Digging Deeper: A Closer Look at Mental Health in Rural Agricultural Communities

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Introduction

Stress is considered a stimulus or response to events an individual has experienced over an identified time frame, and has been correlated to the development of mental health issues such as anxiety and depression (Martin & Brantley, 2002). Extended work hours, physical labor, and high-risk situations all contribute to agriculture as being labeled a stress-filled occupation (Fraser, et al., 2005; Freeman, et al., 2008; Rudolphi et al., 2019). Rural families in agricultural communities are not only challenged by unique financial, legal, and emotional stressors, but weather, pests, disease, prices, and interest rates are also elements which may fluctuate without warning. These stressors are further compounded by the feeling of isolation created by the geographical and social distance found in rural areas (Fraser, et al., 2005; Rudolphi et al., 2019).

The research indicates that one in four people worldwide experience issues with their mental health annually (Hagen et al., 2019). Assuming farmers experience similar problems with their mental health at the same global rate, this would mean 25 percent of farmers worldwide are struggling with mental health annually (Hagen et al., 2019). Concomitantly, this number is likely underestimated considering existing evidence indicates that farmers experience mental illness at a higher rate than the general population (Hagen et al., 2019). What is more, "Farmers have also been more likely to report that life was not worth living than non-farmers" (Yazd et al., 2019, p. 1). Farmer mental health can potentially impact individual health, family life, farm productivity, and animal welfare (Hagen et al., 2019). Considering one third of individuals that contribute to the global economy do so through the agricultural industry, poor mental health can adversely impact economic productivity, animal health, and human health worldwide (Hagen et al., 2019). Ensuring the mental health of agricultural producers is essential for global health (Hagen et al., 2019)

Theoretical or Conceptual Framework

This research was viewed through the lens of Bronfenbrenner's ecological theory (Eriksson et al., 2018). The four elements of Bronfenbrenner's ecological theory, the microsystem, mesosystem, exosystem, and macrosystem are broken down via the assessment of regularly occurring activities and interactions with significant others. Bronfenbrenner's ecological theory examines how an individual's mental health is influenced by singular factors and the ecological systems surrounding a person, as well as interactions between and within these ecological systems (Eriksson et al., 2018).

Methodology

The purpose of this study was to evaluate the mental wellness of individuals involved in agricultural occupations as a result of the unique stressors related to the discipline. The descriptive – correlational study utilized treatments assigned to the characteristics (demographics) of the subjects rather than the subjects themselves. The target population was accessed through email lists provided by the Texas Wheat Producers and Board, Texas Pork Producers, and Texas Food Processors associations (N = 700). Data were collected through Qualtrics via the PHQ-9 (patient health) and GAD-7 (generalized anxiety disorder) 4-point Likert type questionnaires paired with demographics were analyzed using descriptive statistics (i.e. trends and tendencies, mean, standard deviation, frequency, and percentages) to accomplish

the research objectives. The GAD-7 comprises seven questions and is calculated by assigning scores of 0, 1, 2, and 3, to the response categories of "not at all," "several days," "more than half the days," and "nearly every day," respectively, with a total score range of 0 to 21. Total scores reflect minimal anxiety (0-4), mild anxiety (5-9), moderate anxiety (10-14), and severe anxiety (15-21). The PHQ-9 comprises 9 questions and utilizes the same response categories and score assignments as the GAD-7, for a total score range of 0-27. Total scores reflect minimal depression (0-4), mild depression (5-9), moderate depression (10-14), moderately severe depression (15-19), and severe depression (20-27). Statistical analysis for this study was completed using the Statistical Package for the Social Sciences analytic software SPSS 26.0 and Microsoft Excel 2019. Procedures documented by Dillman et al. (2009) web survey procedures for implementation guided the study.

Results/Findings

Objective one determined that the average participant was a married (74.6%), white (94.9%), male (79.7%), that was 55-64 years old (25.4%), holding a bachelor's degree (40.7%), with 10-49 acres (18.6%), and is the principal owner of their agricultural operation (71.2%). Objective two sought to assess the level of mental wellness of the participants using the GAD-7 and the PHQ-9 instruments to measure levels of anxiety and depression. Results of the GAD-7 survey indicated that 40.9% of participants (n = 44) experienced minimal anxiety, with 20.5% experiencing moderate to severe anxiety. Results of the PHQ-9 (n = 42) survey indicated 52.4% experienced minimal depression while 47.6% suffered depression levels ranging from mild (30.8%) to severe (2.4%).

Conclusions

It was concluded that the use the GAD-7 and the PHQ-9 instruments indicated alarming levels of anxiety and depression among [state] farmers and ranchers. The results of this study have the potential to influence how rural health care is approached and researched in the future. GAD-7 scores of the sample researched indicated that 59.1% (M = 6.29) met the criteria for Generalized Anxiety Disorder (GAD-7 $\geq$ 5), while 47.6% (M = 5.38) met the criteria for Major Depressive Disorder (PHQ-9 $\geq$ 5). These findings are supported by those of Rudolphi et al. (2019) indicating that the treatment of anxiety and depression is important to ensure health, wellness, safety, and productivity in the agricultural workforce.

Implications/Recommendations/Impact on Profession

The results of the study support the need for continued research in areas of rural mental health. Further enquiry should look at extending analysis by adding a stress instrument such as the PSS-10 - Perceived Stress Scale (Cohen & Williamson, 1988; Reis et al., 2010). This will assist in data analysis of subjects who would identify a stressor but might have been apprehensive about identifying a mental illness. Future development in implementation of prevention methods and interventions that target identifiers of mental illness in rural individuals should occur. This innovation could potentially impact educational programming in Texas A&M AgriLife Extension including: further agent training in mental health first aide, program development for prevention methods, and outreach efforts for communities across Texas.

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