

The Effects of Economic Strain on Stress in Farm Families

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The current depressed economic conditions in American agriculture are posing severe challenges to many farm families. Some observers have suggested that these adverse economic conditions, which threaten to force a substantial percentage of farm families from their farms and homes, will impose substantial emotional stress on farm operators and their families (for example, see Hargrove, 1986).

The extent to which the current farm financial crisis affects the personal lives of farm family members is a difficult issue to address, in part, because of the difficulty of isolating the various factors that combine to produce stress in farm families. For example, is role conflict among spouses concerning off-farm employment overshadowed by a financial crisis? Does financial strain intensify stress produced by life-cycle events, such as aging and the presence of children? Are the different stress levels associated with the structure of farming (e.g., size and type of operation) equally elevated given the same level of financial strain?

In this article, we examine how important personal, structural, and financial characteristics are in predicting farm family stress within the context of the current farm financial crises in North Dakota, which has been particularly hard hit by the economic conditions of the 1980s. First, we will discuss various sources of stress identified by researchers. This discussion will serve as a background to the analysis of data on North Dakota farmers and ranchers.

Stress in Farm Families

Four categories of factors appear to be particularly important sources of emotional strain in farm families: (1) role performance, (2) personal characteristics of the operator, (3) farm structure, and (4) financial characteristics.

Role-related stress has been found to be one of the more prevalent stress experiences in farm families. The adjustment of family members to the changing role of farm women (i.e., off-farm employment, farm management), in particular, has led to increased levels of family stress. Studies by Kohl (1971; 1976) indicated that the fusion of farm and home roles was a major source of stress for farm women. Berkowitz and Perkins' (1984) study of married women on dairy farms in New York reported that role conflicts between home responsibilities and work outside the home were associated with stress regardless of the wife's farm or home task load.

A second important source of stress in farm families appears to be directly linked to the personal characteristics and life cycle events of the operator. Age of the operator, for example, is directly related to stress in farm families; that is, well-being tends to increase with age regardless of farm size (Molnar, 1985). Similarly, developmental stresses appeared at predictable points in the life cycle (Hedlund and Berkowitz, 1979). For example, the presence and age of children had an important impact on stress levels in farm families.

A third category of factors is related to the structure and organization of the farm or ranch. Indicators of farm structure or organization frequently used in research include ownership arrangement, size, type of control, and off-farm employment (see Knutson et al., 1983). In a recent study by Molnar (1985), farm size was found to be positively related to assessments of well-being. Surprisingly, he also found that after controlling for personal characteristics (such as age, education, and life cycle), off-farm employment appeared to have no statistically significant impact on their perception of well-being. This finding strengthens our argument for the need to analyze factors in context by pointing out the effects of interaction among stress-related variables.

Financial and money management difficulties due to restricted cash flow can also create severe levels of stress and tension in farm families (Rosenblatt and Anderson, 1981). Emotional strain due to financial concerns is typically exhibited in higher levels of marital difficulties and depression (Rosman and Joslin, 1985; Heffernan and Heffernan, 1986).

In this article, we investigate the effects of economic strain on stress in farm families in several ways. First, we examine the relationship between financial strain and reported disruptions in the personal lives of farm family members. Next, we determine what type of disruptions farm family members have recently experienced and isolate those events reported by respondents as being directly or indirectly related to the farm crisis. Third, we test the relationship between financial strain and two symptoms of emotional stress (depression and marital/family conflict). Finally, we test the power of several variables to predict stress.

Data for this study were obtained from a 1986 random telephone survey of North Dakota farmers first contacted in the spring of 1985. Respondents were screened in the 1985 survey to include only those less than 65 years old who were operating a farm, considered farming to be their primary occupation, and sold at least \$2,500 of farm products in 1984. This procedure, we felt, narrowed the sample to full-time farmers with active careers. The 759 farmers who were still

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farming in 1986 and who had completed usable questionnaires constitute the data base for the study.

FINDINGS

Financial Strain on Personal Lives

Farm operators who were surveyed were asked what effect the current farm financial situation had had on their own personal lives. Thirty percent of the respondents indicated that it had had a great deal of effect, 54 percent reported some effect, while only 16 percent reported no impact. Effects mentioned by many respondents included stress, a general need to get along on less, the need to repair equipment rather than purchase it, and the necessity of foregoing vacations and other nonessential expenses.

The relationships between the perceived overall effect of the current financial situation in farming on the personal lives of farm family members relative to various financial variables are shown in Figure 1. Farm operators' perception of the effect of current farm financial conditions was strongly related to their debt-to-asset ratio, net cash farm income, and the variable, total family income less family living expenses. For example, only 11 percent of those with no debt reported they had been affected a great deal and 36 percent mentioned no effect. At the other end of the financial spectrum, a mirror opposite picture is revealed. Sixty-one percent of the operators with debt-to-asset ratios over 70 percent said they had been affected a great deal, but only 4.9 percent said they had not been affected at all. The greater the financial strain, the more severe the impact on the operator's personal life appears to be. All three relationships were found to be statistically significant at the 0.01 level using the chi-square test. This means that the chances are 1 in 100 that the operators' opinions would be distributed as such by chance alone. In other words, the relationship was very strong.

Types of Disruptions

Operators were asked whether they or any member of their immediate family had experienced any of a number of specific events, which are normally stressful, during the two years prior to the survey. The disruptions cited most by respondents were (1) depression or other emotional problems (24.4 percent); (2) reduction in pay, benefits, or cut-back in work hours (22.0 percent); and (3) unusual marital or other family stress or conflict (15.2 percent). Those events that were least likely to be experienced by farm families were committing a crime (0.5 percent) and suicide (0.7 percent). Depression and marital/family conflict, symptoms frequently linked to stress, were reported as being largely a result of the farm crisis by 84 percent and 80 percent of the respondents, respectively. The few divorces, which did occur to respondents or members of their family, were not viewed as largely a result of farm financial problems.

Overall, the level of disruptions reported by respondents was surprisingly low. Clearly 45 percent of those answering the question indicated that they or members of their family had not experienced any of the 11 events listed in the survey. One in four respondents reported only one disruption among family members, and about 17 percent cited having encountered two of the events. Slightly fewer than 14 percent of the respondents mentioned that they or their family members had experienced at least three of the events. The seemingly low incidence of disruptions reported by operators may be due, in part, to difficulties in recall.

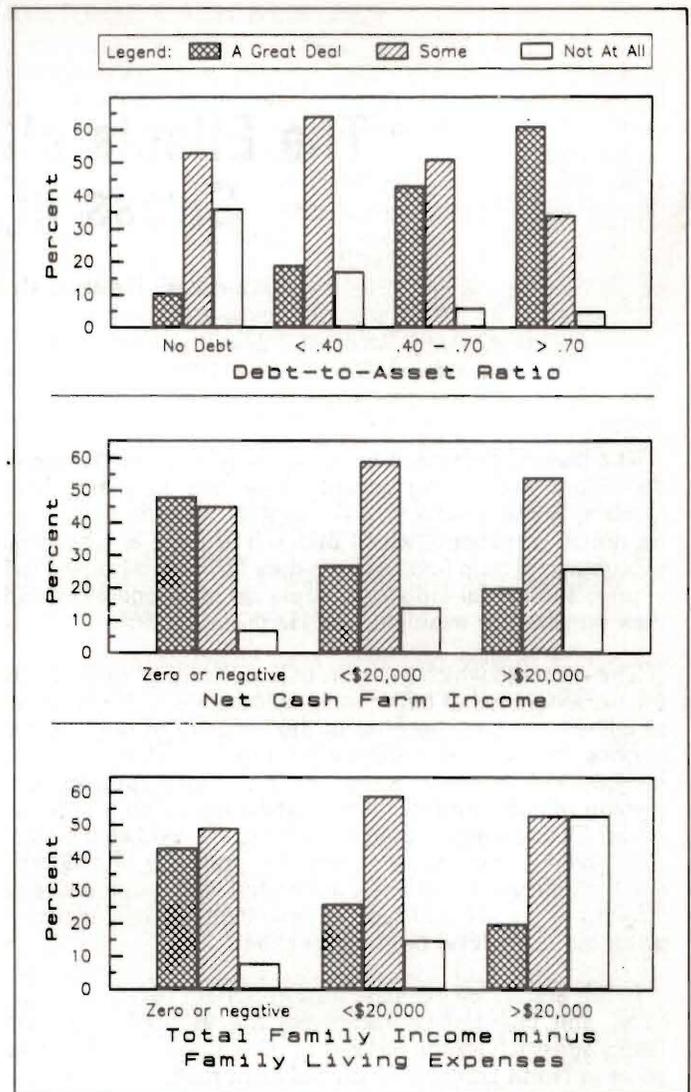


Figure 1. Perceived effect of current financial situation on the personal lives of farm family members.

Events such as illness or emotional trauma are particularly susceptible to recall difficulties in contrast to highly prominent events, such as death of a spouse, marriage, or birth of a child. Thus, caution should be taken in over optimistically interpreting these findings as an indication of only modest levels of disruption.

Financial Strain and Emotional Stress

The relationships between indicators of financial strain and stress as measured by depression and marital/family conflict are summarized in Figure 2. In each case, a strong relationship exists between the indicator of financial pressure and the manifestations of emotional stress. For example, almost 44 percent of respondents with debt-to-asset ratios above 70 percent reported that they or a member of their immediate family had experienced depression or other emotional problems, and 33 percent reported experiencing unusual marital or family stress or conflict. Corresponding values for respondents with no debt were quite low by comparison — 11 percent and 6 percent, respectively. The

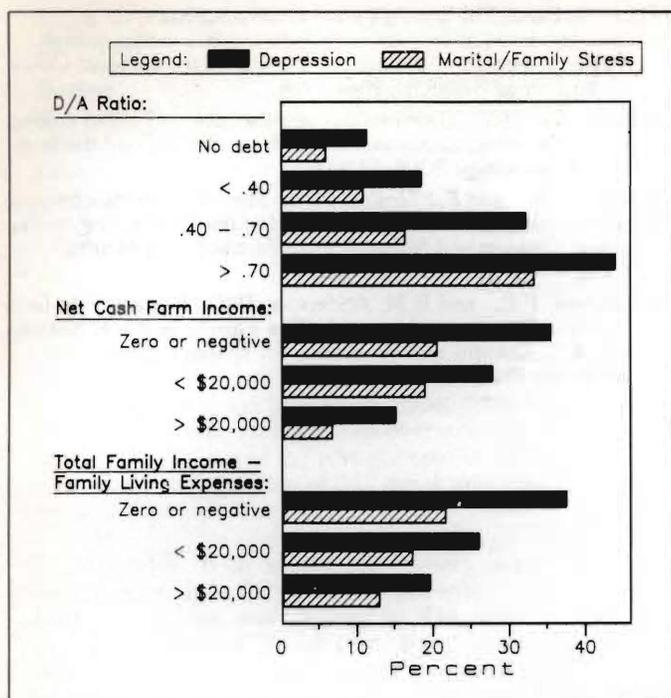


Figure 2. Incidence of depression and marital/family stress by various financial variables.

distributions of responses were quite similar for net cash farm income and for family income less living expenses. In brief, the greater the financial pressure, the more farmers reported family members' experiencing depression or marital/family conflict. All three relationships were found to be statistically significant at the 1 percent level using the chi-square test.

The relative importance of financial and personal variables in predicting the incidence of depression and marital/family conflict was tested using a statistical technique called multiple discriminant analysis. Eleven variables, which represent the four categories of stress factors mentioned in the introduction, were tested. Two were measures of role performance: the number of days worked off the farm by the operator and by the spouse. Five were indicators of personal characteristics and lifecycle events: age and highest level of education completed by the operator and by the spouse and the number of children in the family under age 18. The variable *total farm income* was used to measure farm structure and was chosen as a proxy for farm size to reflect the qualitative difference (in terms of value, labor involvement, and management) between ranch and farm land. Three variables were measures of financial strain: debt-to-asset ratio, net cash farm income, and status on debt payments.

Marital/Family Stress. The results of the analysis indicate that only three of the 11 variables tested met the statistical criteria to be included in the equation for predicting marital and family stress. The single most important predictor of marital and family stress was operator's age. The other two variables were financial indicators: current on all debt payments and net cash farm income. All three variables were inversely related to stress. That is to say, younger farm families, those not current on debt payments, and those

with low net cash farm income were more likely to have experienced marital/family stress.

The three factors were statistically significant at the 1 percent level, according to their F-values. The explanatory power of this equation, however, was marginal at best. The three indicators correctly classified the reported experience of stress in only 58.5 percent of the cases analyzed. The probability for correct classification by chance alone, using Morrison's (1969) proportional chance criterion, was 51.4 percent.

Depression. Only two financial variables entered the equation for predicting depression and other emotional problems: current on all debt payments and net cash farm income. Both variables were significant at the 1 percent level and both relationships were also inversely related to stress. In other words, respondents who were not current on debt payments and those who have low net cash farm incomes were more likely to report depression and related problems. The explanatory power of this equation, however, was much greater than the previous one. For example, the two indicators of financial strain correctly classified the reported experience of depression and emotional problems in 72.6 percent of the cases. The probability for correct classification using the proportional chance criterion was only 52.7 percent.

Discussion

The findings from this study generally support previous research which indicates that a strong relationship exists between financial strain and increased stress in the lives of farm operators and their families. Farmers expressed concern for the need to reduce expenses, reevaluate what they view as essential, and forego vacations or recreational activities to conserve money. They also mentioned that stress from financial strain manifests itself in numerous ways. Our survey results indicate that two of the more pervasive symptoms are depression or other emotional problems and marital or family conflict. The impact of other factors (i.e., role performance, personal characteristics, and farm structure) documented as contributing to increased levels of these two symptoms appear to be muted by the influence of financial strain. The one exception was age of the operator, which was more predictive than financial strain of marital or family conflict.

The results of our study also pose several intriguing and important questions. What accounts for the seemingly low proportion of disruptions reported by farm operators? Are operators sensitive to the problems that occur within their family, or is the small number of disruptions reported by North Dakota farmers a function of recall? Is a questionnaire a reliable tool to use to recover sensitive information concerning stress? Does financial strain diminish the distress produced by other factors linked to emotional stress? Is financial strain just a temporary stress or, while other contextual variables are more permanent, or does financial strain simply elevate stress levels produced by each factor? Given the fact that few believe the financial situation in farming is likely to improve in the short term, it would seem prudent that we invest much more time and effort in better addressing the ramification of financial strain for stress in farm families.

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