Depression Among the Rural Elderly

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April, 1989

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Introduction

It is clear that the elderly, like other age segments of the population, experience mental health problems. Studies have estimated that 15 to 22 percent of the community-based elderly experience depressed moods and from 10 to 15 percent have depression that should be clinically treated (Gurland et al., 1980; Blazer and Williams, 1980; Gurland and Cross, 1982). Both elderly men and women experience these problems. Women tend to report more symptoms of depression in middle-age and early old age, but more old-old men have clinically diagnosed depression (Gurland et al., 1980).

There has, for some time, been a degree of uncertainty regarding the relationship between age and psychological distress. Some studies have reported higher levels of depressive or other psychopathological symptoms among the elderly (Gurin, Veroff and Feld, 1960; Schwab, Fennell and Warheit, 1974). Other studies have reported either mixed results or higher levels for younger persons (Eaton and Kessler, 1981; Frerichs, Aneshensel and Clark, 1981; George, Landerman and Melville, 1983; Warheit, Holzer and Arey, 1975). Still others found no significant differences by age (Phillips, 1966; Gaitz and Scott, 1972; Weissman and Myers, 1978; Uhunhuth et al., 1983). In a review of this literature, Feinson (1985) argued that there was not much support for the interpretation of a significant relationship between age and psychological distress. In further analyses she noted that much of the distress experienced by older men and women could be attributed to other factors which are correlated with age (Feinson, 1985, 1987). For example, much depression in the

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elderly may be secondary depression, in response to physical illness, loss of a spouse, or similar problems that often accompany old age (Pfeiffer and Busse, 1973).

In this context, it is possible that much of the previously noted ambiguity regarding the association of age with psychological distress may be related to differences in the distribution of other characteristics in the samples and specific situational factors. Thus, it appears that an important step in understanding depression and other forms of psychological distress among the elderly would be to examine the importance of situational factors. This study analyzes the mental health outcomes of the elderly in response to economic stress in rural areas.

Economic Stress in Rural Areas

It has been well established that the farm crisis is having a ongoing impact upon the quality of life in rural areas. With the precipitous drop in the value of land values, a long-term economic decline has encompassed much of the rural population in the North Central region of the United States (Jolly and Barkema, 1985; Lasley, 1987). The farm crisis has been shown to have direct negative impacts upon rural communities, families and individuals (Bultena, Lasley and Geller, 1985; Geller, Bultena and Lasley, 1988; Heffeman and Heffeman, 1986). The relationship between stress, and particularly economic stress, and psychological distress is well documented (Ross and Huber, 1985; Kessler, 1982; Catalano and Dooley, 1983). However, we do not have much data on the relative impact of such events across age groups.

There are some reasons to expect that the current economic crisis in rural areas would be less likely to impact upon the elderly. Economic stress and business failures have been more likely among younger operators in the rural areas. In general,

the older farm owners and operators were in a better financial situation to weather the immediate economic crisis.

On the other hand, there are many ways in which the elderly may be even more impacted by the current situation. The economic downturn certainly has affected retirement plans and resources. Many older operators have selected early retirement. The economic situation has also had many indirect effects. The economic stability of the business and human service sector has declined. Numerous businesses in small communities have failed. Many services are no longer available in close proximity to rural residences. This is also compounded by the fact that the elderly are less likely to utilize mental health services. In contrast to their use of hospital services, the elderly underutilize mental health services. It is estimated that four to six percent of the patients using community mental health services are age 65 or older (Redick and Taube, 1980; Butler and Lewis, 1982). National surveys have found the percentage of elderly who had received professional help for mental health problems had ranged from 3 to 13 percent (Kulka and Tamir, 1978; Gurin, Veroff and Feld, 1960; Evashwick, Rowe, Diehr and Branch, 1984). A recent study of an urban population found that 8.7 percent of the population under the age of 65 had sought treatment for mental health problems (German, Shapiro and Skinner, 1985). In contrast, only 4.2 percent of the 65 to 74 year old, and 1.4 percent of those over 74 had sought mental health treatment. Lawton (1979) has suggested that the aged are less willing to interpret their problems as psychological. The current cohort of the elderly is more likely to perceive a stigma associated with the use of mental health services (Kleinman and Clemente, 1976). If they do seek help, they are more likely to see a physician as effective in treating psychiatric symptoms (Waxman, Carner and Klein, 1984).

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The impact of the farm crisis has not been limited to formal supports. Many of the younger residents of rural areas have been forced to migrate to urban areas, or even out of the region, in search of employment opportunities. As a result, intergenerational relationships have been impacted. The support networks remaining in the rural areas is also changing dramatically. With the out-migration of the younger residents, the remaining population is increasingly aged. In effect, the impact of the farm crisis influences the basic character of the rural community. Research has shown that the elderly may be particularly affected by community-wide problems (Comstock and Helsing, 1976).

Study Design and Procedures

The population for this study consists of adults, age 18 or older, living in households located in rural Iowa. The definition of rural used in this study corresponds with the U.S. Census Bureau definition of all persons living in communities of 2,500 or less or in the country. The sample was stratified to assure regional representation across the state of Iowa. The design was also weighted to oversample residents of rural-farm households.

Respondents were selected from households through a two step procedure. First, after someone in the household was contacted, the interviewer determined the number of adults aged 18 or older living in the household. The respondent would ask for, and record, the first name of each of these persons. Second, the computer would use a random selection table to determine which respondent should be interviewed. If that person was not at home, a call-back would be arranged when the selected person would be available. No substitutions were permitted.

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A total of 575 rural household telephone numbers were randomly selected for
the initial sampling list. Of these numbers, 46 (8.0%) were found to be non-working
numbers or ineligible households (respondent too ill, household in urban area, etc.).
Of the remaining 529 households, 36 (6.8%) could not be successfully
contacted/resolved during the calling period, and in 79 (14.9%) the selected
respondent refused to be interviewed. At least seven call attempts, placed at different
times of the day, and different days of the week, were made prior to determining that a
number was classified as a non-contact. Interviews were completed with 414 of the
respondents, representing a 78.3 percent response rate.

Sample Characteristics

Nearly two-thirds of the respondents (65.9%) live in rural-farm households. As
noted, this segment of the rural population was oversampled. The rural-farm
household account for approximately one-third of the rural population in Iowa (Goudy,
1983). Another 26.8 percent of the sample were non-farm households in the country
or in small rural communities of 2,500 or fewer persons. A small proportion of the
respondents, 6.3 percent, resided in larger communities.

Over half of the respondents (58.9%) were female and nearly all were white
(99.2%). Corresponding with the shifting age distribution in the rural areas of the
state, approximately 6 of every ten respondents were aged 45 or older. The high
proportion of the elderly in this area of the state is reflected in the sample containing
13.5 percent aged 65 to 74 and 5.8 percent aged 75 and above. The age and sex
distribution of the sample is presented in Table 1.

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Depression

Depression is the most important type of mood disturbance included in the category of affective disorders. There are a few scales that may be used to measure the presence of depressive symptoms in surveys. It is important to note that these measure do not make a diagnosis of depression in the strict medical sense. One of the better established measures is the NIMH Center for Epidemiologic Studies Depression Scale (CES-D). The CES-D scale was developed for use in studies of the epidemiology of depressive symptomatology in the general population (Radloff, 1977). While not designed to discriminate among types of depression nor to distinguish primary depressive disorders from secondary depression, it is intended to identify the presence and severity of depressive symptomology. The CES-D has been shown to discriminate between clinically depressed patients and others (Weissman et al., 1977). It has also been administered in rural populations and clinically correlated cutoff points have been established (Husaini et al., 1980).

The present study uses a variation of the CES-D identified by Ross and her associates (Ross and Huber, 1985; Ross, Mirowsky, and Huber, 1983). This variant of the scale uses 12 of the original 20 items. The items selected all loaded onto a common dimension of a factor analysis. Two of the excluded items do not work equally well for men and women, two are generally poor indicators, and four tend to load onto a distinct dimension. Ross and Huber (1985) report alpha reliabilities of .85 for women and .82 for men using this modified CES-D scale.

The CES-D is administered by asking respondents how many days in the prior

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week they had experienced each of the symptoms. The traditional scoring method, used to calculate the clinically correlated cutoffs, is to code each response into three categories and add them together to produce the final scale measure. The unadjusted sum of the measures is also used, primarily in multivariate analyses of potential determinants.

Anxiety

In addition to examining depression, a set of questions designed to measure functional anxiety were added to the survey. These questions, drawn from a set of scales developed by Warheit (Schwab et al., 1979; Warheit et al., 1986), have been shown to work in survey of rural populations (Beeson and Johnson, 1987). These measures of anxiety do not have an established cutoff points corresponding with clinical diagnosis.

Subjective Well-Being

The assessment of the subjective well-being of the elderly has been a recurrent research topic in social gerontology for several decades. Over time, this research has increasingly focused upon a few relatively standard measures of well-being. In particular, some variation of the Life Satisfaction Index (Neugarten, Havighurst, and Tobin, 1961) has been used in many of the studies on the elderly. The original version of the Life Satisfaction Index, the LSIA, was developed by Neugarten, Havighurst and Tobin (1961) as a short discrete-answer scale to measure the five factors they believed contributed to life satisfaction. Methodological analyses have consistently shown that the LSIA is multidimensional, but not conforming to the structure proposed by

Neugarten, Havighurst and Tobin. The emergent interpretation is of a three factor solution (Liang, 1984; Hoyt and Creech, 1983; Redmond and Hoyt, 1989). General agreement is that these factors represent mood tone, zest for life, and congruence of life expectations and achievements. It has been suggested that each of the LSIA dimensions may be related in a distinct manner with certain independent variables (Redmond and Hoyt, 1989). Earlier studies that have treated the LSIA as a multidimensional measure have found important variations in the relationship of independent variables with the component factors of the LSIA (Hoyt et al., 1980; Knapp, 1976).

Results

The results show a strong relationship between the measures of psychological distress and the age of the respondents. As presented in the first two column of Table 2, both depression and anxiety are high for the younger age group and gradually decline through age 74. However, both depression and anxiety are significantly higher for the 75 and older age group. Many of the earlier studies examining the relationship of psychological distress with age have not broken-out this oldest group separately. This is clearly an important concern. The depression score for this old-old age group is nearly as high as that for the youngest age group. The increase in the anxiety symptom score is not as dramatic, but is higher than for respondents aged 55 through 74. Thus, while the current economic crisis is thought to impact more directly upon the younger respondents, this or other factors are contributing to high levels of distress among the oldest segment of the rural population.

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We found both similarities and differences with this pattern for the three dimensions of psychological well-being. The old-old did show a drop in mood tone and zest relative to the younger age groups. However, they also demonstrated increased congruence. It would appear that, although this oldest age group is experiencing increased levels of psychological distress and lower levels of optimism, they also are reporting a greater congruence between desired and achieved goals.

As noted earlier, it is possible that many of the associations being discussed here could be attributed to other factors which are correlated with age. In particular, marital status and health are both related to psychological distress and well-being and are also correlated with age. Moreover, as we noted in our earlier review, it is not clear that the economic stress caused by the current farm crisis has impacted all age groups equally. To address these concerns, we ran regressions on each of the psychological distress and well-being measures. Our independent variables were marital status (0 = not married, 1 = married), self-reported health (0 = good, 1 = fair or poor), sex (0 = male, 1 = female), household income (0 = less than $20,000, 1 = more than $20,000), age (continuous) and economic stress. The economic stress measure was the sum of a series of items that measured negative economic outcomes in the past year (e.g., having a loan foreclosed, having trouble making payments, etc.). The results of the analyses are summarized in Table 3.

Consistent with the literature on stressors, the measure of economic stress is significantly related to each of the psychological distress and well-being measures. Economic stress has a positive effect for psychological distress, increasing the levels

of both depressive and anxiety symptoms. The effect for the well-being items is negative, decreasing the level of mood tone, zest for life and congruence of past goals with the present.

Self-reported health is also significant for each of the psychological distress and well-being measures. Persons who have poorer self-reported health are more likely to have depressive and anxiety symptoms. They are also more likely to have lower scores on mood tone, zest and congruence. Marital status was only significant for anxiety, with married respondents reporting higher levels of anxiety than respondents not currently married. Gender and income were not significant predictors of any of the Psychological distress or well-being measures.

Age had a significant effect for four of the five measures considered. Consistent with Feinson (1987), age did not show a significant relationship with depressive symptoms once controls for the other measures were introduced. There was, however, a significant relationship between age and the other measure of psychological distress, anxiety. This relationship indicated that younger respondents were more likely to experience anxiety than older ones. Thus, we do not find any support for higher levels of psychological distress among the elderly after controlling for differences in economic stress, marital status, health and gender.

On the other hand, our analyses do show some patterns of association between age and psychological well-being that have important implications for the elderly. Both mood tone and zest have significant negative relationships with age. That is, the older the respondent, the lower the reported mood tone and zest. While we do not see increases in psychological distress associated with age, we do find significant declines in two measures of well-being.

The relationship between age and the third dimension of psychological well-being, congruence, is also significant. However, in this instance it is a positive association. As persons grow older they have an increase in the congruence between past goals and the present. It would appear that the elderly are able to develop positive evaluations of their life accomplishments even at a time where they may actually be less happy than before.

Discussion and Conclusions

Only one of the measures of psychological outcomes used in this study has established scoring procedures which permit the estimation of potential need for mental health assistance. The CES-D has been widely used as an indicator of the prevalence of depression symptoms in the general population. Individuals scoring above an established cutoff point are likely to be persons who would be judged to be depressed if they were to be examined. This group also is likely to include many who are temporarily depressed or mildly depressed but not disabled by their feelings. In prior studies, the percentage above the standard cutoff has ranged from around 9 to 20 percent. In one of the early applications of the CES-D in an urban area, 19.8 percent of Kansas City area white respondents scored above the cutoff (Comstock and Helsing, 1976). A semi-urban sample from Maryland reported 17.0 percent with scores of 16 or higher on the CES-D (Comstock and Helsing, 1976). In two studies in

rural areas, Husaini and Neff (1982) reported standard cutoff percentages of 12.7 for rural Tennessee and 15.0 for rural Oklahoma.

In this study, the proportion of the respondents with a CES-D score that was above the cutoff was 21.3 percent. Not only is this proportion higher than reported in earlier studies, it is substantially higher than the prior rural studies. It has been ten years since the rural studies reported by Husaini and Neff (1982) were conducted. It would appear that the chronic economic stress experienced in the interim has had a substantial impact upon rural mental health. While it is not possible to directly test this assertion with the present data, there is some independent evidence to support this interpretation. Beeson and Johnson (1987) reported significant increases in levels of depression between 1981 and 1986 in the rural component of a longitudinal survey conducted in Nebraska.

Table 4 presents the estimates of percentage of the population with high depressive symptom scores by age. The age groups with the highest proportion in need of potential intervention are the 18 to 34, 55 to 64, and 75 and older. Each of these age groups show over 30 percent who may need some assistance. Interestingly, the 65 to 74 age group has a very low proportion in the potential assistance category. Only 8.9 percent of this age group scored above the cutoff point. This age group may have been at the point in the life course to have missed much of the direct impact of the economic crisis. Many may have retired prior to, or at the beginning of the farm crisis and, thus, managed to avoid much of the direct financial losses suffered by others. In contrast, the 55 to 64 age group may be experiencing the direct impact of the crisis on their work and retirement planning. In

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contrast with the next older age group, the 65 to 74 aged respondents are not as likely to have experienced the health declines that increase psychological distress.

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This discussion highlights the importance of recognizing the mental health care needs of the elderly in rural areas. The multivariate analyses demonstrate that age, as an independent predictor, does not have a significant effect upon depression. Thus, in terms of theoretical interpretations it is important to recognize that the level of depressive symptoms identified among the old-old are due to factors other than age. In particular, economic stress and poor health are strong predictors of psychological distress. On the other hand, since this age group has relatively higher levels of economic stress and poor health, they are one of the higher need age groups in terms of mental health care.

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Table 1.   Age and Sex Distributions

		N	Percent
SEX			
	MALE	170	41.1
	FEMALE	244	58.9
Age			
	18-24	19	4.8
	25-34	56	14.2
	35-44	77	19.5
	45-54	85	21.6
	55-64	81	20.6
	65-74	53	13.5
	75-90	23	5.8

Table 2.   Mean Psychological Distress and Well-Being Scores by Age Groups

AGE	CES-D	Anxiety	Mood	Zest	Congruence
18-34	8.32	3.89	9.48	14.96	12.96
35-54	5.80	2.92	9.51	15.08	13.88
55-64	6.08	2.25	9.59	14.81	13.99
65-74	3.98	1.36	9.69	14.51	13.98
75+	8.16	2.68	9.08	12.95	14.64

Table 3.   Summary of Regressions on Psychological Distress and Well-Being

	CES-D	Anxiety	Mood	Zest	Congruence
Marital Status	-.067	.102 *	.074	.070	-.004
Economic Stress	.403 ***	.395 ***	-.324 ***	-.184 ***	-.316 ***
Health	.249 ***	.223 ***	-.117 *	-.224 ***	-.163 **
Sex	.046	-.015	.053	.043	.012
Age	-.082	-.157 **	-.136 **	-.157 **	.112 *
Income	.012	-.010	-.043	.008	-.013
R^2	.254	.262	.138	.132	.149

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Marital Status	0 if not married, 1 if married.
Economic Stress	Number of negative economic outcomes in the prior year (0 to 15 possible, observed range of 0 to 7).
Poor Health	Self-rated; 0 if good or very good, 1 if fair or poor.
Sex	0 if male, 1 if female.
Age	Age in years.
Income	Yearly household income; 0 if less than $10,000, 1 if $10,000 or more.

Table 4. Depression by Age

Age Group	Percent Above CES-D Cutoff
18-35	35.8 %
35-54	18.6 %
55-64	30.9 %
65-74	8.9 %
75 +	31.6 %