

Behavioral Health Issues of the Aging Agricultural Population

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“I think the thing that maybe has been the hardest for me is... making decisions... for over 50 years you’ve had someone to talk things over with and now you have to make a decision by yourself.” Comments of a 77 year old farm widow (Scheerer and Brandt, 2001).

The 2002 Census of Agriculture (United States Department of Agriculture, 2004), the most recent available agricultural census, indicates that the average age of United States farmers is 55.3 years. The average farmer in 2002 was more than a year older than the previous census of agriculture in 1997 when the average farmer was 54.0 years of age. Realistically, half of all current farmers could – or should – cease farming during the next 15 years.

The health of the aging American agricultural population is a matter of concern, given their advancing age. A steady supply of essentials for life, food, fiber and increasingly, renewable energy, depends on healthy food producers. In particular, attention should be focused on the behavioral health of America’s aging agricultural population because behavioral health is closely linked to stress and stress among the agricultural population is rampant. Furthermore, the behavioral health of this group usually is the most neglected area of their healthcare. This chapter examines behavioral health issues of the aging agricultural population.

Definition of Behavioral Health

The AgriWellness Glossary of Agricultural and Behavioral Health Terms (available at <http://www.agriwellness.org>) defines behavior as the “observable activity of an organism, such as a human.” Behavior can be quantified, measured, healthy or disordered, managed and to a large extent controlled by humans or ignored. Most farmers decide when and how long they sleep, exercise, how much they eat, talk, work and play. Farmers make choices to take risks or to engage in safe behaviors.

Behavioral health has commonly come to include treatments for disordered behaviors such as addictions as well as mental illness. The newly emerging field of agricultural behavioral health involves the behavioral healthcare of the agricultural population. Agricultural behavioral health providers must understand the cultures of farmers, ranchers and other persons involved in the production of food and fiber and they must have knowledge of the unique behavioral health risks of this population and methods of restoring disordered or dysfunctional behaviors of this population to wellness. As the AgriWellness Glossary of Agricultural and Behavioral Health Terms indicates, wellness is the condition of being in maximum physical and behavioral health.

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The term, behavioral health risks, refers to factors that reduce wellness. This article adopts a broad approach to behavioral health risks, such as that described by Rosmann (2003), which includes social psychological distress as an indicator of behavioral health. Social psychological distress, as a concept, has been used in a number of studies of the rural agricultural and other populations as an outcome of the stress process (e.g., Mojtabai, 2005, 2006; Schulman and Armstrong, 1989; Swisher, Elder, Lorenz and Conger, 1998). This process involves the perception and evaluation of potential harm associated with a stimulus circumstance (Cohen, Sherrod and Clark, 1986). Social psychological distress refers to the degree to which people find their lives to be unpredictable, uncontrollable or overwhelming (Averill, 1973; Cohen, Camarck and Mermelstein, 1983; Lazarus, 1966; Lin and Ensel, 1989; Kessler, 1979). This broader definition is appropriate when examining the types of risks experienced by the agricultural population and the types of services which are needed as interventions. The Sowing the Seeds of Hope Regional Program, which provides behavioral health supports to the agricultural population in seven upper Midwestern states (i.e., Iowa, Kansas, Minnesota, Nebraska, North Dakota, South Dakota and Wisconsin), has found this broader definition of behavioral healthcare to be well suited to the broad range of health risks and interventions that are needed for the agricultural population (Rosmann, Schmitt and Meek, 2005).

Characteristics of the Aging Agricultural Population

Who belongs to the aging agricultural population and what is this population like? The report, Structural and Financial Characteristics of U.S. Farms: 2001 Family Farm Report (Hoppe, 2001), provides a comprehensive overview of farming in the United States. Table 1 summarizes the farm typology definitions adopted by the Economic Research Service of the United States Department of Agriculture (USDA) and used by Hoppe. Hoppe’s analysis of farm families used data gathered in 1996 and 1998. As might be expected, the vast majority of farms at that time were small family farms (i.e., 91%) and they accounted for 33% of the value of all agricultural production. Collectively, small family farms held 69% of farm assets, including 68% of the farmland. The number of small family farms continues to increase slowly (United States Department of Agriculture, 2004).

**Table 1
Farm Typology Group Definitions**

Small Family Farms (sales less than \$250,000)	Other Farms
<ul style="list-style-type: none"> • Limited resource farms. Small farms with sales less than \$100,000, farm assets less than \$150,000, and total operator household income less than \$20,000. Operators may report any major occupation, except hired manager. 	<ul style="list-style-type: none"> • Large family farms. Sales between \$250,000 and \$499,999. • Very large family farms. Sales of \$500,000 or more. • Nonfamily farms. Farms organized as

<ul style="list-style-type: none"> • Retirement farms. Small farms whose operators report they are retired.* • Residential/lifestyle farms. Small farms whose operators report a major occupation other than farming.* • Farming as main occupation: Small farms whose operators report farming as their major occupation.* • Low-sales farms. Sales less than \$100,000. • High-sales farms. Sales between \$100,000 and \$249,000. 	<p>nonfamily corporations or cooperatives, as well as farms operated by hired managers.</p> <p>***** *Excludes limited-resource farms whose operators report this occupation.</p>
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Source: Hoppe, R. A. (Ed.) (2001). Structural and financial characteristics of U. S. farms: 2001 family farm report. Washington, D.C.: United States Department of Agriculture, Economic Research Service, Agricultural Information Bulletin No. 768, p. 3.

Table 2 illustrates the characteristics of farms included in Hoppe’s report. Some types of active farmers, notably those that operate limited resource small family farms, retirement small family farms and small family farms which have farming as the main occupation but low sales, are older than other farmers. Generally, farm operators are older than farm laborers (Myers, 2004; National Institute of Occupational Safety and Health, 1998). Male farm operators usually die younger than their spouses, which causes many farm women to become farm owners and when some may not be fully prepared to manage the operation (Keller, October, 2001; Scheerer and Brandt, 2001).

Table 2
Farm Characteristics

Type of Farm	On-Farm Income	Total Household Income	% of Farms	% of Production	Average Age of Operator
Limited resource small family farm	-\$2,960	\$10,021	7.3	.8	58
Retirement small family farm	N/A	\$41,238	14.1	1.8	70
Residential/lifestyle small family farm	-\$4,719	\$72,477	40.4	6.0	49
Small family farm as main occupation, low sales	*	\$32,781	20.4	7.8	58

Small family farm as main occupation, high sales	\$26,530	\$58,990	8.3	16.9	50
Large family farm	\$49,536	\$71,319	4.5	16.6	50
Very large family farm	\$145,572	\$179,371	3.0	36.5	49
Nonfamily farm	**	**	2.0	13.5	53

Sources: United States Department of Agriculture (1996). Agricultural resource management study. Washington, D.C.: Economic Research Service.

Hoppe, R.A. (Ed.) (2001). Structural and financial characteristics of U.S. farms: 2001 family farm report. Washington, D.C.: United States Department of Agriculture, Economic Research Service, Agriculture Information Bulletin No. 768.

*Data suppressed due to insufficient observations or large standard error.

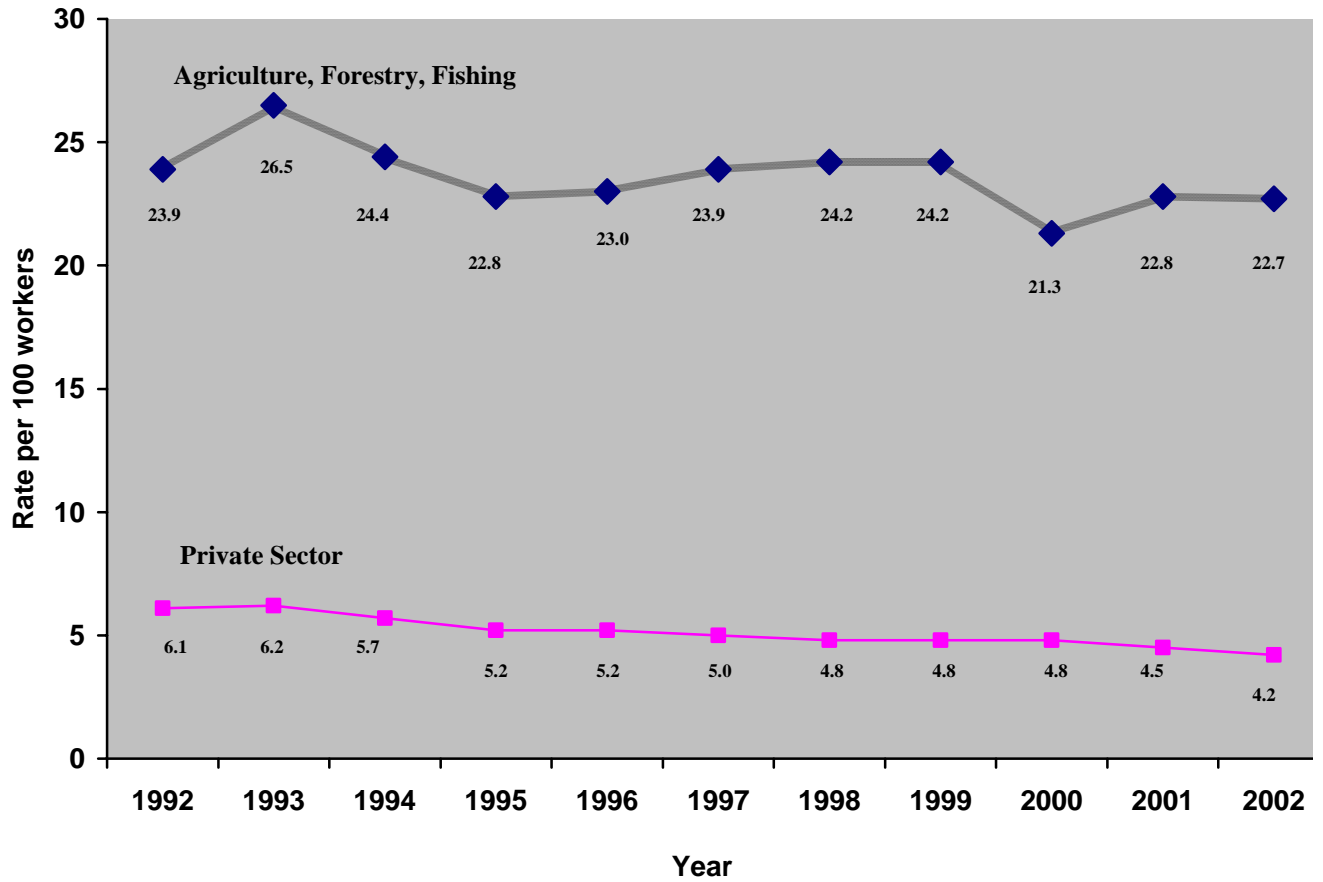
**These data are not available because nonfamily farms, by their very nature, report income and distribute income to shareholders differently than family farms.

The only available comprehensive data that describe the aging farm population that are more recent than the report by Hoppe are contained in the 2002 Census of Agriculture (United States Department of Agriculture, 2004). The 2002 Census of Agriculture indicated that since 1997 the average age of farmers increased and that the proportion of principal operators claiming farming as their main occupation also increased. Most of these increases in age and in the proportion claiming farming as the main occupation were due to demographic changes, but there was a concern that changes in the design of the 2002 report form may have also contributed to these increases. What is clear is that the general trends exhibited in the data reported by Hoppe (2001) are similar to the 2002 Census of Agriculture trends in that a substantial portion of older farmers have low incomes. Another detectable trend from both surveys is that the proportion of operators of small family farms (i.e., sales less than \$250,000 annually) who are female is larger than the proportion of female operators of large family farms (i.e., sales more than \$250,000 annually), that is, 11.9% as compared to 3.9%. Indeed, the smaller the family farm operation, the higher the proportion of female operators. In summary, almost one-third of aging farm residents and especially those who are widows struggle with economic uncertainty.

Occupation-Related Fatalities and Physical Injuries of Aging Farmers

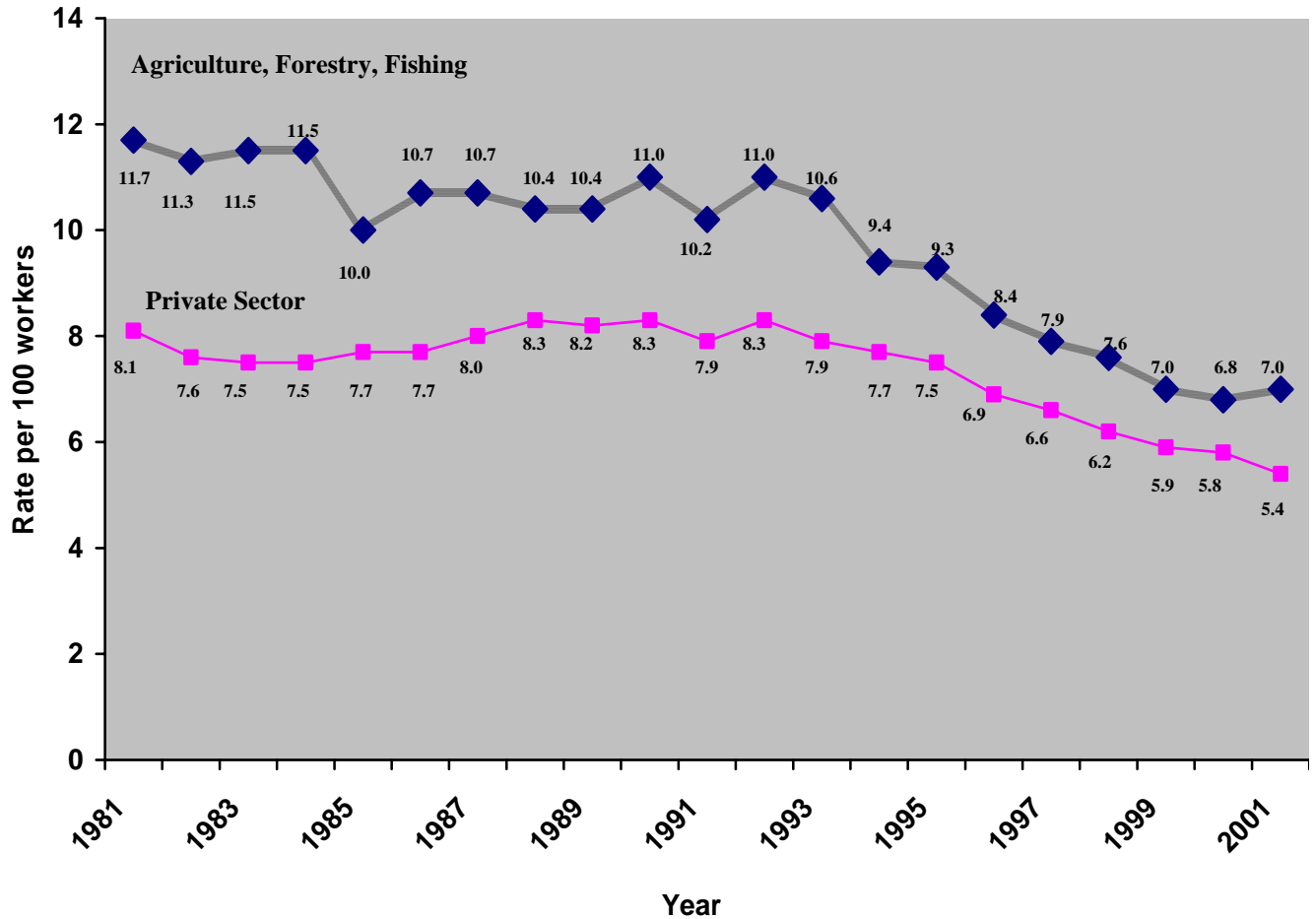
It is well known that agriculture is one of the most dangerous occupations, with higher rates of work-related fatalities and nonfatal injuries than most other occupations (Myers, 2004; National Safety Council, 1999; Zwerling, Sprince, Wallace, Davis, Whitten and Heeringa, 1995). National Institute of Occupational Safety and Health (NIOSH) data indicate that the annual rates of fatal occupational injury in agriculture, forestry and fishing during 1992 – 2002 were 3.9 to 5.4 times the rates in private-sector industry as a whole (Myers, 2004). As Figures 1 and 2 show, the overall rates of fatal and nonfatal occupational injuries in agriculture, forestry and fishing have been declining for a number of years, however, perhaps as a result of concerted research and safety and health improvements in the production of food and fiber.

Figure 1
Annual Rates of Fatal Occupational Injury in the Agriculture, Forestry and Fishing Industry and the Private Sector



Source: Myers, J. (2004). Focus on Agriculture. In J.P. Sestito, R.A. Lunsford, A.C. Hamilton and R.R. Rosa (Eds.), Worker Health Chartbook 2004. Cincinnati, OH: National Institute for Occupational Safety and Health, Publication No. 2004-146, Chapter 3, available at: www2.cdc.gov/NIOSH-Chartbook/front/acknowlgmts.html

Figure 2
Nonfatal Occupational Injury Rates in the Agricultural, Forestry and Fishing Industry (Excluding Farms with Fewer than 11 Employees) and the Private Sector

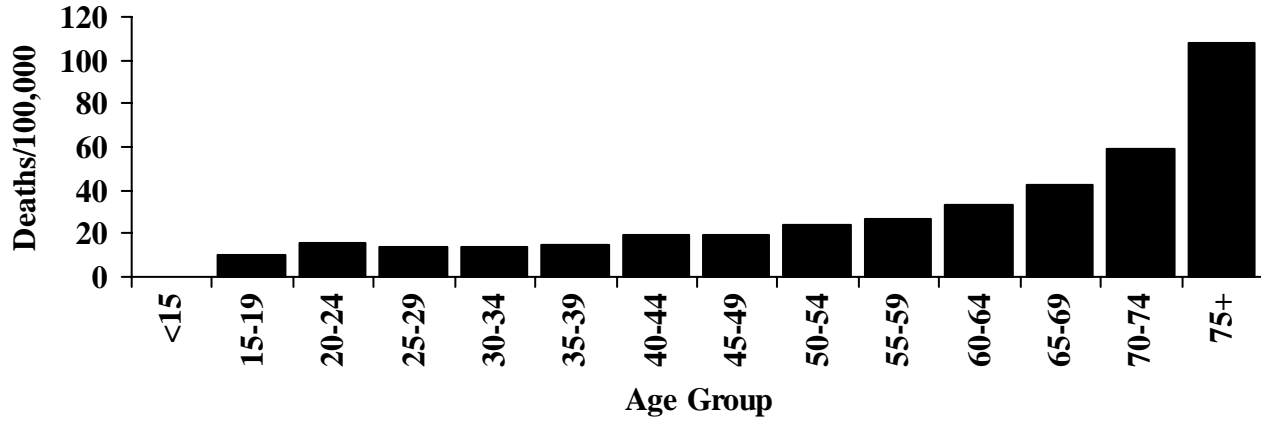


Source: Myers, J. (2004). Focus on Agriculture. In J.P. Sestito, R.A. Lunsford, A.C. Hamilton and R.R. Rosa (Eds.), *Worker Health Chartbook 2004*. Cincinnati, OH: National Institute for Occupational Safety and Health, Publication No. 2004-146, Chapter 3, available at: www2.cdc.gov/NIOSH-Chartbook/front/acknowledgments.html

Interestingly, the rate of occupational fatal injuries increases as farmers become older but not the rate of nonfatal injuries. Using agriculture industry data that excluded forestry and fishing, Myers, Layne and Marsh (2007) reported that the occupation-related death rate for farmers over 75 years of age is approximately double the rate of deaths per 100,000 farmers (see Figure 3) in the next lower age range (i.e., 70-74 years). But, as Figure 4 shows, the nonfatal injury rate for older farmers (i.e., 55 years+) is lower than

the rate for younger farmers (i.e., 20-54 years of age) in most parts of the country (see Figure 4).

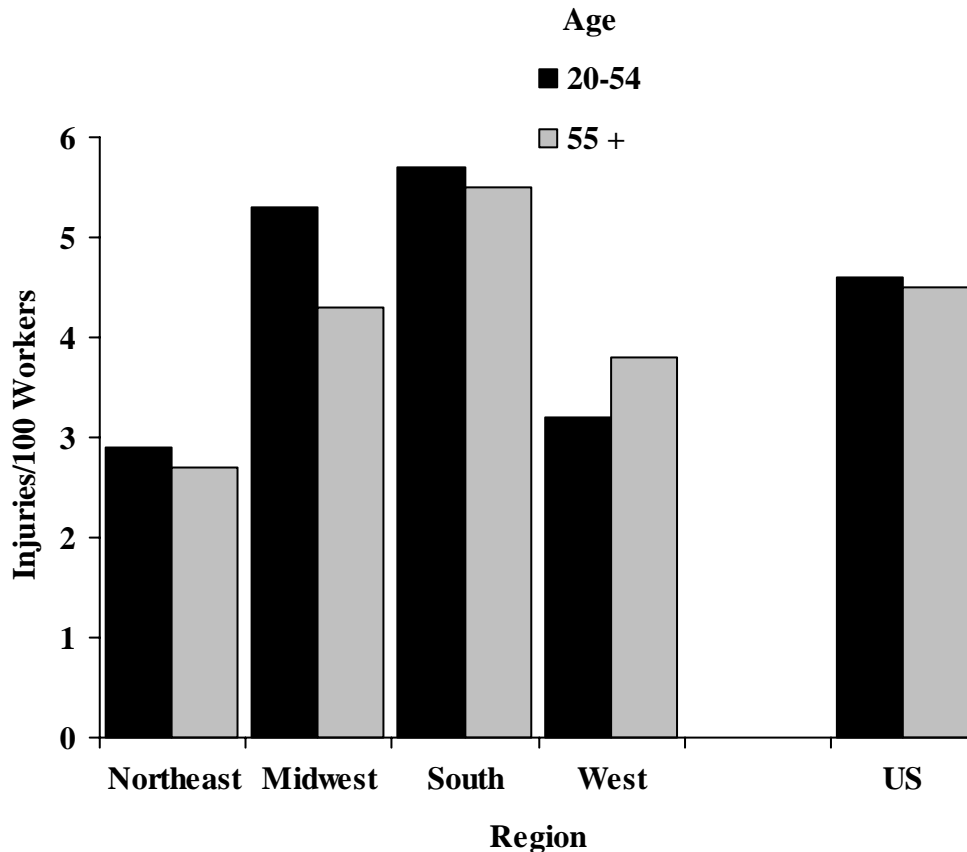
Figure 3
Occupational fatality rates by age group
for farming, 1992-2004*



***Excludes New York City. Rates calculated by NIOSH and may differ from BLS.**

Source: Myers, J.R., Layne, L.A. and Marsh, S.M. (2007). National injury and fatality data for aging farmers. Presented at: "A Conference on the Aging Farm Community: Using Current Health and Safety Status to Map Future Action," March 6-8, 2007, Indianapolis, IN.

Figure 4
Farming injury rates by age group and
region of the United States, 2001-2004



Source: Myers JR, Layne LA, Marsh, Marsh SM. [2007]. National injury and fatality data for aging farmers. Presented at: "A Conference on the Aging Farm Community: Using Current Health and Safety Status to Map Future Action," March 6-8, 2007, Indianapolis, IN.

When older farmers (i.e., over age 54) are injured, however, their injuries are more severe (Gelberg, Struttman and London, 2000; Hagel, Dosman, Rennie, Ingram and Senthilsevan, 2004; Myers, 2007).

Behavioral Health Risks of the Aging Agricultural Population

It is well established that stress caused by financial difficulties increases the risks of farming-related injuries and fatalities (Geller, Ludtke and Stratton, 1990; Simpson, Sebastian, Arbuckle, Bancej and Pickett, 2004; Thu, Lasley, Whitten, Lewis, Donham, Zwerling and Scarth, 1997). Older farm residents who find themselves in economic difficulty are at greater risk for occupation-related injuries and death. Scheerer and Brandt (2001) conducted semi-structured interviews with farming widows in Kentucky to

identify the stresses that they were experiencing as a result of the loss of their mates. The respondents indicated that becoming the primary decision maker in the farming operation was the most significant stress, followed by financial difficulties. The comments of the widow at the beginning of this article typify the experiences reported by the subjects in Scheerer and Brandt's survey. Olson and Schellenberg (1986) and Weigel (1981) found that the death of a spouse or other close family member was the most stressful event in their surveys of farm stressors. They also found that as stressors accumulated, farmers' defense mechanisms broke down. The types of stressors experienced by farmers, including aging farmers, are unique to the occupation: machinery breakdown, livestock disease outbreaks, too many roles to fill simultaneously such as financial manager, childcare taker, laborer in an off-farm job, to name but a few. When things don't go right in several facets of life simultaneously, these farm people find themselves overwhelmed with perceived responsibilities and inability to manage all of them. They may develop a sense of inadequacy, feel helpless and become emotionally paralyzed. The Canadian Agricultural Safety Association (2005) survey of 1,100 agricultural producers across Canada also documented that causes of stress for farmers are unique: economic uncertainty, unfavorable government policies, disease outbreaks, the pressure to maintain the family farm, physical health concerns, the need to balance farm and off-farm work, personal family relationship difficulties and concerns about mental health, all of which are listed from most to least stressful. As May (1998) found, there is a tendency for health and financial stressors to affect older farmers and families more than they affect younger farmers and families.

Not all aging members of the agricultural population report social psychological distress. Roy's (2001) survey of 717 northwest Iowa farmers found that farmers over 65 years of age reported fewer mental health symptoms than farmers under 65 years of age. Roy suggested that most of the older farmers in her sample were more financially secure than younger farmers, once again validating the importance of economic security to wellness.

One of the largest samples of the aging agricultural population and their reported stressors is available from the seven state Sowing the Seeds of Hope program (AgriWellness, Inc., July 2007). Of 34,628 callers to farm crisis telephone hotlines in the seven states between May 1, 2003 and April 30, 2006, 16% of the calls were from older adults over 65 years of age. Reasons given for contacting the hotlines by all callers, including the elderly, were these: stress over finances – 14%, problems coping with daily activities – 14%, depression/mood disorder – 14%, desired information and/or referral – 12%, marital/family problems – 9%, alcohol/drug misuse – 2%, gambling – 1% and other – 34%. These data verify the role of financial stress and feeling overwhelmed with too many responsibilities as primary stressors for the agricultural population, including aging members of this population.

In summary, although precise data are lacking, it appears that about two-thirds of aging farm people report themselves to not be overly stressed. The other third of the aging agricultural population struggles with losses of loved ones, economic insufficiency, physical health concerns, behavioral health concerns and a variety of less frequently

reported stressors, which when combined together, cause these persons to feel overwhelmed.

Behavioral Health Conditions of the Aging Agricultural Population

There are no comprehensive epidemiological studies of the behavioral health conditions associated with agricultural production. However, there are several comprehensive surveys that compare rural versus urban residents for serious psychological distress, such as the Annual Chartbook on Trends in the Health of Americans published by the Centers for Disease Control and Prevention and the National Center for Health Statistics of the U.S. Department of Health and Human Services (e.g., National Center for Health Statistics, 2005) and suicide (e.g., National Center for Health Statistics, 2006). At least one comprehensive survey examined substance misuse by adults, notably the Chartbook on Trends in the Health of Americans entitled Health, United States, 2006 (National Center for Health Statistics, 2006). The agricultural population is embedded in the larger rural subset of all these comprehensive surveys. Demographic Trends in Rural and Small Town America (Johnson, 2006) indicates that only 6.5% of the nonmetropolitan workforce is engaged in agricultural production and only 17% of the U.S. population is considered nonmetropolitan. Agricultural producers, including farmers, ranchers, and farm workers, comprise about 3.3 million people, who produce enough food for half a billion people. These comprehensive surveys often contain information that can be extrapolated about the aging agricultural population.

Mojtabai (2005; 2006) evaluated data about psychological distress available from the National Health Interview Survey from 1997 through 2002 that are available through the National Center for Health Statistics. Mojtabai found that the prevalence of significant psychological distress was higher in nonmetropolitan than metropolitan areas, a finding that is at variance with past research that showed no urban-rural differences in psychological distress. Participants with significant psychological distress from rural areas were less likely than their counterparts from metropolitan areas to have contact with mental health professionals and more likely to be unable to afford medications. Serious psychological distress is highly linked with poverty in remote rural areas that contain the agricultural population. Health, United States, 2005 (U.S. Department of Health and Human Services, 2005) indicated that 8.7% of persons who are very poor reported serious psychological distress in 2002-2003, while 5.4% of near poor persons reported serious psychological distress and 1.8% of the nonpoor reported serious psychological distress during the same timeframe. These data indicate that 3.9% of all persons outside metropolitan service areas reported serious psychological disturbance in 2002-2003, in comparison to 2.9% of persons within metropolitan service areas during the same timeframe.

Health, United States, 2006 (U.S. Department of Health and Human Services, 2006) reported on the use of alcohol by elderly U.S. residents. Consumption of alcohol declined with age and was lower for older rural people than older metropolitan people. The aging agricultural population is embedded in the rural population that was sampled. While 68.3% of 25-44 year olds reported consumption of alcohol in 2004, consumption

of alcohol declined to 57.9% of 45-54 year olds, to 43.6% of 55-64 year olds, 49.5% of 65-74 year olds and 37% of 75+ year olds in 2004. Survey data pertaining to the use of prohibited drugs such as methamphetamines by the aging agricultural population are not available.

Suicide

Suicide by older male members of the agricultural population is a particular peril. Data from the seven-state (i.e., Iowa, Kansas, Minnesota, Nebraska, North Dakota, South Dakota and Wisconsin) Sowing the Seeds of Hope project indicate that 2% of the callers admit to suicidal ideation (AgriWellness, Inc., July 2007). It is well known that suicide rates increase with age and are highest among persons 65 years and older (Carney, Rich, Burke and Fowler, 1994; Department of Health and Human Services, 1999). Singh and Siahpush (2002) examined the annual male and female suicide rates for the time period 1970-1997 for every county in the United States. They examined suicide rates across ten rural/urban classifications from least to most metropolitan areas. These rural/urban classifications are shown in Table 3.

Table 3
Rural/Urban Continuum Classifications*

1. Central counties in metropolitan areas with 1 million people or more.
2. Fringe counties in metro areas with 1 million people or more.
3. Counties in metro areas with 250,000 – 1 million people.
4. Counties in metro areas with fewer than 250,000 people.
5. Urban counties with a population of 20,000 or more, adjacent to a metro area.
6. Urban counties with a population of 20,000 or more, not adjacent to a metro area.
7. Urban counties with a population of 2,500 to 19,999, adjacent to a metro area.
8. Urban counties with a population of 2,500 to 19,999, not adjacent to a metro area.
9. Rural counties with a population of less than 2, 500, adjacent to a metro area.
10. Rural counties with a population of less than 2,500, not adjacent to a metro area.

*Source: Butler, M.A., & Beale, C.L. (1994). Rural/urban continuum codes for metro and non-metro counties, 1993. Washington, D.C.: Economic Research Service, USDA Staff Report 9425

Table 4 shows the number of counties and the percent of the total U.S. population in 1990 for the ten rural/urban continuum classifications.

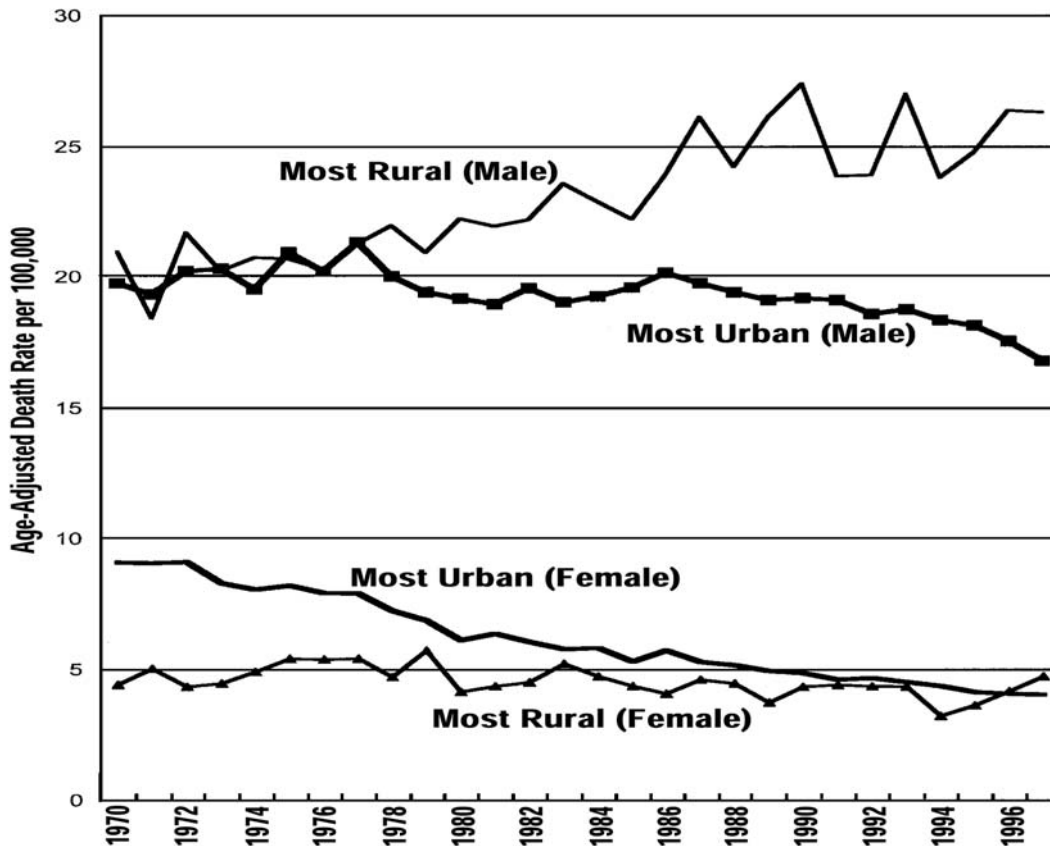
Table 4
Rural/Urban Continuum Characteristics*

Rural/Urban Variable	Number of Counties	Percent of Total U.S. Population in 1990
1	169	45.5
2	132	3.6
3	323	22.3
4	203	7.9
5	137	4.0
6	110	2.5
7	616	6.5
8	643	5.1
9	247	1.0
10	523	1.4

*Source: Singh, G.K., & Siahpush, M. (2002). The increasing rural/urban gradients in U.S. suicide mortality, 1970 – 1997. *American Journal of Public Health*, 92 (7), 1161-1167.

Figure 5 reports the age-adjusted U.S. suicide rates calculated by Singh and Siahpush for the most urban and most rural males and females from 1970 to 1997. As can be seen, the suicide rate for the most urban males is about four times higher than for the suicide rate for the most urban and most rural females. The suicide rate of the most rural males is nearly twice that of the most urban males. The agricultural population resides in highly rural counties. Singh and Siahpush speculated that both rural and urban areas have experienced profound social and demographic changes during the past three decades but these changes have affected rural areas much more adversely than urban areas. They cite declines in traditional farm activity, the change from a agriculture-based economy to a more service and manufacturing-oriented economy and the substantial population loss due to birth deficits and out-migration in most rural communities as contributing factors to increases in the suicide rate in highly rural areas. If the suicide rates were not adjusted for age, suicide would increase significantly as rural males become older.

Figure 5
Age-Adjusted U.S. Suicide Rates by Urban-Rural, 1970 – 1997*



*Source: Singh, G. K., & Siahpush, M. (2002). The increasing rural-urban gradients in U.S. suicide mortality, 1970 – 1997. *American Journal of Public Health*, 92(7), 1161-1167.

Gunderson, Donner, Nashold, Salkowicz, Sperry and Wittman (1993) examined the suicide statistics of farm residents and workers in five north central states from 1980 to 1988 and found that their suicide rate was twice as high as the suicide rate for the general population. There is a seasonal component to suicide among the agricultural population, with self-inflicted deaths occurring more frequently during the planting and harvesting periods. Furthermore, as Gunderson and his colleagues detected, suicide by farm people was more likely to take place between 6:00 a.m. and noon during the early part of the week (i.e., Sunday, Monday and Tuesday), whereas suicide among the general population is more likely to occur at night and toward the end the week (i.e., Friday and Saturday). The timing of suicide appears to be related to the occupation of working the land as a way of life. Feelings of frustration are perhaps most acute to farmers when they would normally be involved in church or work activities. Beeson (2000) suggested that overwhelming and continuing experiences of loss (e.g., loss of land, loss of political power, loss of livelihood, loss of community, loss of a way of life) could be contributing factors. Perhaps loss of a spouse is another precipitating factor for suicide among aging agricultural males. Exposure to pesticides was also found to be linked with increases in the suicide rate for males, after controlling for age, race, Hispanic ethnicity, years of

education, and marital status (Stallones, 2006). Gunderson and his colleagues also speculated that exposures to farm pesticides could be related to high farmer rates of suicide.

Vega, Scutchfield, Carno, and Meinhardt (1985) found that Mexican-American agricultural workers have significant needs for mental health assistance but there are few available services to meet their needs. The researchers found that individuals age 40-59 years reported more distress than other age groups. Hovey and Seligman (2006) reviewed the few available studies that examine the mental health, including the suicide rate, of migrant farm-workers. The authors found that high stress associated with the migrant farm-worker life style contributed to heightened risks for hopelessness, anxiety, depression and suicide. Age of the survey respondents was not reported.

In summary, there is ample evidence that the occupation of agriculture is linked with a high suicide rate and that most studies report increases in suicide concurrent with increases in age. Aging male farmers who are experiencing economic turmoil, losses of close affiliates, health compromises and perceived uncertainty about the future are at particular risk for suicide.

Concluding Remarks

There are few studies that specifically examine the types of behavioral health pathology manifested by the aging agricultural population. Systematic comprehensive surveys are needed to better understand the behavioral health conditions that occur in the aging agricultural population and to plan treatment approaches. In addition to the generalized surveys of rural people of all ages in which the aging agricultural population is embedded, there are some data that are available about the agricultural population in specific samples (e.g., McSparron, 2005; Rosmann and Delworth, 1990; Scarth, Zwerling, Lewis and Burmeister, 1997). Findings from these truncated samples, combined with the suggestions from comprehensive surveys of rural people in which the agricultural population is embedded, all suggest that about two-thirds of the aging agricultural population in the United States consists of well-functioning persons whose behavioral health waxes and wanes in response to the amount of stress that they experience. The other third of the aging agricultural population struggle with behavioral health issues. Long-term exposure to multiple stressors wears down coping capacity and results in build-up of behavioral health pathology. The behavioral health conditions manifested by the aging agricultural population include the following, listed in the order of their frequency of occurrence: interpersonal relationship problems (e.g., loss of spouse), adjustment disorders which develop in response to too many simultaneous stressors such as economic insufficiency and health concerns, depression, anxiety and addictive disorders. Substance abuse may accompany mental health pathology as a co-occurring disorder but substance misuse declines with age.

All of these problems usually respond well to therapeutic interventions and psychosocial supports, such as counseling, psychotropic medication, behavioral health management and informal supportive contacts with family and friends. Factors that reduce stress and

its negative consequences involve support from a web of connections among members of the extended family and the local community (Carson, Araquistain, Ide, Quoss, et al, 1994; Rettig, Danes and Bauer, 1991). Specific ethnic minorities, such as rural Hispanic males, lower paid employees in farming-related industries and persons who lack adequate social support networks (e.g., recent immigrants into the United States) are particularly likely to exhibit behavioral health conditions among the aged. As might be expected, the risks of behavioral health pathology, especially suicide, are similar to the risks for physical health injuries and illnesses among the aged; the chances of these undesired events increase with age, economic stress and exposure to many distressing events at once. If there is a general conclusion that can be reached, it is that there is a somewhat increased likelihood of behavioral health perils for about one-third of the aging agricultural population who are overwhelmed with stressors.

Factors that hamper the effective delivery of behavioral health services to the agricultural population, especially the aging agricultural population who have difficulty with transportation, are improving only slowly. Older people tend to be isolative, self-reliant and avoid seeking behavioral healthcare even when needed (Rost, Smith and Taylor, 1993; Roy, 2001). Lack of agricultural behavioral healthcare providers in rural areas who understand the culture of people engaged in farming and ranching is a serious contributing factor (Eberhardt, Ingram, Makuc, et al, 2001; Hartley, Bird and Dempsey, 1999; Hartley, Ziller, Loux, Gale, Lambert and Yousefian, 2007). As Hartley (2004) indicated, there is a pattern of environmental, cultural and economic factors that are unique to the agricultural community that suggest a higher risk for health disparity among persons engaged in agriculture. This conclusion certainly applies to the aging agricultural population.

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