>Disagree</b>
I would try family therapy as a way of getting help for my family	<b>Agree</b>	<b>Disagree</b>
I would not share my problems with a clergyman	<b>Agree</b>	<b>Disagree</b>
I would like my husband / wife to see a marriage counsellor for problems we might have in our marriage	<b>Agree</b>	<b>Disagree</b>
I don't see myself taking any more education	<b>Agree</b>	<b>Disagree</b>
I would not go to see someone for financial counselling	<b>Agree</b>	<b>Disagree</b>
I would talk to another person who is in farming about a personal problem	<b>Agree</b>	<b>Disagree</b>
If something is troubling me I would rather keep it to myself	<b>Agree</b>	<b>Disagree</b>
I try not to let my feelings show when I am in public	<b>Agree</b>	<b>Disagree</b>

I would not go to see a psychiatrist, psychologist or social worker with my problems	<b>Agree</b>	<b>Disagree</b>
I would not go to see someone trained to help families with their problems	<b>Agree</b>	<b>Disagree</b>
I would like to go back to school and finish my education	<b>Agree</b>	<b>Disagree</b>
I can't do it all myself sometimes I need help.	<b>Agree</b>	<b>Disagree</b>
My husband / wife and I can solve any problems without professional help	<b>Agree</b>	<b>Disagree</b>
I do not like to show my feelings to others	<b>Agree</b>	<b>Disagree</b>

Below is a list of ten people who may have helped you with problems or worries in the past. Please say YES if they have helped you and No if they haven't. Please say how likely you are to ask them for help again in the future.

Person	Have they helped you in the past		Please mark whether you will go to this person for help again			
Religious leader	Yes	No	Not at all likely	Hardly likely	Somewhat likely	Very likely
Financial advisor	Yes	No	Not at all likely	Hardly likely	Somewhat likely	Very likely
Psychiatrist, psychologist or social worker	Yes	No	Not at all likely	Hardly likely	Somewhat likely	Very likely
Family doctor	Yes	No	Not at all likely	Hardly likely	Somewhat likely	Very likely
Family counsellor	Yes	No	Not at all likely	Hardly likely	Somewhat likely	Very likely
Marriage counsellor	Yes	No	Not at all likely	Hardly likely	Somewhat likely	Very likely
Self-help farm group	Yes	No	Not at all likely	Hardly likely	Somewhat likely	Very likely
A friend	Yes	No	Not at all likely	Hardly likely	Somewhat likely	Very likely
Husband or wife	Yes	No	Not at all likely	Hardly likely	Somewhat likely	Very likely
Other family member	Yes	No	Not at all likely	Hardly likely	Somewhat likely	Very likely

Thank you for answering these questions.  
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## Appendix 7

### Barriers Against Seeking Help questionnaire

Please think about a problem you have had and read the following. Please tick whether you agree or disagree with each of the statements. By professional I mean a person outside of your friends and family e.g., doctor, psychologist, psychiatrist, counsellor, nurse or social worker who work as a part of the helping profession.

I would not be able to talk to a professional about my problems because of the hours I work	<b>Agree</b>	<b>Disagree</b>
I would not be able to talk to a professional person about my problems because they only work between 9.00 and 5.00	<b>Agree</b>	<b>Disagree</b>
I do not know who there is for me to talk to outside of my friends or family	<b>Agree</b>	<b>Disagree</b>
I would not be able to travel to talk to a professional about my problems	<b>Agree</b>	<b>Disagree</b>
I have tried to talk to a professional in the past but it did not work out	<b>Agree</b>	<b>Disagree</b>
I would not trust someone outside of my friends or family to talk to about my problems	<b>Agree</b>	<b>Disagree</b>
I would not know what kind of help a professional would be able to give	<b>Agree</b>	<b>Disagree</b>
People who are not farmers do not understand my problems	<b>Agree</b>	<b>Disagree</b>
I would not want to talk to a professional about my problems	<b>Agree</b>	<b>Disagree</b>
I believe that you do not need to talk to people outside your family about your problems	<b>Agree</b>	<b>Disagree</b>
If I go and talk to a professional about my problems it means I can't cope	<b>Agree</b>	<b>Disagree</b>
I don't believe a professional could help me with my problems	<b>Agree</b>	<b>Disagree</b>
Only people with a mental illness go and talk to professionals about their problems.	<b>Agree</b>	<b>Disagree</b>

If there are any other things that stop you from asking for professional help please write them here:

**Thank you for answering these questions.**

## Appendix 8

### Covering letter sent to participants

Dear NFU Member,

**Re: Research project – a study to determine levels of stress among farmers. How farmers deal with stress.**

My name is David Wheatcroft and I am a Clinical Psychologist in training. I am on the Lancashire Clinical Psychology training course and I am carrying out a piece of research looking at levels of stress and coping among British Farmers. In order to do this I need your help.

This letter has been sent to you from the NFU, I do not know who you are or where you live. This research has been given the support of your regional director and branch secretary, I have their permission to contact you.

The research is looking at levels of stress in farmers. I am interested in how you cope with stress and the difficulties that it may cause in your life. I hope that you will take the time to read this letter and answer the enclosed questions.

#### **Who am I?**

Although I am not from a farming background myself many of my friends around the country are farmers and I have seen the effect that the ongoing crisis in the industry has had on their lives. I value your comments, your opinions are important to me and I believe that the findings of this research will help to argue the case for more support for farmers at a national level.

#### **Why am I doing this research?**

It is known that farmers are among the most stressed workers in Britain today. Little is known about the ways in which farmers deal with this stress.

It is the aim of this research to:

1. Identify levels of stress
2. To find out how farmers deal with stress.
3. To find out how stress affects your life as a farmer.
4. To find out whom you turn to for support when you feel under pressure.
5. To find out how organisations such as the NFU and the NHS (National Health Service) can help farmers with their problems.

Continued .....

## How will I do this research?

### *Who will be involved?*

Farmers who are members of the NFU in the Northwest region are being sent this letter and questionnaires.

### *What will you have to do?*

I would be most grateful if you would complete the enclosed questionnaires. It should only take you about 20 minutes to do and will provide me with valuable information for my study. Once you have completed all the questions please return them to me in the freepost envelope provided.

I am also interested in talking to a few farmers individually about stress and coping. **If you agree to be interviewed this does not mean that you need help.** The interviews will last a maximum of 45 minutes and I am happy to visit you in your home, or a mutually convenient location. If you are happy for me to interview you please complete the reply slip at the end of this letter and enclose it with your completed questionnaires.

## Who will see the results of this research?

Any answers that you give will remain private and confidential. I will be the only person who sees your completed questionnaires. All the information that I collect will be destroyed once the study is complete.

I firmly believe that your views are important and value your comments. The findings of this research will be of use to the NFU, the National Health Service and hopefully the government. **I will not be passing on any information about you as an individual to any other organisation.**

If you have any further questions or comments regarding this research please feel free to contact me on (01253)

I thank you once again for taking the time and trouble in reading my letter and answering my questions.

Yours sincerely,

David Wheatcroft  
Clinical Psychologist in training

**Please write your name, address and telephone number in the space below if you are happy to be interviewed as part of this research. Thank you.**

**Appendix 9**  
**Letter sent to interview participants**

27<sup>th</sup> July 1999

Dear Mr

**RE: Research project – a study to determine levels of stress among farmers. How farmers deal with stress.**

Thank you for returning the questionnaires that I recently sent you, your answers are greatly appreciated.

Thank you for agreeing to take part in an interview with me to discuss your views further. I will shortly be contacting you again to arrange a convenient time and location for us to meet.

I expect that the interview will last about 45 minutes and, as with your questionnaires, any information that I collect will remain private.

I am looking forward to meeting you later in the year but please feel free to contact me if you have any questions about my research, or you no longer wish to be interviewed, before then.

Yours sincerely,

**David Wheatcroft**  
Clinical Psychologist in Training.

## Appendix 10

### Consent form for semi-structured interview

A study looking at help seeking among farmers for difficulties with stress and coping.

Please read the following and sign below if you are happy to be interviewed as a part of this project.

- This interview will be carried out by David Wheatcroft (Clinical Psychologist in training) whose manager is DR. H Frost (Clinical Psychologist).
- The interview should not last about 45 minutes. You have a right to stop the interview if you wish. David will be able to give you the name and address of local services who you can talk to if the need arises.
- The interview will be tape-recorded. All information will be private and confidential and will be destroyed once the research has been written up and David has passed the course. David is the only person that will have access to tape recordings.
- No information given during the interview will be used to identify you. All personal features will be removed before the final project is written.
- If you have any further comments or questions about the interview you can contact David Wheatcroft at: the department of Psychology Training, Whitegate Drive Health centre, Whitegate Drive, Blackpool, Lancashire, FY3 9HG. (01253) 798071.
- If you have any complaints about this research, these should be made to: Professor C. Fergus Lowe, Head of School, School of Psychology, University of Wales, Bangor, Gwynedd, LL57 2DG.

I have read the letter telling me about this research and understand it. I agree to take part in this research. I have been given a copy of this form and have had chance to read it.

Signature:

Date:

Signature of researcher:

**Appendix 11**  
**Letter sent to respondents after interviews completed**

18<sup>th</sup> February 2000

Dear Mr ,

**Re: Research project – a study to determine levels of stress among farmers. How farmers deal with stress.**

Last April I sent you a set of questionnaires looking at levels of stress in farming and how you as a farmer deal with stress. When you sent the questionnaires back you said that you would be happy to be interviewed as part of my research.

As so many of you said you would be happy to meet me and I only have a certain amount of time to complete my project, it will not be possible to visit you all. Unfortunately I have now visited all the farms I can manage and I am writing to tell you that I shall not be making an appointment to see you.

I would like to thank you again for your help. I hope that my findings will be of some use to the NFU, as I am planning on sending a copy of my findings to Nick Brown, I hope that they will be of some use to the government as well.

If you would like feedback on any of my findings please do not hesitate to contact me,

Please accept my best wishes for the future,

Yours sincerely,

**David Wheatcroft**  
Clinical Psychologist in training.



**Appendix 12**  
**Regrouped variables from the CRI**

<b>Regrouped variables from original CRI</b>			
<b>Emotion focussed coping</b>	<b>Problem focussed coping</b>	<b>Positive appraisal</b>	<b>Social support</b>
5 (CA)	1 (LA)	2 (PA)	3 (SS)
13 (CA)	9 (LA)	10 (PA)	11 (SS)
21 (CA)	17 (LA)	18 (PA)	19 (SS)
29 (CA)	25 (LA)	26 (PA)	27 (SS)
37 (CA)	33 (LA)	34 (PA)	35 (SS)
45 (CA)	41 (LA)	42 (PA)	
6 (A)	4 (PS)		
14 (A)	12 (PS)		
22 (A)	20 (PS)		
30 (A)	28 (PS)		
38 (A)	36 (PS)		
46 (A)	44 (PS)		
7 (AR)			
15 (AR)			
23 (AR)			
31 (AR)			
39 (AR)			
47 (AR)			
8 (ED)			
16 (ED)			
24 (ED)			
32 (ED)			
40 (ED)			
48 (ED)			

**Key:**

CA = Cognitive avoidance (old scale)  
A = Acceptance (old scale)  
ED = Emotional discharge (old scale)  
LA = Logical analysis (old scale)  
PS = Problem solving (old scale)  
PA = Positive appraisal (old scale)  
SS = Social support (old scale)

**Appendix 13**  
**Skewness and kurtosis of variables**

Variable	N	Mean (SD)	Skewness		Skewness statistic	Kurtosis		Kurtosis statistic
			Statistic	Std error		statistic	Std error	
Age	123	50.54 (10.27)	-.255	.218	1.16	-.392	.433	-.090
Size of farm (acres)	125	270.24 (290.72)	4.503	.217	20.75	28.723	.430	66.79
farming experience	122	31.83 (11.92)	-.183	.219	0.84	-.638	.435	-1.47
Number of friends	100	6.55 (5.12)	1.246	.241	5.17	1.167	.478	2.44
Problem solving	95	18.90 (7.29)	-1.66	.247	-.672	-.321	.490	-.655
Social support	107	6.94 (3.25)	.463	.234	1.979	.117	.463	.252
Positive appraisal	104	8.57 (4.17)	-.001	.237	-.004	-.452	.469	.964
Emotion focussed	91	18.97 (9.46)	.618	.253	2.44	.150	.500	.300
Total help	115	3.98 (1.69)	.094	.266	4.15	-.244	.447	-.51
Openness	115	10.41 (4.84)	.226	1.83	1.83	-.631	.447	-1.41
Future help	105	18.87 (8.48)	.236	2.67	2.67	3.156	.467	6.75
Practical b	113	.522 (.965)	.227	7.48	7.48	1.510	.451	3.35
Knowledge	113	.64 (.79)	.227	3.29	3.29	-.997	.451	-2.21
Attitude b	103	1.44 (1.33)	.238	3.23	3.23	-.227	.472	-0.48
Stigma b	113	.45 (.73)	.227	4.40	4.40	.103	.451	0.22
Barriers total	118	3.41 (3.19)	.959	.223	4.30	.347	.442	0.78

**Appendix 13 (continued)**  
**Transformation of variables**

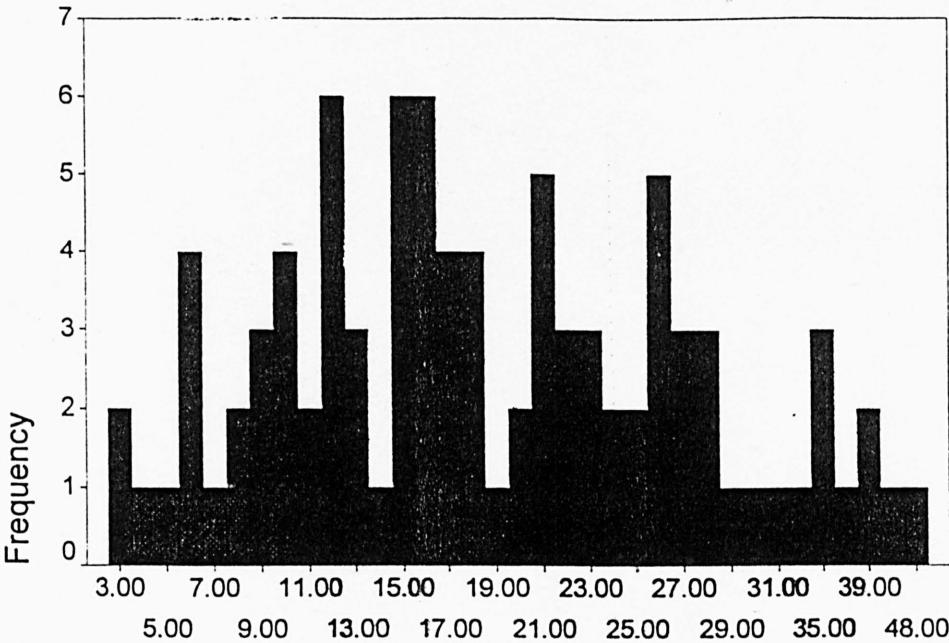
variable	n	Data transformation	Mean (SD)	Skewness			Kurtosis		
				Statistic	Std error	Skewness statistic	statistic	Std error	Kurtosis statistic
Attitudinal barriers	103	Logarithm	.74 (.69)	-.022	.238	-0.09	-1.170	.472	-2.47
Barriers total	118	Logarithm	1.19 (.79)	-.171	.223	0.77	-1.140	.442	-2.57
Future help	105	Squared	4.34 (1.00)	-.364	.236	-1.54	.590	.467	1.26

**Appendix 14**  
**Factors identified as stressors from semi-structured interviews**

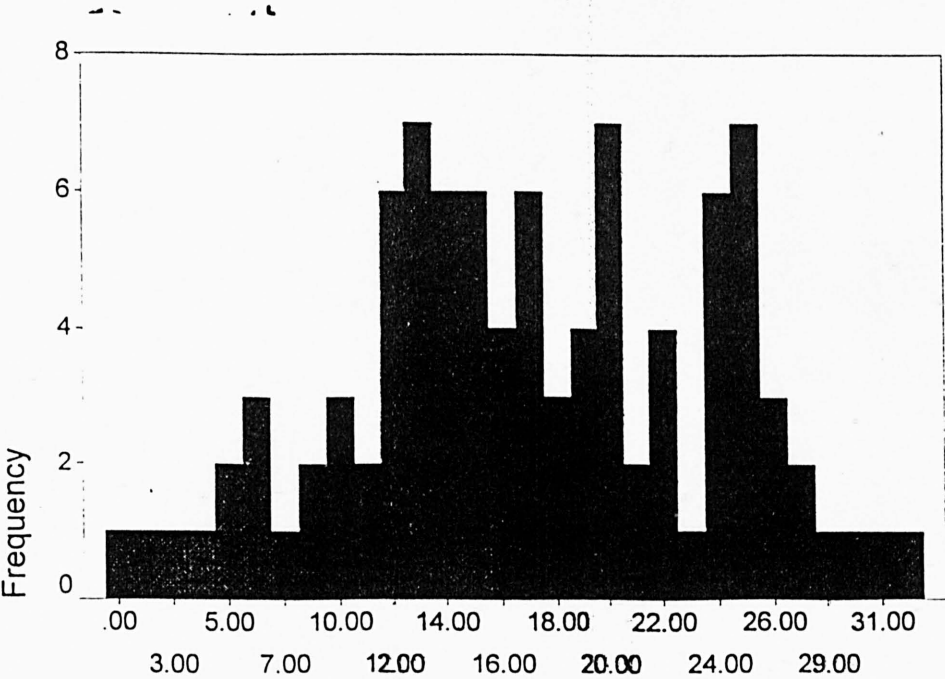
<b>Stressor</b>	<b>Number of participants identifying stressor</b>
Being in situations over which you do not have any control	5
Interference from outside agencies	5
Financial worries	5
European bureaucracy and regulation	4
Paperwork	4
Uncertainty about the future	3
Never getting a break	3
Feeling of always having to move forwards to stay still	3
Worries about retirement – financial	2
Market forces / market organisation	2
Health worries	2
Weather	2
Modern technology	2
Being self employed	2
Not having human contact in the working day	2
Losing pride in workmanship and sense of achievement	2
Having a disrupted routine	1
Disagreement about best business practice	1
Fear of retribution for paperwork mistakes	1
Juggling demands for generating extra income	1
State of building repair	1
Daylight hours in winter	1
Speed of life in 21 <sup>st</sup> century	1
Fear of failure	1
Workload	1

Appendix 15  
Graphs showing distribution of scores across four dimensions of coping

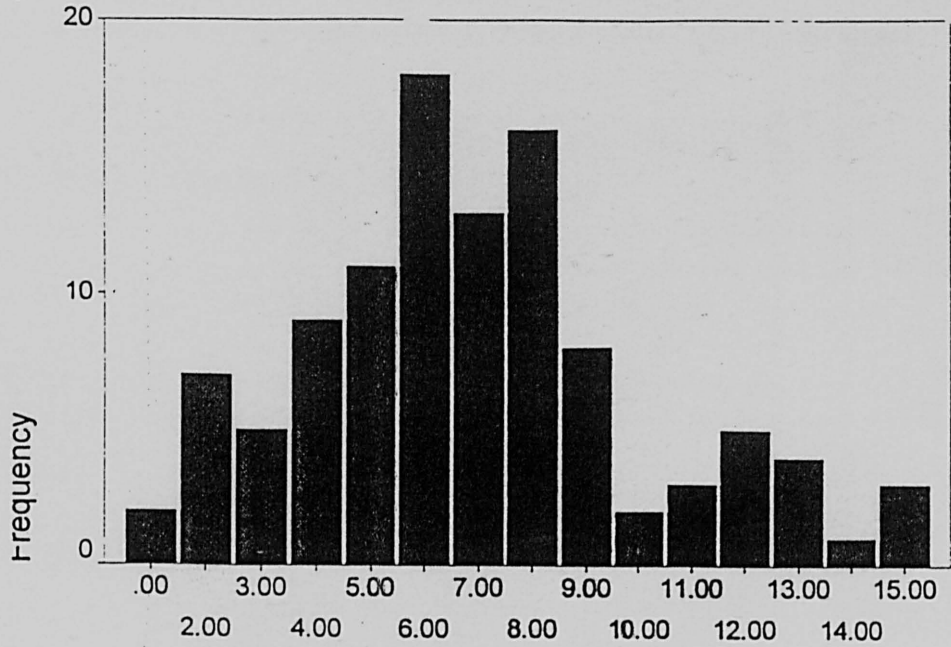
Emotion focussed coping



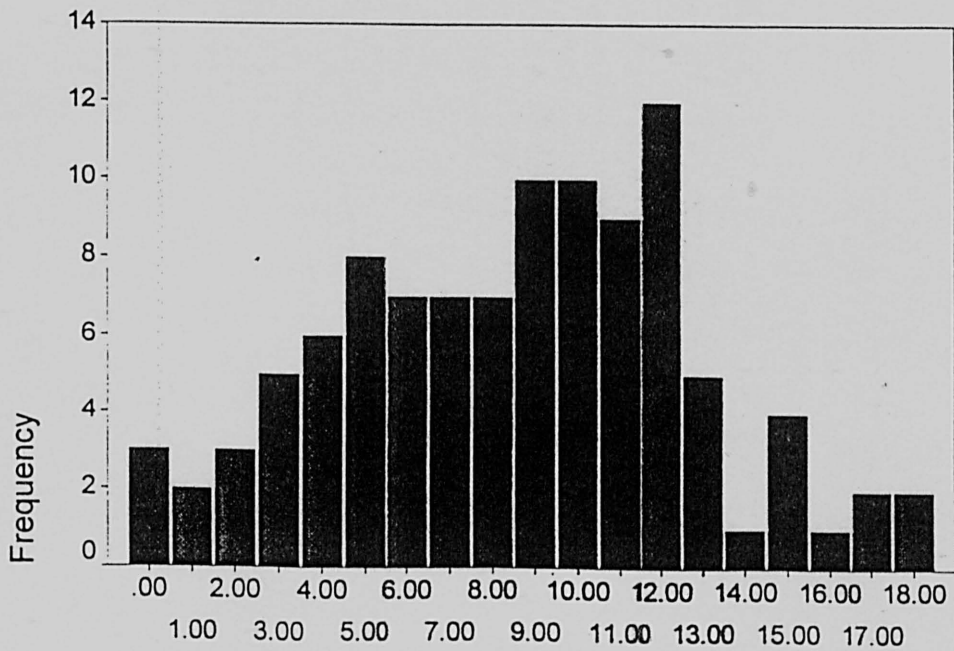
Problem focussed coping



Seeking social support



Positive appraisal



**Appendix 16**  
**Statistical relationships between demographic factors and stress**

<b>Demographic factor</b>	<b>Statistical analysis using chi-squared</b>		
	<b>Pearson (Chi Squared)</b>	<b>df</b>	<b>p</b>
Marital status	.19351	1	.78524
Farm type	.18637	1	.83201
Gender	2.08458	1	.22021
Sheep farming	.29425	1	.70149
Dairy farming	2.10118	1	.17264
Beef farming	2.45615	1	.15072

<b>Demographic factor</b>	<b>Statistical analysis using Mann Whitney</b>			
	<b>u-</b>	<b>n</b>	<b>z</b>	<b>p</b>
Age	1606.500	123	-1.342	.180
Length of farming experience	1591.000	122	-1.228	.219
Size of farm –acres	1823.000	125	-.541	.588
Size of farm – Number of beef cattle	489.500	65	-.493	.622
Size of farm – Number of sheep	770.500	86	-1.316	.188
Size of farm Number of dairy cows	706.500	85	-1.506	.132
Hours worked – Summer	1950.500	126	-.055	.956
Hours worked – Winter	1699.500	123	-1.071	.284

**Appendix 17**  
**Statistical relationships between factors identified as stressors and stress**

<b>Stressor</b>	<b>Statistical analysis using chi-squared tests</b>		
	<b>Pearson (Chi Squared)</b>	<b>df</b>	<b>p</b>
Financial problems	6.35214	1	.01350*
Money worries	22.12294	2	.00002**
Danger of losing the farm	1.46547	1	.24018
Bank involvement in running farm	2.19321	1	.15076
Difficulties with amount of paperwork	5.87752	1	.02356*
Difficulties completing forms	3.81355	1	.06692
Difficulties understanding regulations	.54597	1	.50317
Policy makes farming more difficult	.00023	1	1.00

\*  $p < 0.05$

\*\*  $p < 0.005$



**Appendix 18**  
**Statistical relationships between demographic factors and coping**

	<b>Coping strategy</b>	<b>Age</b>	<b>Duration</b>	<b>Summer</b>	<b>Winter</b>	<b>Acres</b>
<b>rho</b>	Problem solving	-.134	-.005	.206*	.150	.111
	Social support	.009	.025	.095	.102	.235*
	Positive appraisal	-.003	-.023	.095	.052	-.026
	Emotion focussed	-.111	-.050	.220*	.135	.097
<b>sig</b>	Problem solving	.207	.963	.046	.150	.290
	Social support	.928	.800	.329	.302	.016
	Positive appraisal	.979	.824	.339	.604	.798
	Emotion focussed	.310	.641	.036	.206	.367
<b>n</b>	Problem solving	90	92	95	93	93
	Social support	102	103	107	105	105
	Positive appraisal	99	102	104	102	102
	Emotion focussed	86	88	91	89	89

\*  $p < 0.05$

Relationships between problem solving (coping) and demographic factors

	<b>Statistical analysis using Mann Whitney</b>			
<b>Demographic</b>	<b>u</b>	<b>n</b>	<b>z</b>	<b>p</b>
Dairy farming	721	93	-1.718	.086
Beef farming	1067.000	94	-.284	.777
Sheep farming	910.000	94	-.266	.790

Relationships between Social support (coping) and demographic factors

	<b>Statistical analysis using Mann Whitney</b>			
<b>Demographic</b>	<b>u</b>	<b>n</b>	<b>z</b>	<b>p</b>
Dairy farming	904.00	105	-1.973	.049
Beef farming	1275.000	105	-.646	.519
Sheep farming	1107.000	106	-.533	.594

\*  $p < 0.05$

Relationship between Positive appraisal (coping) and demographic factors

	<b>Statistical analysis using Mann Whitney</b>			
<b>Demographic</b>	<b>u</b>	<b>n</b>	<b>z</b>	<b>p</b>
Dairy farming	925.500	102	-1.407	.160
Beef farming	1188.000	102	-.755	.450
Sheep farming	1147.500	103	-.179	.858

Relationship between emotion focussed (coping) and demographic factors

Demographic	Statistical analysis using Mann Whitney			
	u	n	z	p
Dairy farming	785.500	90	-.720	.472
Beef farming	784.500	90	-1.809	.070
Sheep farming	806.000	90	-.541	.589

**Appendix 19**  
**Statistical relationships between coping strategies and stress**

	Statistical analysis using Mann Whitney			
<b>Coping strategy</b>	<b>u</b>	<b>n</b>	<b>z</b>	<b>p</b>
Problem solving	1053.500	95	-.446	.655
Social support	1341.500	107	-.470	.639
Positive appraisal	1042.00	104	-1.917	.055
Emotion focussed	696.000	91	-2.673	.008*

\*  $p < 0.05$

**Appendix 20**  
**Statistical relationships between factors identified as stressors and coping**

	<b>Coping strategy</b>	<b>Effects of policy</b>	<b>Money worries</b>
<b>Rho</b>	Problem solving	.144	.134
	Social support	.221*	.167
	Positive appraisal	.123	-.138
	Emotion focussed	.116	.213*
<b>Sig</b>	Problem solving	.163	.195
	Social support	.022	.085
	Positive appraisal	.213	.163
	Emotion focussed	.273	.042
<b>N</b>	Problem solving	95	95
	Social support	107	107
	Positive appraisal	104	104
	Emotion focussed	91	91

Relationships between problem solving coping and stressors

	<b>Statistical analysis using MannWhitney</b>			
<b>Stressor</b>	<b>u</b>	<b>n</b>	<b>z</b>	<b>p</b>
Financial problems	746.000	95	-2.753	.006*
Losing farm	656.000	93	-.185	.853
Bank involvement	604.500	94	-.196	.844
Paperwork	696.500	93	-.062	.951
Forms	943.500	91	-.612	.540
Regulations	568.500	90	-1.049	.294

\*  $p < 0.05$

Relationships between social support coping and stressors

	<b>Statistical analysis using Mann Whitney</b>			
<b>Stressor</b>	<b>u</b>	<b>n</b>	<b>z</b>	<b>p</b>
Financial problems	1306.500	107	-.720	.471
Losing farm	707	105	-.921	.357
Bank involvement	751.500	106	-.043	.965
Paperwork	707.500	105	-1.406	.160
Forms	1300.000	103	-.107	.915
Regulations	640.500	101	-1,680	.093

Relationships between positive appraisal coping and stressors

Stressor	Statistical analysis using Mann Whitney			
	u	n	z	p
Financial problems	1165.500	104	-1.167	.243
Losing farm	678.500	102	-.682	.495
Bank involvement	706.500	103	-.218	.827
Paper work	826.500	102	-.199	.842
Forms	1176.500	100	-.387	.699
Regulations	776.000	98	-.282	.778

Relationships between emotion focussed coping and stressors

Stressor	Statistical analysis using Mann Whitney			
	u	n	z	p
Financial problems	754.000	91	-2.129	.033*
Losing farm	544.500	89	-.705	.481
Bank involvement	383.000	90	-1.945	.052
Paper work	438.500	89	-2.270	.023*
Forms	617.000	87	-2.725	.006*
Regulations	635.500	87	-.108	.914

\* p < 0.05

**Appendix 21**  
**Statistical relationships between coping and help seeking behaviour**

	<b>Coping style</b>	<b>Openness to help seeking</b>	<b>Future help seeking behaviour</b>
<b>Rho</b>	Problem solving	.181	.105
	Social support	.297*	.252*
	Positive appraisal	-.108	.142
	Emotion focussed	-.057	-.049
<b>Sig</b>	Problem solving	.84	.342
	Social support	.002	.014
	Positive appraisal	.284	.177
	Emotion focussed	.598	.669
<b>N</b>	Problem solving	92	84
	Social support	103	94
	Positive appraisal	101	92
	Emotion focussed	89	80

\*  $P < 0.05$

**Appendix 22**  
**Statistical relationships between beliefs about seeking help and stress**

Analysis based on individual items from Cook & Tyler (1981) Attitudes Towards Seeking Help Questionnaire (Appendix 6).

Attitudes towards seeking help item number	Data analysis by Chi Squared test		
	Chi Squared (Pearsons)	df	p
1	1.47582	1	.26297
2	1.31617	1	.28486
3	2.74161	1	.13117
4	5.81885	1	.02383*
5	4.89254	1	.03793*
6	1.27315	1	.27830
7	.00005	1	1.00000
8	10.11691	1	.00247**
9	1.67960	1	.25124
10	.01763	1	1.00000
11	.22531	1	.69967
12	4.72654	1	.03958*
13	.10475	1	.81943
14	.50309	1	.55398
15	.08454	1	.84309
16	.43116	1	.55851
17	5.40684	1	.02340*
18	.08870	1	.79325
19	.48667	1	.53672
20	.17437	1	.69958
21	2.01664	1	.20397
22	.94817	1	.41814
23	.85275	1	.44003
24	5.39512	1	.02390*

\*  $p < 0.05$

\*\*  $p < 0.005$

**Appendix 23**  
**Statistical relationships between barriers and help seeking behaviour**

Relationships between stress scores and barriers against seeking help. Taken item by item from the Barriers to Seeking Help Questionnaire (Appendix 7).

BASH question number	Statistical analysis using Chi Squared		
	Chi Squared (Pearsons)	df	p
1	.13965	1	.81668
2	.01316	1	1.00000
3	2.49441	1	.13378
4	.00758	1	1.00000
5	5.98276	1	.02180*
6	.05298	1	1.00000
7	.08529	1	.85010
8	.31726	1	.58119
9	.01803	1	1.00000
10	.25013	1	.67316
11	1.23346	1	.31156
12	9.89819	1	.00219**
13	.26758	1	.79317

\*  $p < 0.05$

\*\*  $p < 0.005$

Relationships between help seeking scores and stress

	Help seeking dimension	Stress
Rho	Total number of barriers	.096
	Openness to seeking help	-.141
	Future help seeking	-.093
Sig	Total number of barriers	.300
	Openness to seeking help	.127
	Future help seeking	.458
N	Total number of barriers	118
	Openness to seeking help	118
	Future help seeking	105



Relationships between different types of barrier and openness to seeking help and future help seeking behaviour.

	Type of barrier	Openness to help seeking	Future help seeking
Rho	Practical	-.189*	.016
	Knowledge based	-.294**	-.126
	Attitudinal	-.346**	-.230*
	Stigma	-.464**	-.099
Sig	Practical	.046	.873
	Knowledge based	.002	.201
	Attitudinal	.000	.026
	Stigma	.000	.321
N	Practical	112	101
	Knowledge based	112	104
	Attitudinal	102	94
	Stigma	112	103

**Appendix 24**  
**Statistical relationship between demographic factors and help seeking behaviour**

	Demographic factor	Openness to seeking help	Future help seeking
Rho	Age	-.082	-.130
	Acres	-.019	-.045
	Length of experience	-.154	.019
	Hours (summer)	-.026	.080
	Hours (winter)	-.148	-.068
Sig	Age	.386	.193
	Acres	.843	.650
	Length of experience	.101	.851
	Hours (summer)	.781	.420
	Hours (winter)	.114	.494
N	Age	114	102
	Acres	117	104
	Length of experience	114	102
	Hours (summer)	117	105
	Hours (winter)	115	103

Relationship between Demographic factors (farm type) and openness towards seeking help

Demographic factor	Statistical analysis using Mann Whitney			
	u	n	z	p
Dairy farming	1295.500	115	-.501	.616
Beef farming	1330.000	115	-1.797	.072
Sheep farming	1219.500	116	-1.061	.289

Relationship between demographic factors (farm type) and future help seeking behaviour

Demographic factor	Statistical analysis using Mann Whitney			
	u	n	z	p
Dairy farming	1083.500	103	-.506	.613
Beef farming	1127.000	103	-1.296	.195
Sheep farming	1055.00	104	-.066	.947

# **Appendix 25** **Statistical relationships between past /future sources of help and stress**

Past / current help and stress scores

Source of help	Statistical analysis using Chi Squared		
	Chi Squared	df	p
Religious leader	2.43598	1	.14470
Financial advisor	4.26493	1	.04929*
Psychiatrist / psychologist or social worker	3.86685	1	.07889
Family doctor	.21720	1	.70501
Family counsellor	.50761	1	.59617
Marriage counsellor	.04045	1	1.00000
Self help group	1.51553	1	.36862
A friend	.07420	1	.83768
Husband / wife	.03374	1	1.00000
Other family member	.85777	1	.39856

\* p < 0.05

Relationships between intention and future help seeking and stress scores

Source of help	Statistical analysis using Mann Whitney			
	u	n	z	p
Religious leader	339.0	62	-1.5857	.1128
Financial advisor	680.0	79	-.7831	.4336
Psychiatrist / psychologist or social worker	351.5	58	-1.2466	.2125
Family doctor	746.0	80	-.3740	.7084
Family counsellor	341.5	55	-.4973	.6189
Marriage counsellor	329.5	58	-1.3069	.1912
Self help group	263.5	49	-.3480	.7279
A friend	754.5	86	-1.4977	.1342
Husband / wife	985.0	94	-1.2923	.1963
Other family member	843.5	89	-1.2521	.2105

Appendix 26  
Path analysis data

Path analysis 1 Stress scores as outcome measure (logistic regression)

Variable	b	s.e	wald	df	sig	r	exp (b)
Money worries	-1.6331	.6011	7.3817	1	.0066	-.2340	.1953
Emotion focussed coping	1.8315	.8157	5.0415	1	.0247	.1759	6.2435

Path analysis 1 Stress scores as outcome measure (linear regression)

Independent variable	Adjusted r squared	beta t	sig t
Money worries	.152	.320	.006
Emotion focussed coping	.203	.262	.023
Sheep farming	.189	-.190	.029
Financial problems	.168	.410	.001

Path analysis 2 Openness to seeking help as outcome measure

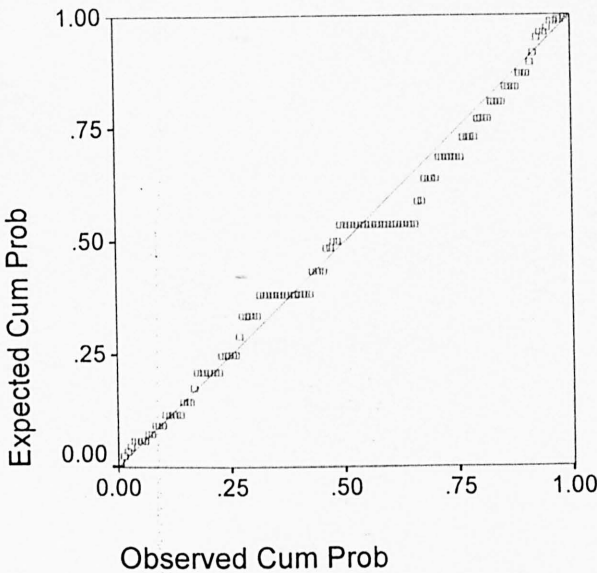
Independent variable	Adjusted r squared	beta t	sig t
Total number of barriers	.216	-.474	.001
Social support (coping)	.270	.351	.009
Financial problems	.069	.282	.006

Path analysis 3 Future help seeking as outcome measure

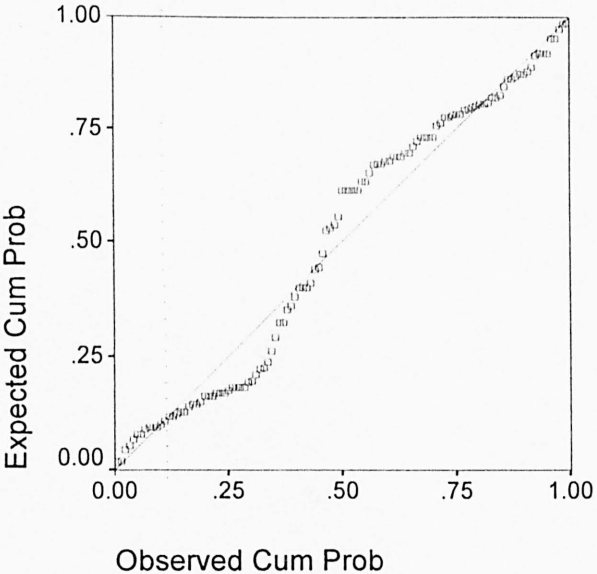
Independent variable	Adjusted r squared	beta T	sig T
Attitudinal barriers	.039	-.222	.031
Hours worked (winter)	.058	.242	.017
Danger of losing farm	.046	.241	.032
Length of farming experience	.276	-.300	.005

Appendix 27  
Scatter plots for multiple regressions

Normal P-P Plot of Regression Sta  
Dependent Variable: CRIEMOT2



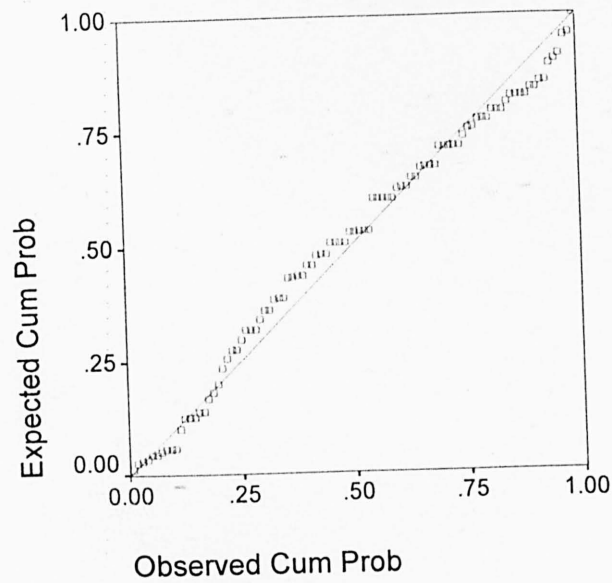
Normal P-P Plot of Regression Sta  
Dependent Variable: FINA.PRO



# Normal P-P Plot of Regression Sta

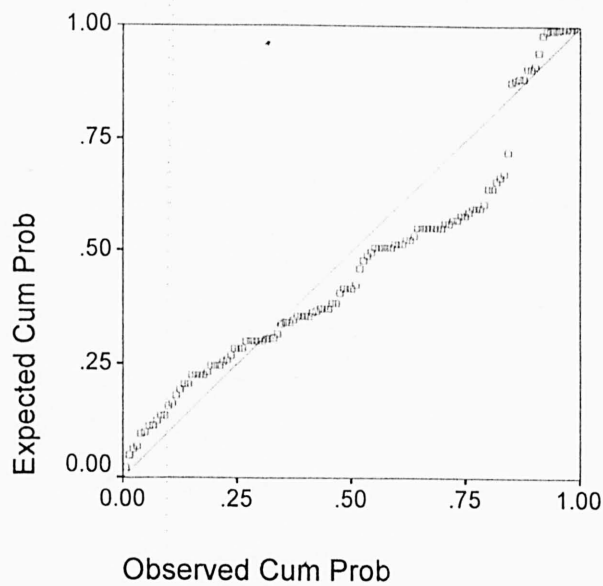
117

Dependent Variable: FUT.HELP

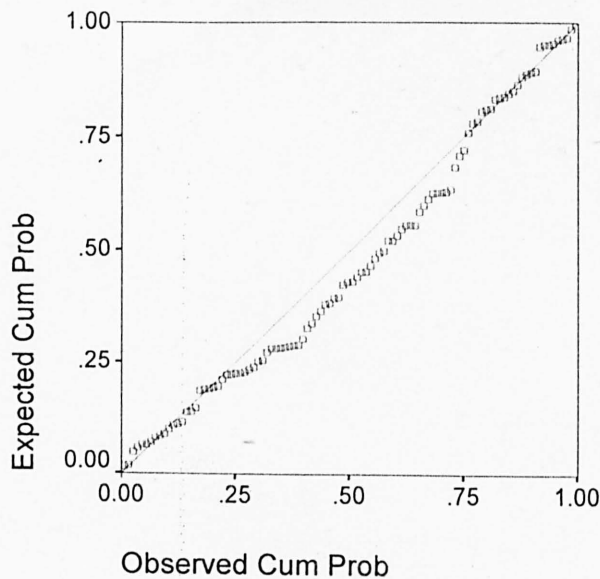


# Normal P-P Plot of Regression Sta

Dependent Variable: LOSE.F



Normal P-P Plot of Regression Sta  
Dependent Variable: OPENNESS



Normal P-P Plot of Regression Sta  
Dependent Variable: BARTOT

