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FARMER AND RANCHER SUICIDE: RAISING AWARENESS

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FARMER AND RANCHER SUICIDE: RAISING AWARENESS

by

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A Scholarly Project

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of the

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Approval Page

This Scholarly Project Paper, submitted by Noelle Rivard, MOTS and Krista Steinbeisser, MOTS in partial fulfillment of the requirement for the Degree of Master's of Occupational Therapy from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

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PERMISSION

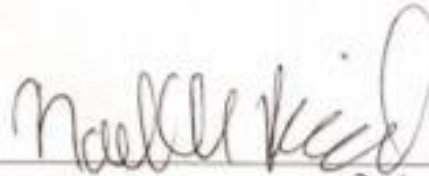
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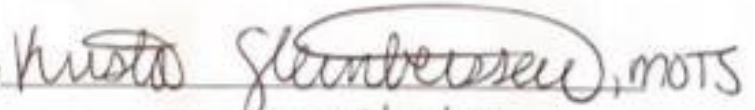
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ABSTRACT

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Suicide is death caused by self-directed, injurious behavior with the intent to die (National Institute of Mental Health [NIMH], 2019). This is a concerning public health issue, as it is the 10th leading cause of death in the United States (U.S.) (Hedegaard, Curtin, & Warner, 2018). Suicide rates vary between different populations, with the occupational group of Farming, Fishing, and Forestry having a disproportionately higher suicide rate than the national average (Jared, 2019; Peterson et al., 2018). Farmers and ranchers in rural regions of the U.S. are not receiving appropriate mental health services due to a shortage of health care providers (National Advisory Committee of Rural Health and Human Resources [NACRHHS], 2017). Despite the need for more health care providers to address this issue, the role of occupational therapy practitioners in suicide prevention and intervention is not clearly defined (Novalis, 2017).

Due to the uncertainty of occupational therapy's role in suicide prevention, there is a need to describe how the profession can contribute to this prevalent issue. The purpose of this project is to raise awareness of farmer and rancher suicide and occupational therapy's role in suicide prevention and intervention. A literature review was conducted to understand the precursors of farmer and rancher suicide, best practices in suicide prevention, and the skill set needed for occupational therapy practitioners to address suicide prevention and intervention. The information gathered from the literature

review and key concepts from the Ecology of Human Performance Model (Dunn, 2017; Dunn, Brown, & McGuigan, 1994) guided the development of the products.

The final products include four tables and two articles submitted for publication. Tables one and two include information on farmers and ranchers. The first table addresses the skills needed for farmers and ranchers to engage in farming, promote positive mental health, and prevent suicide-related behaviors. The second table identifies multiple strategies and dissemination methods to promote suicide prevention practices within this population. Tables three and four describe occupational therapy practitioners in suicide prevention and intervention. The first table addresses the skills needed for practitioners to screen for suicide. The second table describes strategies and dissemination methods to establish the role of practitioners in working with individuals at risk of suicide. These tables guided the development of two articles to raise awareness of suicide among farmers, ranchers, and occupational therapy practitioners.

Although raising awareness of suicide prevention and intervention is the purpose of this project, there are limitations. One limitation is that the dissemination of the products is unknown. Another limitation is that the transferability of suicide prevention and intervention to other allied health professionals is limited. These products help reduce the gap between occupational therapy practitioners providing suicide prevention services and individuals at risk of suicide. It is hoped that these products are utilized to promote suicide prevention in the occupational therapy profession, along with farmers and ranchers in the future.

CHAPTER I

Introduction

Suicide is a concerning public health issue in the United States. It is the 10th leading cause of death, totaling 47,000 people who died by suicide in 2017 (Hedegaard, Curtin, & Warner, 2018; National Institute of Mental Health [NIMH], 2019). Suicide affects all populations, although rural areas have a higher rate of suicide than urban areas (Ivey-Stephenson, Crosby, Jack, Haileyesus, & Kresnow-Sedacca, 2017). Within rural areas, there is an increasing prevalence of suicide among farmers and ranchers (Truchot & Andela, 2018; Scheyett, Bayakly, & Whitaker, 2019). This population experiences high stress due to having a lack of control over aspects of this job. This includes changing weather patterns, production costs, and legislative policies (Fraser et al., 2005; Schulze, Launden-Slager, & Coussons-Read, 2009; Truchot & Andela, 2018).

In addition to experiencing higher rates of suicide, farmers and ranchers do not have adequate access or availability of mental health services in rural areas (National Advisory Committee on Rural Health and Human Services [NACRHHS], 2017). According to Ross and Afayee (2019), 45% of individuals who died by suicide had contact with a primary care provider a month prior to dying by suicide. Although some individuals had contact with a primary care provider during this time period, only 19% of individuals who died by suicide had contact with a mental health provider (Ross & Afayee, 2019). Rural areas are currently experiencing a shortage of health care professionals that are qualified and trained to address mental health issues, such a suicide

(NACRHHS, 2017). Among these health care professionals are occupational therapy practitioners. Due to the lack of accessible mental health services in rural areas and the increased rate of farmer and rancher suicide, it is imperative for occupational therapy practitioners to practice suicide prevention and intervention.

Due to the complexity of suicide prevention, there are two populations of interest. One population that is targeted through this project is farmers and ranchers. This population is targeted through intervention strategies, such as positive coping strategies and social connectedness. The second population of interest is occupational therapy practitioners. This population is targeted through discussing suicide prevention and different screening tools. The application of the interventions mentioned above will be implemented through a variety of dissemination methods, which were developed in this project. If the interventions are not published, the interventions will be disseminated in another way to allow for application. The overall purpose of this project is to raise awareness of suicide among farmers, ranchers, and occupational therapy practitioners.

Model Guiding Scholarly Project

The Ecology of Human Performance (EHP) model (Dunn, 2017; Dunn, Brown, & McGuigan, 1994) was chosen to guide the creation of this project. The EHP model (Dunn, 2017) analyzes a person, group, or population through addressing the person, context, and tasks (Dunn, 2017). The interaction between these three constructs impacts an individual's performance range (Dunn, 2017). The performance range is defined as the number of tasks that a person has available to fulfill life roles (Dunn, 2017). A farmer or rancher's performance range could be increased from supportive factors, such as access to mental health services. In comparison, the performance range could be limited by the

inability to receive appropriate care. Within the EHP model (Dunn, 2017) there are five intervention approaches, which include: establish/restore, adapt/modify, alter, prevent, and create. Establish/restore is used to help individuals establish new skills or to restore skills that an individual lost (Dunn, 2017). The adapt/modify approach is used to change an individual's context and increase an individual's occupational engagement (Dunn, 2017). The alter approach involves providing a completely new context for an individual to engage in occupations (Dunn, 2017). The prevention approach is utilized to keep health problems or other unwanted circumstances from occurring (Dunn, 2017). The create intervention approach involves promoting positive interventions for all individuals to participate in (Dunn, 2017). This project focuses on using the establish/restore, adapt/modify, and prevent intervention approaches to address suicide among the two populations of interest (Dunn, 2017).

Key Terminology

The following terms are discussed throughout the scholarly project. Therefore, the terms are defined for clarification.

- **Extension office:** Services put in place to help members throughout a state or community by providing resources regarding social, health, and economic needs (Kaufman et al., 2017).
- **Farm:** Any place from which \$1,000 or more of agricultural products were produced and sold, and normally would have been sold during the year (United States Department of Agriculture [USDA], 2019c).
- **Farmer:** People who operate, own, or work on an agricultural enterprise involving livestock or crops (Scheyett et al., 2019).

- **Nonmetropolitan:** Nonmetropolitan areas include populations of less than 50,000 people. This category is broken down into micropolitan areas and noncore areas. Micropolitan areas have an urban cluster of more than 10,000 people and less than 50,000. Noncore counties lack urban clusters and are not part of metropolitan or micropolitan areas. The classification system for rural regions was designed by the National Center for Health Statistics (NCHS) and is used by the Centers for Disease Control and Prevention (CDC) to compare the health between rural and urban areas (National Center for Health Statistics, 2017; Ivey-Stephenson et al., 2017).
- **Occupational Therapy:** A profession that helps people across the lifespan to engage in the occupations they desire and need to do through the therapeutic use of daily activities (American Occupational Therapy Association [AOTA], 2014; AOTA, 2019).
- **Occupational Therapy Practitioners:** Occupational Therapy Practitioners are Occupational Therapists and Occupational Therapy Assistants (AOTA, 2014).
- **Rancher:** People who have a primary focus on the optimal care of animals (Eastman, 2018).
- **Rural:** Rural regions includes all areas outside of urbanized areas and urban clusters. Urban areas are 50,000 people and urban clusters are at least 2,500 and less than 50,000 people (United States Census Bureau, 2018).
- **Rural Allied Health Professionals:** Health care professionals who collaborate with physicians to provides services for identification, prevention, and treatment of disease, disability, and disorders (National Rural Health Association, 2008).

These professionals include: physical therapy, occupational therapy, clinical lab technicians, radiology technicians, respiratory therapists, and health information technicians (National Rural Health Association, 2008).

- **Stress:** The rate of all the wear and tear caused by life (Schulze et al., 2009).
- **Suicide:** Death caused by self-directed injurious behavior with intent to die (NIMH, 2019).
- **Suicide Attempt:** Non-fatal, self-directed, and injurious behavior with the intent to die that may not result in injury (NIMH, 2019).
- **Suicide Ideation:** Thinking about, considering, or planning suicide (NIMH, 2019).
- **Telehealth:** Using telecommunication technology to provide a variety of health services to different locations (Tarlow, Johnsons, & McCord, 2019).

This topic will be discussed more in detail in the remaining chapters. Chapter II is a comprehensive literature review that will explore suicide prevention with farmers, ranchers, and occupational therapy practitioners. Chapter III will describe the methodology used to design strategies that raise awareness of suicide in the two populations of interest. Chapter IV provides an overview of the products created and presents the products. Chapter V summarizes farmer and rancher suicide and the role of occupational therapy practitioners in suicide prevention. This chapter also provides limitations and recommendations for future research.

CHAPTER II

Literature Review

Suicide rates are increasing all over the world, but are especially concerning in the United States (U.S.) (Weir, 2019). Suicide has been the 10th leading cause of death in the U.S. since 2008 (Hedegaard, Curtin, & Warner, 2018). However, suicide rates have increased by 2% each year in the last decade (Hedegaard et al., 2018). According to the Center for Disease Control and Prevention (CDC) (2017), suicide became the second leading cause of death among individuals between the ages of 10-34 and the fourth leading cause among individuals between the ages of 35-54 in 2016. This shows that suicide rates have continued to rise throughout the U.S. (Hedegaard et al., 2018).

Along with the increase in suicide, it is important to know that suicide rates are impacted by sociodemographic factors (Ivey-Stephenson et al., 2017). These sociodemographic factors include age, gender, race/ethnicity, and population density (Ivey-Stephenson et al., 2017). For example, males are dying by suicide at higher rates than females in the U.S. (Ivey-Stephenson et al., 2017). It has also been found that individuals between the ages of 35-64 years have a higher risk of dying by suicide (Ringgenberg, Peek-Asa, Donham, & Ramirez, 2018; David-Ferdon et al., 2016). Among racial/ethnic groups in the U.S., research shows that American Indian/Alaska Native and non-Hispanic white populations are more susceptible to suicide (Ivey-Stephenson et al., 2017). The data on demographic factors and suicide patterns indicates that specific

populations need to be identified to address the prevalence of suicide in the U.S. (Ivey-Stephenson et al., 2017).

One of the specific populations that should be targeted are rural areas. The CDC conducted a study that found counties in nonmetropolitan/rural areas had higher suicide rates compared to urban or medium metropolitan areas (Ivey-Stephenson et al., 2017). In 2015, rural counties had an age-adjusted suicide rate of 17.6 compared to 12.5 among urban counties (NACRHHS, 2017). The data on urbanization reveals that a significant disparity between rural and urban suicide rates exists (NACRHHS, 2017). Within rural communities, there are individuals who are more vulnerable to suicide than others.

Suicide in Farmers and Ranchers

One vulnerable group of individuals within rural areas are farmers and ranchers. Throughout the U.S, there are 21.6 million jobs related agriculture (United States Department of Agriculture [USDA], 2019a). This makes up 11% of the total U.S. workforce (USDA, 2019a). According to the USDA (2019b) many farmers live within nonmetropolitan/rural areas. The study which showed rural communities have a higher rate of suicide highlights the need to address this issue in farmers and ranchers (Ivey-Stephenson et al., 2017).

The CDC reported that during 2000-2016, the suicide rates of the working age population increased by 34%, from 12.9 per 100,000 people to 17.3 per 100,000 people (Peterson et al., 2018). Literature has shown that the population of farmers and ranchers are at a higher risk of suicide due to the nature of the career (Fraser et al., 2005; Truchot & Andela, 2018). In 2015, the suicide rate for Farming, Fishing, and Forestry was 22.8 per 100,000 people, which is 1.5 times higher than the national average (Jared,

2019; Peterson et al., 2018). Due to the increased disparity of suicide rates in U.S. occupational groups, it is imperative to raise awareness of farmer and rancher suicide.

Precursors to Farmer and Rancher Suicide

There are many precursors and risk factors that are unique to farmer and rancher suicide. In addition, this population may experience general factors that contribute to the risk of suicide (CDC, 2019a). These risk factors are important to be aware of because the cause of suicide is not linear. According to the CDC (2019a), the following factors should be taken into consideration to reduce the high risk of suicide in farmers and ranchers:

Family history of suicide; family history of child maltreatment; previous suicide attempts; history of mental disorders, particularly clinical depression; history of alcohol and substance abuse; feelings of hopelessness; impulsive or aggressive tendencies; cultural and religious beliefs (e.g., belief that suicide is noble resolution of a personal dilemma); local epidemics of suicide; isolation, a feeling of being cut off from other people; barriers to accessing mental health treatment; loss (relational, social, work, or financial); physical illness; easy access to lethal methods; and unwillingness to seek help because of the stigma attached to mental health and substance abuse disorders or to suicidal thoughts.

For the purpose of this project, the precursors associated with farmer and rancher suicide were broken down into eight categories. These categories are: (a) Work Stress; (b) Financial Stress; (c) Family Stress; (d) Personal Stress; (e) Cultural Norms; (f) Access to Services; (g) Legislation; (h) Other.

Work Stress: Truchot and Andela (2018) conducted a study that assessed the stressors commonly experienced by French farmers. Although this study was based in

France, literature revealed that these stressors are also applicable to farmers and ranchers in the U.S. The researchers found that work stress within this population is caused by having a heavy workload, having an excess of physical work, and lacking time to complete tasks, rest, and participate in social/leisure activities (Truchot & Andela, 2018). In addition, farmers were found to work long hours and have increased time pressure in their jobs (Truchot & Andela, 2018).

Financial Stress: One reason why this population has high work stress may be due to the farming financial crisis in the U.S. (Scheyett et al., 2019). Financial Stress was further broken down in the literature as stress that is the result of job losses, decrease in sales, debt, and bankruptcy. Other financial stressors could include the reduction of financial margins, the cost of production being higher than the selling cost, and the instable market within the agricultural industry (Truchot & Andela 2018; Scheyett et al., 2019). Overall, farmers and ranchers in the U.S. experience significantly higher financial stress, due to the cost of running a farm/ranch while managing decreased sales and product prices.

Family Stress: The farming financial crisis in the U.S. causes many farmers to fear that they will be unable to provide for their family (Scheyett et al., 2019). This could cause farmers and ranchers to have elevated levels of family stress and tension. In addition to worrying about being the main financial provider, farmers may be fearful of finding a successor of the farm within the family (Scheyett et al., 2019; Truchot & Andela, 2018).

Personal Stress: Increased tension within the family could contribute to other personal stressors for farmers and ranchers. Literature found that this population is more

likely to experience conflicts with other family members and colleagues, poor family functioning, and relationship issues (Rayens & Reed, 2014; Scheyett et al., 2019; Truchot & Andela, 2018). Other personal stressors may include having a lack of social support, experiencing loss, and being diagnosed with chronic physical or mental health conditions (Crain et al., 2012; Polain, Berry, & Hoskin, 2011; Scheyett et al., 2019). Researchers found that one chronic health condition which is common in the farming and ranching population is depression (Crain et al., 2012; Polain et al., 2011). This condition is often a co-occurring diagnosis with other medical illnesses and is a precursor to suicide (NIMH, 2018). The cause of depression is unknown; however, some of the factors could include environment, family history, major life changes, trauma, and stress (NIMH, 2018; Fortney et al., 2007). Many of the factors that contribute to depression are correlated with the precursors to farmer and rancher suicide.

Cultural Norms: Although research has shown that farmers and ranchers continue to experience higher levels of stress, they are not asking for help (Fraser et al., 2005; Klingelschmidt et al., 2018). This is due to the cultural norms of farmers, ranchers, and rural communities (Fraser et al., 2005; Klingelschmidt et al., 2018). These cultural norms were identified as gender role expectations, masculinity, and stigma against mental health services (Fraser et al., 2005; Klingelschmidt et al., 2018). Farmers and ranchers also demonstrate poor help-seeking behaviors, such as being stoic and self-reliant (Fraser et al., 2005). Along with these behaviors, many farmers and ranchers use maladaptive coping strategies (Kunde, Kolves, Kelly, Reddy, & Leo, 2018). These coping strategies could involve avoiding feelings, being aggressive towards others, and consuming alcohol

or cannabis (Kunde et al., 2018). Fraser et al. (2005) stated that these factors are all barriers to proper mental health care.

Access to Services: Along with these barriers to care, farmers and ranchers commonly experience a lack of access to services (NACRHHS, 2017). This could be due to many individuals within this population living in a geographically isolated area (Truchot & Andela, 2018). Farmers and ranchers also encounter challenges to reach health care providers, such as long travel distances, poor roads, and unpredictable weather conditions. In addition, they may experience long wait times and expensive services in health care (Polain et al., 2011; Truchot & Andela, 2018). The long wait times experienced by this population could be caused by the health professional shortage and lack of availability of services in rural communities (NACRHHS, 2017). Rural communities are currently experiencing a shortage in behavioral health providers, which inhibits farmers and ranchers from seeking help for their stress and mental health concerns (Larson, Patterson, Garberson, & Andrilla, 2016).

Legislation: Another external factor associated with farmer and rancher suicide is legislation (Truchot & Andela, 2018). This population experiences legislation pressure due to dealing with new agricultural regulations or governmental policies, having to abide by safety standards, and being faced with global issues (Crain et al., 2012; Truchot & Andela, 2018). Constantly adapting to new standards and regulations could cause farmers and ranchers to worry about performing well in their job (Crain et al., 2012; Truchot & Andela, 2018). Therefore, legislation pressure enhances the stress experienced by this population.

Other: In addition to legislation pressure, the weather and environment are precursors to farmer and rancher suicide. This is due to the unpredictability of weather patterns and lack of control that farmers often have over their physical environments (Brigance, Mas, Sanchez, & Handal, 2018; Schulze et al., 2009; Truchot & Andela, 2018). Within this environment, farmers, and ranchers may be exposed to toxic substances and lethal means (Kunde et al., 2018). Klingelschmidt et al. (2018) found that high pesticide exposure was associated to a higher risk of psychiatric disorders and suicidal behaviors. In addition, Kunde et al. (2018) found that there is a relationship between firearm use and farmers. Higher firearm use could be due to the responsibility that some farmers have to end the lives of animals, which increases one's exposure to death (Klingelschmidt et al., 2018). The increased exposure to death and the prevalence of firearms within this population influences their perspective towards suicide (Klingelschmidt et al., 2018).

These dynamic precursors demonstrate why the farming and ranching population stand out among other occupational groups as having a higher risk of suicide. The rate of suicide among this population will continue to increase, unless these stressors and precursors are targeted. Therefore, being aware of these precursors will contribute to suicide prevention programs.

Best Practices for Suicide Prevention in Farmers and Ranchers

Due to suicide becoming a national public health issue, there are many rising opportunities to address suicide in the U.S. (Ross & Afayee, 2019). One national initiative that is increasing awareness of suicide prevention is *Healthy People 2020*. This initiative sets goals and guides federal, state, and local resources to improve the nation's

health (Bolin et al., 2015). *Healthy People 2020* aims to reduce the national suicide rate by 10% (U.S. Department of Health and Human Services, 2019). *Rural Healthy People 2020* is an additional initiative that focuses on health priorities for rural America. Based on a national survey of rural health stakeholders, the top 10 rural health priorities are mental health and mental disorders (Bolin et al., 2015). According to Ross and Afayee (2019), one of the primary federal resources addressing suicide prevention and Healthy People's goals is the U.S. Department of Health and Human Services (HHS). Another federal resource that addresses this public health issue is The Substance Abuse and Mental Health Services Administration (SAMHSA) (NACRHHS, 2017). The resources mentioned above manage programs, develop grants, and conduct research to discover the best practices in suicide prevention.

According to the SAMHSA's National Registry on Evidence-Based Programs and Practices, there are currently 24 evidence-based programs for suicide prevention that exist throughout the U.S. (NACRHHS, 2017). However, only 12 have been implemented in urban and rural communities (NACRHHS, 2017). The CDC's technical package of best practices for suicide prevention urges communities to focus on the following strategies: access and delivery of health care, protective environments, promoting connectedness, coping and problem-solving skills, identifying people at risk, and reducing the harm of suicide (Stone et al., 2017).

Access and Delivery of Health Care

One evidenced-based program that focuses on improving the accessibility of mental health care providers is the National Health Service Corps (Stone et al., 2017). This program offers clinicians financial rewards for working in Health Professional

Shortage Areas (HPSAs), such as many rural communities in the Mid-West (Stone et al., 2017). Researchers also found evidence to support the use of telephone support or telemental health services to reach geographically isolated populations (Van der Feltz-Cornelis et al., 2011). SAMHSA supports the National Suicide Prevention Lifeline, which is a telephone support organization that assists people who are in crisis and have suicidal ideation (Ross & Afayee, 2019). In addition, Tarlow, Johnson, & McCord (2019) conducted a study that concluded telemental health services were beneficial to reach rural areas. The barriers to care experienced by farmers and ranchers can be targeted by increasing access to services and mental health care providers.

Protective Environments

Along with the access and delivery of services in rural communities, the surrounding environment has the potential to impact a person's risk of suicide (Stone et al., 2017). To create protective environments and prevent suicide, evidence supports reducing access to lethal means, changing organizational policies or culture, and developing community-based policies that reduce substance abuse (Stone et al., 2017). Data from the National Vital Statistics System (NVSS) shows that 60% of all suicide deaths in rural communities were caused by firearms (Ivey-Stephenson et al., 2017). This rate is almost double that of the suicide rates caused by firearms in urban communities (Ivey-Stephenson et al., 2017). The University of Wisconsin Extension Service in Jackson County, WI developed a gun lock program which separated people at risk of suicide from easy access to firearms (Ross & Afayee, 2019; Stone et al., 2017). Research found that safe storage practices like this program protects communities from higher suicide rates (Stone et al., 2017). Shaping a positive environment to promote the health

and safety of rural communities may also impact suicide rates within the farming and ranching population.

Promoting Connectedness

To build a positive and protective environment against suicide, Stone et al. (2017) recommends focusing on promoting social connectedness and relationships between community members. Due to social isolation being a primary precursor in farmer and rancher suicide, prevention efforts should involve existing community resources and activities in rural areas (Truchot & Andela, 2018). *Sources of Strength* is one evidenced based program that helps communities foster conversations about suicide and mental health (Sources of Strength, 2019; Stone et al., 2017). This program originated in North Dakota and is based in the school system to promote help-seeking behaviors, healthy coping strategies, and positive communication with adults among all students (Sources of Strength, 2019). Research found that this program increased social connectedness between adults and students in the community (Stone et al., 2017). Programs that focus on social connectedness are appropriate for farmers and ranchers in order to address their maladaptive coping skills and poor help seeking behaviors (Fraser et al., 2005; Kunde et al., 2018).

Coping and Problem-Solving Skills

Promoting positive coping and problem-solving skills would also address maladaptive coping and responses to stress in the farming and rancher population. Most of the literature on coping and problem-solving skills targeted towards this population were located on state extension offices. Extension offices have a history of providing resources addressing health, social, and economic needs (Kaufman et al., 2017). The

following Mid-Western states extension offices were found to provide information specifically for coping and problem-solving skills: Iowa, Minnesota, North Dakota, South Dakota, Montana, and Wyoming. These extension offices also publish handouts and articles that assist with stress management (Brown, 2018; Tranel, Bentley, & Hall, 2019; University of Minnesota, 2017; University of Minnesota, 2019). Each extension office provides contact information, videos, and podcasts relating to specific areas of need for farmers (Brotherson, 2016; Brotherson, 2017; Fetsch, 2016a; Fetsch, 2016b; Fetsch, 2016c). Within each state's extension office, there are other resources that have been found or developed to assist this population.

Reitmeir (2019) identified coping and life skills as one of the primary protective factors against suicide. Along with the extension offices mentioned above, *The Safety Planning Intervention (SPI)* is a program that encourages individuals to deal with suicidal thoughts by utilizing internal coping strategies (Stanley & Brown, 2012). The Suicide Prevention Center and American Foundation for Suicide Prevention identified SPI as a best practice for suicide prevention (Stanley & Brown, 2012). Stanley and Brown (2012) suggests that employing internal coping strategies, such as going for a walk or listening to music, can help individuals who have a high risk of suicide feel in control of their thoughts. The life skills which are taught through this program have the potential to help the farming and ranching population successfully adapt to stress and other precursors to suicide (Stone et al., 2017).

Identifying People at Risk

In order to better identify people who are at risk of suicide among farmers and ranchers, Stone et al. (2017) recommends that communities focus on gatekeeper training,

crisis intervention, and treatment for vulnerable individuals. *Applied Suicide Intervention Skills Training (ASIST)* is a program that helps train counselors, emergency workers, and gatekeepers in the community to reach individuals who are at risk of suicide and connect them with the appropriate resources (Stone et al., 2017). Developing training sessions for gatekeepers in the community was identified in the literature as one of the best practices for suicide prevention (Van der Feltz-Cornelis et al., 2011).

According to Reitmeier (2019), there are serious and immediate risk behaviors that indicate a person may complete suicide and should seek help. Serious warning signs include talking about feeling trapped or being in pain, talking about being a burden to others, feeling isolated, being anxious, having disturbed sleep, experiencing mood swings, demonstrating agitated behavior, and demonstrating increased use of alcohol or drugs (Reitmeier, 2019). Immediate warning signs include talking about wanting to die, talking about feeling hopeless or having no reason to live, and looking for a way to kill oneself (Reitmeier, 2019). Being aware of these warning signs can help health care practitioners support a person in crisis. By training gatekeepers and service providers in suicide prevention and crisis intervention, more farmers and ranchers who are at risk of suicide can receive mental health services.

Reducing the Risk of Suicide

One way to promote the benefits of seeking mental health services to farmers and ranchers is through facilitating safe and professional discussions of suicide in the media. This technique was recommended in the literature in order to reduce the risk of suicide (David-Ferdon et al., 2016; Stone et al. 2017; Van der Feltz-Cornelis, 2011). This involves refraining from glorifying suicide, stating myths about suicide, and providing

detailed descriptions of methods that individuals have used to complete suicide (Novalis, 2017; Van der Feltz-Cornelis, 2011). According to Stone et al. (2017), health care practitioners can talk about suicide in a safe and responsible way by following the *Recommendations for Reporting on Suicide*. Before rural communities implement the suicide prevention programs mentioned above, more community members need to talk about suicide and its risk factors. The way in which health care practitioners discuss suicide is imperative to positively promote suicide prevention. In addition, this technique is important to use within the farming and ranching population, where the stigma against mental illness is high (Fraser et al., 2005).

Although suicide awareness and prevention programs are increasing throughout the U.S., the high rate of suicide continues to be a national priority (CDC, 2018). The CDC's technical package of best practices for suicide prevention was developed to help communities prioritize the most beneficial strategies to raise awareness of suicide (Stone et al., 2017). To prioritize these strategies for the farming and ranching population, health care practitioners must consider the following question: Who should be targeted and how should we target them with the best practices in suicide prevention?

Who is Targeted and How They are Targeted

There has been a shift in suicide prevention initiatives from focusing on individuals who have a mental health diagnosis to targeting communities and individuals across the lifespan (David-Ferdon et al., 2016). This is due to the fact that a wide variety of risk factors contributes to suicide and many individuals do not have a history of previous attempts (David-Ferdon et al., 2016). Therefore, this shift creates a need to implement a prevention-oriented approach and address vulnerable populations who may

be at risk of suicidal thinking (David-Ferdon et al., 2016). Based on the literature, it is important for suicide prevention initiatives to address rural communities and mental health concerns (Ross & Afayee, 2019). The main groups within rural communities that need to be targeted for suicide prevention are community members and allied health professionals.

Rural Communities

Research has continually stated that comprehensive, community-based suicide prevention programs are the best way to reach individuals in rural areas (Ross & Afayee, 2019). Community-based programs should focus on educating the general population and specific groups within the community, such as farmers and ranchers. This is done through identifying protective factors, risk factors, specific stressors, and general stressors for individuals in rural areas dying by suicide (Crain et al., 2012; Ivey-Stephenson et al., 2017). Community-based suicide prevention programs should also take ethnicity and population needs into consideration when implementing suicide prevention programs (Ivey-Stephenson et al., 2017). This would increase outreach to a wider population and address all circumstances associated with suicide in rural communities (David-Ferdon et al., 2016). In addition to training community members, successful suicide prevention efforts include health care and social service providers (Ross & Afayee, 2019). One health care profession that should be integrated with these efforts to foster a holistic and collaborative perspective are allied health professionals (National Rural Health Association, 2008; Ross & Afayee, 2019).

Rural Allied Health Providers

To implement a comprehensive, community-based suicide prevention program in rural communities, the gap in rural allied health professionals needs to be addressed. This gap is present in the number of health care professionals working in rural areas, as well as mental health practitioners (NACRHHS, 2017). In 2016, 65% of nonmetropolitan/rural areas had no psychiatrists and 47% had no psychologists (NACRHHS, 2017). As a result, farmers and ranchers have fewer accessible mental health professionals than metropolitan areas (NACRHHS, 2017). Although the shortage of mental health professionals has been documented through research, there is no consistent data on the shortage of rural allied health professionals (National Rural Health Association, 2008). However, more allied health professionals should be targeted in rural areas to extend health care services (National Rural Health Association, 2008). This is due to their ability to collaborate with members of the health care team and individuals within the community (National Rural Health Association, 2008). Allied health professionals are unique members of the health care team because they deliver health care services to prevent illnesses, such as depression and suicide (National Rural Health Association, 2008; T. Matthews, personal communication, June 24, 2019). Allied health professionals include physical therapy, occupational therapy, optometry, clinical laboratory science, radiology technicians, respiratory therapy, and dietetics (National Rural Health Association, 2008). The focus of this project is occupation therapy, due to the profession's ability to collaboratively address the complexities of individuals, groups, and populations (Novalis, 2017).

Rural OT and Suicide Prevention Efforts

Literature has shown that occupational therapy plays a unique role in rural areas due to the wide range of services they can provide (Boshoff & Hartshorne, 2008). Some of these services include rehabilitation, health promotion, community development, injury management, occupational health, and mental health services (Boshoff & Hartshorne, 2008). However, there may be only one occupational therapy provider within a rural area (Waite, 2015). Waite (2015) found that this could lead to therapists traveling up to hundreds of miles to provide services. With a variety of services provided to a large area, occupational therapists need a vast skill set to serve rural communities (Waite, 2015).

Along with the isolation frequently experienced by occupational therapists in rural areas, there are other challenges they encounter (Smallfield & Anderson, 2008). Some of the barriers that rural occupational therapists may experience include a wide range of clients and services provided, a lack of experience and up to date knowledge for diagnostic conditions specific to rural communities, and a high client-therapist ratio (Boshoff & Hartshorne, 2008; Smallfield & Anderson, 2008). Therapists may also be exposed to long waiting lists and limited human resources in practice (Boshoff & Hartshorne, 2008; Smallfield & Anderson, 2008). Due to the wide range of clients that occupational therapists will provide services to, they will encounter farmers and ranchers. Therefore, it is important for therapists to develop skills associated with the needs of the farming and ranching population (Smallfield & Anderson, 2008). Based on the rising mental health concerns among farmers and ranchers, there is an opportunity for occupational therapists to take a role in suicide prevention.

Occupational therapists can contribute towards suicide prevention initiatives and treat individuals at risk by utilizing the profession's holistic view of an individual (AOTA, 2014). Novalis (2017) suggested that occupational therapists maintain a holistic approach through the use of models, frames of references, and the *Occupational Therapy Practice Framework: Domain and Process* (3rd ed.; *Framework*; AOTA, 2014). These tools can guide therapists in developing interventions that identify and prevent risk factors of suicide (Gutman, 2005). The interventions that were found to be successful in the literature for suicide prevention include health maintenance, positive coping skills, stress management, and interventions that focus on self-identity, self-worth, and a balance in life roles. (Custer & Wassink, 1990; Roy, Tremblay, Robertson, & Houle, 2017; Mummert, Wilson, & Yancosek, 2014).

Gutman (2005) provided other suicide prevention interventions that occupational therapists can implement, such as client and family education. This will ensure that family members understand the symptoms and how to respond to the warning signs of suicide (Gutman, 2005). If individuals have an exacerbation of symptoms or demonstrate suicidal ideation, occupational therapists can help develop contingency plans (Gutman, 2005). These plans will help individuals and other health care professionals who are involved in their care determine an appropriate plan of action (Gutman, 2005; Novalis, 2017). The plan may include how to seek immediate care, set-up contacts in case of an emergency, and develop agreements with family and friends (Gutman, 2005).

Occupational therapists can specifically address the farmer and rancher population by utilizing one of the core pillars of occupational therapy, which is encouraging engagement in occupation (Hewitt, Boniface, & Belagamage, 2014; Novalis, 2017). By

gaining a stronger understanding of the meaning of farming, occupational therapists can help farmers and ranchers re-engage in roles and activities in their social and physical environments (Novalis, 2017). This strategy can increase an individual's self-esteem and self-worth, which have been identified as protective factors. Higher levels of self-esteem and self-worth have also been associated with lower levels of stress in the farmer and rancher population (Crain et al., 2012).

Although occupational therapists have the skill set to address many areas of need, there is a gap in providing suicide prevention services. This gap is a barrier to receiving care for populations that are more susceptible to suicide, such as farmers and ranchers. One factor that impedes occupational therapists from providing these services is the lack of confidence that many therapists have in addressing suicide prevention (Hewitt et al., 2014). Although there are a variety of general suicide prevention tools, occupational therapists lack training to provide suicide care within the scope of practice (Novalis, 2017).

Summary

Based on the information presented above, farmer and rancher suicide is a nationwide issue, especially in Mid-Western rural communities. Literature shows that there is disparity in suicide rates between the general population and the farmer and rancher population (Peterson et al., 2018). This occupational group is exposed to not only general risk factors of suicide, but many unique challenges and stressors. Other difficulties that this population faces include having a stigma against seeking mental health services, a shortage in health care professionals, and a lack of accessible services (NACRHHS, 2017). To combat these obstacles to proper care and the danger of suicide, many federal

programs have been developed to promote suicide prevention. Along with these initiatives, researchers have found that comprehensive, community-based programs are the most effective way to address suicide in rural communities.

Although the literature describes many suicide prevention programs, there is little research that focuses on farmers and ranchers in rural communities. There is also a shortage of service providers who are trained to identify and prevent suicide risk factors within this population. This includes a gap between suicide prevention services and rural allied health professionals, such as occupational therapists. However, there is a lack of literature that defines the role of occupational therapists and other allied health professionals in suicide prevention. Current assessments and interventions are not tailored to the skill sets of occupational therapists. In addition, these tools fail to address the unique characteristics and cultural context of the farmer and rancher population. As a result, there is an absence of tools that integrate a holistic and client-centered perspective of this population.

In order to foster comprehensive, community-based programs in rural communities, occupational therapists need a guide to identify and treat farmers and ranchers who are at risk of suicide. It is also essential to raise awareness and advocate for occupational therapy's role in suicide prevention and addressing the mental health concern of this population. This will ensure that occupational therapists foster change in the national suicide prevention initiative and serve the needs of farmers and ranchers.

Chapter II, Literature Review discussed the gap within suicide prevention services and the farmer and rancher population. Within the literature, the need to address the role of occupational therapy and other rural allied health professionals in suicide prevention

emerged. This will be utilized to develop an article that will raise awareness of the national crisis of suicide and highlight the opportunities for occupational therapy practitioners to play a role in suicide prevention. In addition, the literature will be applied to develop an article that will educate rural communities on the prevalence of farmer and rancher suicide and promote the use of suicide prevention interventions. The Ecology of Human Performance model (EHP) will be used to guide the development of these products. Chapter III, Methodology will describe the process of developing these products.

CHAPTER III

Methodology

The Chapter III Methodology describes the process of evaluating the literature on farmer and rancher suicide, explains the theory that informed the products, and details the procedures taken to develop the products. The authors of this project were inspired by current events in the news regarding the concerning rates of suicide among the farming and ranching population. These events led the authors to have an interest in examining the role of occupational therapy practitioners in suicide prevention and intervention. The authors of this project specifically wanted to focus on occupational therapists working with farmers and ranchers who may have suicidal ideation. Kashiwa, Sweetman, and Helgeson's (2017) article titled, "Occupational Therapy and Veteran Suicide: A Call to Action", also helped the authors recognize a need in the occupational therapy profession to increase awareness of suicide prevention and intervention.

From these initial phases of research, the authors conducted a literature review to identify the prevalence of suicide in the U.S., the risk factors that are associated with farmer and rancher suicide, the current best practices in suicide prevention, and the role of occupational therapy practitioners in suicide prevention. The terms "mental health," "farmers and ranchers," "suicide," "rural health", and "occupational therapy and suicide" were searched using the databases CINAHL, Google Scholar, OT Search, PsychInfo, and SOCIndex. In addition, the authors of this project searched the websites of extension

offices to find current suicide prevention resources for the farming and ranching population in the following Midwestern states: Iowa, Minnesota, North Dakota, South Dakota, Montana, and Wyoming. Key terms guided the search for resources on these websites, including “suicide and farmers,” “stress,” “mental health,” “farmer suicide,” “depression,” “coping and stress,” and “farming and ranching.” Through this literature search, the authors contacted Ted Matthews, who is a Rural Mental Health Counselor for farmers and ranchers across the state of Minnesota (University of Minnesota, 2019). The authors of this project spoke with Ted Matthews regarding his experience in helping this population deal with mental health issues. He also discussed the importance of developing strong relationships with rural community members to raise awareness of suicide prevention. After conducting the literature review, the authors of this project discovered that there is a lack of mental health services and a shortage of behavioral health providers in rural communities (NACRHHS, 2017). In addition, scarce literature was found to clearly define the role of occupational therapy practitioners in suicide prevention.

Occupation-Based Model

The authors of this project considered using the following occupation-based models to further analyze the problems that emerged during the literature review: The Model of Human Occupation (Clifford O’Brien, 2017), the Person-Environment-Occupation Model (Baptiste, 2017), The Canadian Model of Occupational Performance and Engagement (Turpin & Iwama, 2011), and the Ecology of Human Performance (EHP) Model (Dunn, 2017).

The EHP Model (Dunn, 2017) was chosen to analyze the information gained from the literature review and guide the development of the product. This model was developed by faculty of the Occupational Therapy Education Department at the University of Kansas Medical Center to guide therapists in considering how the context influences an individual's behavior (Dunn, 2017). The EHP model (Dunn, 2017) provides a framework to evaluate the relationships between the person, context, and task to understand occupational performance (Dunn, 2017). Occupational performance is described as performance range in this model, which is the number of tasks or observable behaviors available to the person (Dunn, 2017). The performance range can either be increased or decreased based on the interaction between the individual's context and personal factors (Dunn, 2017). According to this model, it is "impossible to understand the person without also understanding the person's context" (Dunn, 2017, pg. 217). The EHP model (Dunn, 2017) defines contexts as conditions that surround the person, including temporal, physical, social, and cultural factors. The person consists of past experiences, values, interests, and skills (Dunn, 2017).

The core concepts of the EHP model (Dunn, 2017) closely aligns with the literature that the authors of this project found on farmer and rancher suicide. Literature shows that the farming and ranching population is commonly affected by pressures from the work, family, and community context (Truchot & Andela, 2018). The EHP model (Dunn, 2017) allows the authors of this project to view the concerning rates of suicide among farmers and ranchers with a holistic lens that considers the entire situation (Dunn, 2017). This model also provides five intervention strategies to help consider the contextual features of when, where, and how suicide prevention can be implemented to

target both farmers and ranchers and occupational therapy practitioners (Dunn, 2017). In addition, this model was chosen because it facilitates outreach to programs that integrate community-based, consumer-driven, and health promotion practices (Dunn, 2017).

The authors of the project organized the information from the literature review into the main constructs of the EHP model (Dunn, 2017), including the person, task, context, and performance range. This information was categorized into two tables. One table evaluates farmers and ranchers at risk of suicide and the second table analyzes occupational therapy practitioners in suicide prevention. Information relating to the person in both tables included sensorimotor, cognitive, and psychosocial factors (Dunn, 2017). The tasks in accordance with farmers and ranchers were broken down into subtasks under job performance, health maintenance, financial management, home management, and social participation (AOTA, 2014). The tasks relating to occupational therapy practitioners in suicide prevention and intervention included best practices for care, along with standardized suicide screening tools commonly used in health care settings. Intervention strategies were identified in each table for farmers and ranchers and occupational therapy practitioners.

Based on the EHP intervention strategies (Dunn, 2017), the authors of this project selected several dissemination methods. These intervention strategies are potential ways that an individual can increase his/her performance range. The authors of this project prioritized the dissemination of information to raise awareness of suicide when choosing the product to develop. In total, three options for a product were considered. The first option discussed was to develop two separate articles. One article would target occupational therapy practitioners in the national practice magazine and the other article

would focus on farmers and ranchers through newspapers in rural communities. The authors also considered developing an article that would highlight best practices in suicide prevention in an evidence-based journal. In addition to this article, the authors would develop a toolbox that identifies standardized suicide screening tools for rural allied health providers. The third option that was considered involved creating a workshop that educated and trained rural allied health providers on suicide prevention and intervention. After discussing these options, the authors of this project ruled out the idea to develop an article in an evidenced-based journal and toolbox. The information from the literature review showed that although there is a variety of resources and publications on suicide prevention, people are unaware of where to find this information. The authors believed that this option would not reach a wide audience or meet the goal of sharing information on suicide prevention. The option of developing a workshop for rural allied health providers was ruled out, as there are many existing workshops on suicide prevention. Therefore, the authors of this project decided to develop two separate articles that would expand outreach to both farmers and ranchers in rural communities and occupational therapy practitioners.

Product Selection Process

Prior to writing the article for occupational therapy practitioners, the authors of this project contacted the editor of *OT Practice* magazine. This was to inquire about the editor's interest in an article that highlights suicide as a public health issue and describes the role of practitioners in suicide prevention and intervention. The editor of this magazine expressed interest in the article, as it was a unique topic to include in the magazine. The table that described occupational therapy practitioners in suicide

prevention in accordance with the EHP model (Dunn, 2017) guided the development of this article. Literature states that although there are resources for suicide prevention, many practitioners are unsure of how to find these resources. Therefore, this product was chosen to raise awareness of occupational therapy's role in suicide prevention and intervention.

As another product, the authors of this project contacted the Center for Rural Health at the University of North Dakota, School of Medicine and Health Sciences. This step was completed to determine if there was a project available to address suicide in rural communities. A correspondent from this office reported that there was currently no programs or projects open for collaboration. Following this notice, the authors contacted Stacy Kusler and Dr. Kay Miller Temple from the North Dakota Targeted Rural Health Education Project (TRHE) to inquire about writing an article to raise awareness of suicide in rural communities. After Stacy Kusler and Dr. Kay Miller Temple showed interest in this article, the authors of the project consulted with Dr. Kay Miller Temple to develop an article that addressed connectedness and positive coping skills for farmers and ranchers. The authors of this project decided to publish this article in the Sidney, Montana newspaper, as the state of Montana has one of the highest age-adjusted death rates for suicide (CDC, 2019b). To assist in the development of this article, the table that described farmers and ranchers at risk of suicide was utilized. The authors of this project wrote the article to highlight the concerning rates of suicide in this population and provide techniques to manage the precursors of farmer and rancher suicide.

Chapter III Methodology discussed the theory and processes that guided the development of the articles for occupational therapy practitioners and farmers and

ranchers. The primary goals of these products are to disseminate information and raise awareness of suicide prevention to a wide audience. Chapter IV Product includes the introduction and description of the finalized products.

CHAPTER IV

Product

Chapter IV Product presents the products created from the analysis of literature on suicide prevention programs, suicide prevention in occupational therapy, and suicide prevention in rural health, with emphasis on the farming and ranching population. Two of the products presented are tables guided by the Ecology of Human Performance (EHP) model (Dunn, 2017). This model is appropriate to use, due to the ability of the model to be used across practice. Table 1 *Farmers, Ranchers, and Risk of Suicide* includes information for farmers and ranchers to prevent suicide and promote positive mental health. Table 1 was used to guide the writing of an article for the Sidney, MT newspaper. This was chosen in order to provide education on coping strategies and suicide prevention in rural communities, targeting farmers and ranchers. Table 3 *OT Practitioner's Role of Screening for Suicide* includes information on suicide prevention and intervention in the occupational therapy scope of practice. Table 3 was used to guide the development of an article for the *OT Practice Magazine*.

The first product is Table 1, which analyzes farmer and rancher suicide through the lens of the EHP model (Dunn, 2017). This table is broken down into the person, task, context, and performance range. Within the person category, the skills and abilities that farmers and ranchers need to successfully engage in the role of a worker are identified. The task category identifies subtasks of farmers and ranchers. The third category in this table, which is context, includes information on the temporal, physical, cultural, and

social factors surrounding farmers and ranchers. These categories demonstrate what factors increase or decrease the performance range for farmers or ranchers. Table 2 *Suicide Prevention and Intervention Strategies for Farmers and Ranchers* includes goals based on the factors which were identified to decrease the performance range. These goals align with the following intervention approaches from the EHP model (Dunn, 2017): establish/restore, adapt/modify, and prevent. Additional strategies that can be considered for dissemination of the information in this table are provided.

Based on the methods of dissemination that emerged in Table 2, the authors of this project developed an article to educate a rural community on the concerning rates of farmer and rancher suicide. This article provides statistics showing that farmer and rancher suicide is a concerning issue. The article also provides information on positive coping strategies and how to promote social connectedness in farmers and ranchers. Due to copyright laws, the article is not included in the product and can be provided upon request.

The second product is Table 3, which is based on the occupational therapy practitioner's role of screening for suicide. Like the previous table, this product is broken down into the person, task, context, and performance range. Within the person category, the skills that occupational therapy practitioners need to perform in suicide prevention and intervention are identified. The task category includes subtasks that must be performed to meet the needed skills in this area of practice. Commonly used suicide screening tools are also identified in this category. The context category describes the physical, temporal, cultural, and social factors that impact the occupational therapy practitioner's performance in suicide prevention and intervention. These categories

demonstrate what factors increase or decrease the performance range for occupational therapy practitioners. Table 4 *Suicide Prevention and Intervention Strategies for OT Practitioners* consists of goals that relate to the occupational therapy practitioner's role of screening for suicide. These goals are organized into the establish/restore, adapt/modify, and prevent intervention approaches from the EHP model (Dunn, 2017). Based on the goals and intervention approaches, the authors of this project identified strategies and methods for dissemination.

The authors of this project used the findings from Table 3 and Table 4 to inform the article for *OT Practice Magazine*. This article includes information on the prevalence of suicide, the role of occupational therapy practitioners in suicide prevention and intervention, and case studies demonstrating how to screen for suicide. Like the article for farmers and ranchers, this article is not included in the product. However, it can be provided upon request.

Table 1
Farmers, Ranchers, and Risk of Suicide

EHP Core Constructs	Farmers, Ranchers, and Risk of Suicide
<i>Person</i>	<p><i>Definition:</i> The person contributes a unique set of past experiences, values, interests, and skills, such as sensorimotor, psychosocial, and cognitive skills (Dunn, 2017). For the purposes of this table, the person is a farmer or rancher.</p> <p>Farmers make up 11% of the total workforce in the U.S. (USDA, 2019a).</p> <p>Skill Set needed for Farmers and Ranchers:</p> <ul style="list-style-type: none"> • Farming experience/years farmed (Hissong & Wilhite, 2008) • Experiences with equipment • Experiences with raising animals and growing crops • History of injuries (Hildebrand, 2015) • Experiences with family and friends • Exposure to death and injury (Klingelschmidt et al., 2018) <p><i>Sensorimotor and Cognitive Factors:</i></p> <ul style="list-style-type: none"> • Chronic or physical injuries (Hildebrand, 2015; Scheyett et al., 2019) • Maintaining physical workload (Truchot & Andela, 2018) • Remembering what crops are in each field • Remembering how to use and fix all equipment • Remembering how to care for crops • Loans/math/cost/selling price (Truchot & Andela, 2018) • Utilizing critical reasoning skills to solve problems (Minnesota State CAREERwise, 2019) • Effectively conveying information to others (Minnesota State CAREERwise, 2019)

	<ul style="list-style-type: none"> • Managing people to prevent relationship tension (Minnesota State CAREERwise, 2019) • Managing time to complete job tasks well (Minnesota State CAREERwise, 2019; Truchot & Andela, 2018) • Being aware of others’ reactions (Minnesota State CAREERwise, 2019) • Making decisions (Minnesota State CAREERwise, 2019) • Assessing performance (Minnesota State CAREERwise, 2019) <p><i>Psychosocial Factors:</i></p> <ul style="list-style-type: none"> • Feelings of hopelessness • Work stress and family stress (Schulze et al., 2009) • Adjustment problems due to high level of stress, such as anxiety • Excessive worry or panic (Truchot & Andela, 2018) • Hypothalamic-pituitary-adrenal (HPA) dysregulation in chronic stress and depression leads to higher cortisol levels (Schulze et al., 2009) • Irritability and aggressive behavior (Polain et al., 2011) • Depression and other mental health disorders (CDC, 2019a; Polain et al., 2011) <p>The occupational group of Farming, Fishing, and Forestry had a suicide rate that was 1.5 times higher than the national average in 2015 (Jared, 2019; Peterson et al., 2018).</p>
Task	<p><i>Definition:</i> Observable behaviors that allow individuals to achieve a goal (Dunn, 2017). Farmers and ranchers must perform a variety of tasks that are required to fulfill their role as workers.</p> <p>Farmers and ranchers are at a higher risk of suicide due to the nature of the career (Jared, 2019; Truchot & Andela, 2018). The following tasks are associated with positive mental health to prevent suicidal ideation:</p>

Subtasks:

- Job Performance (AOTA, 2014)
 - Efficiently raising livestock, crops, and managing harvests (Hissong & Wilhite, 2008)
 - Maintaining equipment (Hissong & Wilhite, 2008)
 - Maintaining up-keep of land (Hissong & Wilhite, 2008)
 - Adapting to weather changes (Truchot & Andela, 2018)
 - Following and understanding changes in policies and regulations (Truchot & Andela, 2018)
 - Obtaining other jobs off the farm (USDA, 2008)
 - Managing the farmer's or rancher's daily work schedule (Truchot & Andela, 2018)
 - Breaking down tasks and taking rest breaks (Truchot & Andela, 2018)

- Financial Management and Bookkeeping (AOTA 2014; Hissong & Wilhite, 2008)
 - Repaying loans
 - Contracting loans
 - Planning for market instability/market costs (Truchot & Andela, 2018)
 - Managing family inheritance (Fraser et al., 2005)

- Health Management (AOTA, 2014)
 - Managing chronic disease (Scheyett et al., 2019)
 - Maintaining the mind/body/spirit (Hissong & Wilhite, 2008)
 - Establishing and maintaining medication routines (AOTA, 2014)
 - Decreasing health risk behaviors (AOTA, 2014)
 - Decreasing alcohol and substance use (Kunde et al., 2018)

- Home Management (AOTA, 2014)
 - Maintaining the home (AOTA, 2014)
 - Knowing who and where to seek help (AOTA, 2014)

	<ul style="list-style-type: none"> ○ Balancing roles in work, family, and the home (Fraser et al., 2005) ○ Caring for children (AOTA, 2014) ● Social Participation (AOTA, 2014) <ul style="list-style-type: none"> ○ Maintaining positive communication and relationships with colleagues, friends, and family members (Truchot & Andela, 2018; Scheyett et al., 2019)
Context	<p><i>Definition:</i> A variety of interrelated conditions that surround the person (Dunn, 2017).</p> <p>Many farmers and ranchers live in rural areas, which provides a unique set of contexts compared to other geographic areas (USDA, 2019b). The following contextual aspects impact a farmer’s or rancher’s ability to perform tasks.</p> <p><i>Physical:</i></p> <ul style="list-style-type: none"> ● Access to care (NACRHHS, 2017) ● Resources in the rural community ● Protective environments (Stone et al., 2017) ● Geographic isolation (Brigance et al., 2018) ● Distances (Waite, 2015) ● Transportation (Waite, 2015) ● Weather patterns (Truchot & Andela, 2018) ● Shops and equipment ● Fields and land on the farm <p><i>Temporal:</i></p> <ul style="list-style-type: none"> ● Time of year (Hissong & Wilhite, 2008) ● Age (35-64 years) (CDC, 2017) ● Developmental stage of life

- Levinson's *Midlife transition, middle adulthood, and late life transition*- "Midlife crisis" (Cole & Tufano, 2008)
- Erickson's *Generativity versus stagnation*- Middle adulthood (Cole & Tufano, 2008)
- Time frame of increased mental health concerns and stress (Ex: Stress may increase during harvest season) (Hissong & Wilhite, 2008)
- Life cycle or life phase
 - Transitions in career
- Health status
 - Place in the continuum of chronic injury or mental illness (Dunn, 2017)

Cultural:

- Stigma against mental health (Fraser et al., 2005)
- Traditional gender role expectations (Fraser et al., 2005)
- Alcohol and substance abuse (Fraser et al., 2005)
- Family expectations (Fraser et al., 2005)
- Communities valuing masculinity and being stoic (Fraser et al., 2005)

Social:

- Family members and their role on the farm
- Friends
- Colleagues
- Community members
 - City council members
 - Church members
 - School board members
 - Livestock yard workers
- Knowing everyone in the community
- Decreased opportunities for social participation (Truchot & Andela, 2018)

***Performance
Range***

Definition: The number of tasks available to the person based on the interaction between the person, task, and context (Dunn, 2017).

Factors that Decrease the Performance Range

- The farmer or rancher may be unable to cope with high levels of stress, which leads to them being unable to fulfill the meaningful tasks included in the role of a worker.
- Access to mental health or transportation services is limited in rural communities, which leads to farmers being unable to manage mental health issues.
- Stigma against mental illness in rural communities influences the farmer's experiences in seeking mental health services.

Factors that Increase the Performance Range

- Farmers and ranchers live in communities with strong social support, which impacts the ability to maintain positive mental health.

Table 2

Suicide Prevention and Intervention Strategies for Farmers and Ranchers

Intervention Approaches	Strategies and Dissemination
<p><i>Establish/Restore</i> Definition: Improving personal skills (Dunn, 2017). Establishing skills involves building skills that have not been developed and restoring skills involves skills that have been impaired (AOTA, 2014).</p> <p><i>Goals:</i></p> <ul style="list-style-type: none"> • Farmers and ranchers will use healthy coping strategies to decrease health risk behaviors (AOTA, 2014) • Farmers and ranchers will manage daily work schedules by taking rest breaks (Truchot & Andela, 2018) • Farmers and ranchers will learn who and where to seek help for emotional distress (AOTA, 2014) • Farmers and ranchers will manage financial pressures by learning how to plan market instability and annual expenditures (Truchot & Andela, 2018) • Farmers and ranchers will establish health management routines to maintain the mind/body/spirit (Hissong & Wilhite, 2008) 	<p>Strategies:</p> <ul style="list-style-type: none"> • Develop healthy coping strategies for farmers and ranchers to deal with work and personal stress (Stone et al., 2017) • Establish a plan to help farmers and ranchers manage debt and personal loans (Johnson, 2019) • Develop effective time management skills between work and family life with farmers and ranchers • Collaborate with farmers and ranchers to build effective problem solving and decision-making skills (Brotherson, 2017) • Collaborate with farmers, ranchers, and their families to establish health management routines that target risk factors for suicide (Gutman, 2005) <p>Dissemination Methods:</p> <ul style="list-style-type: none"> • Sharing information that is created by state extension offices with farmers and ranchers • Educate farmers and ranchers on health care providers that provide a variety of mental health services and where they are located • Writing articles addressing positive coping strategies for farmers, ranchers, and rural communities in local newspapers and magazines

Adapt/Modify

Definition: Changing aspects of the context or adjusting parts of the task to support an individual's performance in their meaningful roles (Dunn, 2017).

Goals:

- Farmers and ranchers will modify their work schedules to implement more rest breaks (Truchot & Andela, 2018)
- Farmers and ranchers will modify daily routines for health and wellness by managing chronic diseases (Scheyett et al., 2019)
- Farmers and ranchers will learn about seeking services through telehealth (Tarlow et al., 2019)
- Farmers and ranchers will learn how to modify the use and storage of weapons to increase safety (Stone et al., 2017)

Strategies:

- Modifying a farmer's work schedule to allow time for rest breaks (Truchot & Andela, 2018)
- Have the farmer seek medical providers via telehealth systems (Tarlow et al., 2019)
- Change how firearms are stored in the rural community (Stone et al., 2017)
- Collaborate with farmers and ranchers to incorporate chronic disease management techniques into their daily routines (Scheyett et al., 2019)

Dissemination methods:

- Educational workshops in rural communities on safe practices for storing firearms and other weapons (Stone et al., 2017)
- Provide tools for modifying daily routines to deal with stress and other chronic diseases through extension services (Brotherson, 2017)
- Offer educational workshops and resources in rural communities that address the benefits of and how to utilize telehealth

Prevent

Definition: Preventing negative outcomes by targeting person, context, or task factors (Dunn, 2017).

Goals:

- Farmers and ranchers will maintain positive communication and relationships with colleagues, friends, and family members (Truchot & Andela, 2018; Scheyett et al., 2019)
- Farmers and ranchers will learn about the effects of health risk behaviors to reduce substance abuse (Stone et al., 2017)
- Farmers and ranchers will recognize warning signs and indicators to seek mental health services (Gutman, 2005)
- Farmers and ranchers will identify who they can contact during times of emotional distress (Gutman, 2005)
- Farmers and ranchers will learn about resources to manage personal and work-related stress

Strategies:

- Teach community members the warning signs for suicide to identify farmers and ranchers who are at risk of suicide (Stone et al., 2017)
- Educate farmers and ranchers on health risk behaviors to reduce substance abuse (Stone et al., 2017)
- Have the farmer or rancher develop contingency plans to seek immediate care in an emergency (Gutman, 2005)
- Encourage the farmer or rancher to utilize extension office resources for guidance with work-related tasks and stress management

Dissemination methods:

- Educational workshops in rural communities with information on the warning signs of suicide and how to respond
- **Writing articles addressing social connectedness among farmers, ranchers, and rural community members in local newspapers and magazines**
- Sharing information on stress management from extension office services (Brotherson, 2016)

<p><i>Create</i> Definition: Making circumstances needed to have optimal performance for all populations and persons (Dunn, 2017)</p> <p>This intervention strategy is not appropriate due to the emphasized focus on individuals who are currently experiencing suicidal ideation or have an increased risk of experiencing suicidal ideation.</p>	
<p><i>Alter</i> Definition: Identifying what aspects of the persons context promote engagement and match activity demands and moving to the context that is optimal (Dunn, 2017).</p> <p>This intervention strategy is not appropriate, because farmers would need to transition to a new context in order to promote positive mental health and match their unique skills, experiences, and abilities.</p>	

Note. Bold font were the selected products

Table 3

OT Practitioner’s Role of Screening for Suicide

EHP Core Constructs	OT Practitioner’s Role of Screening for Suicide
<i>Person</i>	<p><i>Definition:</i> The person contributes a unique set of past experiences, values, interests, and skills, such as sensorimotor, psychosocial, and cognitive skills (Dunn, 2017). For the purpose of this table, the person is an occupational therapy (OT) practitioner, including occupational therapists and occupational therapy assistants (AOTA, 2014).</p> <p>OT Practitioners enable people of all ages to live life to the fullest by helping them promote health and prevent injury, illness, or disability (AOTA, 2019).</p> <p>Currently, there are 134,000 jobs related to occupational therapy in the United States (U.S. Department of Labor, Bureau of Labor Statistics, 2019).</p> <p>Skill Set needed for OT Practitioners in Suicide Prevention:</p> <p><i>Sensorimotor and Cognitive Factors:</i></p> <ul style="list-style-type: none"> • Being aware of how to holistically address the client in practice (Hewitt et al., 2014) • Assessing the impact of mental health in client interactions (Hewitt et al., 2014) • Effectively considering the dynamic interactions of the environment, culture, occupation, and personal life roles of the client (Novalis, 2017) • Accurately analyzing meaningful activities of the client • Remembering to gather information on occupations that are unique to the client (Work, health management & maintenance, sleep/rest, social participation) (AOTA, 2014; Hewitt et al., 2014) • Providing guidance to clients on how to develop awareness of the self, knowledge, health, and wellness (Novalis, 2017) • Utilizing training and expertise to help clients re-engage in meaningful life roles (Novalis, 2017)

	<ul style="list-style-type: none"> • Teaching skills (coping and problem-solving skills) to prevent disability and enhance the quality of occupational performance (AOTA, 2014; Kashiwa et al., 2017) • Being aware of screening tools to identify individuals who may have suicidal ideation (National Action Alliance of Suicide Prevention, 2018) • Knowing how to respond in emergency situations with individuals who may have suicidal ideation (National Action Alliance of Suicide Prevention, 2018) • Pre-service training standards by the Accreditation Council for Occupational Therapy Education (ACOTE) do not require that suicide prevention and intervention are addressed (AOTA, 2018a) • There is a lack of training to provide suicide prevention and intervention services within the scope of OT practice (Novalis, 2017) • Continuing education and training are determined by the agency or the practitioner’s desire to gain more knowledge on suicide prevention <p><i>Psychosocial:</i></p> <ul style="list-style-type: none"> • Listen empathetically when interacting with clients (Gutman, 2005) • Build trusting therapeutic relationships with clients and families (AOTA, 2014; Novalis, 2017)
Task	<p><i>Definition:</i> Observable behaviors that allow individuals to achieve a goal (Dunn, 2017). For the purpose of this table, the primary task for the OT practitioner will be to implement best practices in suicide prevention and intervention.</p> <p><i>Subtasks:</i></p> <ul style="list-style-type: none"> • Identifying people at risk of dying by suicide (Novalis, 2017) • Determining the severity of suicide risk for clients during the evaluation (Gutman, 2005) • Responding to warnings signs and symptoms of suicidal ideation (Gutman, 2005) • Educating the client and family on symptoms of depression and suicidal ideation (Novalis, 2017) • Referring clients to providers within an interprofessional team in the community • Advocating for programs and initiatives that support suicide prevention awareness in the community (Novalis, 2017)

- Interacting with clients and families to identify barriers to positive engagement in occupations during the evaluation (Kashiwa et al., 2017)
- Developing interventions to help clients participate in meaningful occupations (Novalis, 2017)
- Following protocols for emergency situations (National Action Alliance of Suicide Prevention, 2018)
- Maintaining positive relationships with clients who demonstrate suicidal thinking and behaviors (Gutman, 2005)
- Documenting a client's actions and the practitioner's response (Novalis, 2017)

Tools Used to Measure the Risk of Suicide:

- Columbia Suicide Severity Rating Scale (C-SSRS): This protocol is a risk assessment that consists of "yes" or "no" questions regarding suicidal ideation (The Columbia Lighthouse Project, 2019). Practitioners will use this screening tool to identify individuals who are at risk of completing suicide and the severity of this risk (The Columbia Lighthouse Project, 2019). The C-SSRS is offered in many versions for different communities and health care settings (The Columbia Lighthouse Project, 2019).
- Patient Health Questionnaire-9 (PHQ-9): The PHQ-9 is a screening tool that practitioners can use to determine the severity of depression in clients (National Action Alliance for Suicide Prevention, 2018; Patient Health Questionnaire Screeners, 2019). This screening tool consists of 9 questions. The last question addresses suicidal ideation (National Action Alliance for Suicide Prevention, 2018)
- SAFE-T Pocket Card: The SAFE-T Pocket Card is a five-step evaluation that assesses an individual for suicidal ideation (Substance Abuse and Mental Health Services Administration [SAMHSA], 2019). This assessment includes identifying risk factors and protective factors, conducting suicide inquiry, determining risk level and interventions, and documenting a treatment plan (SAMHSA, 2019). This evaluation was created by SAMHSA and is offered in a variety of forms, such as a PDF or mobile app (SAMHSA, 2019).

	<ul style="list-style-type: none"> • <u>Behavioral Health Measure-10 (BHM-10)</u>: The BHM-10 is a 10-item assessment tool that assesses an individual's depressions, anxiety, and overall life function (National Action Alliance for Suicide Prevention, 2018). There is a free, paper version of this screening tool (National Action Alliance for Suicide Prevention, 2018).
Context	<p><i>Definition:</i> A variety of interrelated conditions that surround the person (Dunn, 2017).</p> <p><i>Physical:</i> According to the <i>2015 AOTA Workforce Study</i>, most occupational therapists work in long-term care facilities (LTC), hospitals, or schools (AOTA, 2015). Practitioners in urban areas commonly work in academia, hospitals, or mental health settings (AOTA, 2015). In comparison, many rural practitioners work in home health, LTC, or schools (AOTA, 2015). This study revealed that mental health settings have the lowest amount of rural OT practitioners (AOTA, 2015). The following are major areas of practice for OT:</p> <ul style="list-style-type: none"> • Academia • Community • Early Intervention • Free-Standing Outpatient • Home Health • Hospital • LTC • Mental Health • Other • Schools

Populations most at risk for suicide:

- Veterans and other military personnel (Stone et al., 2017; U.S. Department of Veteran Affairs, 2019)
- Sexual minority youth and LGBTQ+ individuals (Stone et al., 2017)
- Non-Hispanic whites (Ivey-Stephenson et al., 2017)
- Non-Hispanic American Indian/Alaska Natives (Ivey-Stephenson et al., 2017)
- Middle-aged adults, including adults between the ages of 35-64 years (David-Ferdon et al., 2016; Ringgenberg et al., 2018)
- Older adults (American Foundation for Suicide Prevention, 2017; Suicide Prevention Resource Center, 2019)
- Individuals who live in rural communities (Ivey-Stephenson et al., 2017)

The following are aspects in the physical context that impact the practitioner's ability to provide suicide prevention and intervention services:

- Resources in the facility to promote suicide prevention
- Screening tools available to practitioners to identify clients at risk of suicide

Temporal:

- Stage of maturation: According to the *2015 AOTA Workforce Study*, OT practitioners are aging, with a median age of 39 years old. The following is a list of the ages and the percentage of OT practitioners in each age range (AOTA, 2015).
 - 28.9% are between the ages 30-39
 - 23.9% are ages 30 or younger
 - 19.8% are ages between 50-59
 - 19% are ages between 40-49

Cultural:

- *Vision 2025:* Calls for practitioners to be leaders and focus on the well-being of all people and populations (AOTA, 2018b)
- *Healthy People 2020:* Strives to reduce the national suicide rate by 10% (U.S. Department of Health and Human Services, 2019)
- Mission of the organization and the practitioner's workplace facility may determine whether or not suicide prevention and intervention is a primary focus
- The practitioner's workplace facility determines protocols and expectations of how to respond in an emergency situation when clients demonstrate suicidal thoughts and behaviors
- There is a lack of training in the OT profession to utilize suicide prevention and intervention tools (Novalis, 2017)

Social:

- OT practitioners commonly collaborate with the following:
 - Primary care providers
 - Community organizations
 - Allied health providers
 - Clients
 - Families
- Federal programs in the U.S. that address suicide prevention in health care services: (Ross & Afayee, 2019)
 - The U.S. Department of Health and Human Services (HHS)
 - The Substance Abuse and Mental Health Services Administration (SAMHSA)
 - The Indian Health Service (HIS)
 - The Health Resources and Services Administration (HRSA)
- National & local professional associations can be a conduit for information disbursement
- Academic training programs who choose content based on academic standards

Performance Range

Definition: The number of tasks available to the person based on the interaction between the person, task, and context (Dunn, 2017).

Factors that Decrease the Performance Range

- Limited knowledge of screening tools and protocols leads to practitioners being unable to appropriately respond to a client who may have suicidal ideation.
- Practitioners lacking confidence in their abilities to address suicide prevention leads to practitioners not implementing suicide prevention and intervention services in practice.
- Lack of resources or screening tools in the workplace facility leads to practitioners not being aware of available resources and tools in suicide prevention.

Factors that Increase the Performance Range

- Practitioners are trained in building therapeutic alliance with clients, which allows practitioners to maintain positive relationships with people at risk of suicide.
- HRSA, SAMHSA, HHS, and other federal and state programs offer online webinars and workshops for suicide prevention and intervention.
- Workplace facilities having policies and protocols in place to address suicide prevention.

Table 4

Suicide Prevention and Intervention Strategies for Occupational Therapy Practitioners

Intervention Approaches	Strategies and Dissemination
<p><i>Establish/Restore</i> Definition: Improving personal skills (Dunn, 2017). Establishing skills involves building skills that have not been developed and restoring skills involves skills that have been impaired (AOTA, 2014).</p> <p><i>Goals:</i></p> <ul style="list-style-type: none"> • OT practitioners will determine the severity of suicide risk for clients during the evaluation (Gutman, 2005) • OT practitioners will respond to warning signs and symptoms of suicidal ideation (Gutman, 2005) • OT practitioners will interact with clients and families to identify barriers to positive engagement in occupations during the evaluation (Kashiwa et al., 2017) • OT practitioners will develop interventions to help clients participate in meaningful occupations (Novalis, 2017) • OT practitioners will maintain a positive relationship with clients who demonstrate suicidal thinking and behaviors (Gutman, 2005) 	<p>Strategies:</p> <ul style="list-style-type: none"> • Establish procedures to respond to clients who may have suicidal ideation • Train OT practitioners to recognize how to respond to different warning signs of suicide • Establish action plans with family members to understand the appropriate actions to take with clients who may have suicidal ideation • Train OT practitioners to utilize the Intentional Relationship Model when interacting with clients who may be experiencing emotional distress (Taylor, 2008) <p>Dissemination Methods:</p> <ul style="list-style-type: none"> • Teach OT practitioners about suicide screening tools in suicide prevention and intervention through: <ul style="list-style-type: none"> ○ OT Practice article raising awareness of suicide ○ Educational workshops ○ Presentations at National/State conferences ○ Free webinars through AOTA and SAMHSA

Adapt/Modify

Definition: Changing aspects of the context or adjusting parts of the task to support an individual's performance in their meaningful roles (Dunn, 2017).

Goals:

- OT practitioners will administer standardized screening tools during the evaluation process to assess people at risk of suicide
- OT practitioners will educate clients and families on symptoms of depression and suicidal ideation (Novalis, 2017)
- OT practitioners will refer clients to providers within an interprofessional team in the community
- OT practitioners will document a client's actions and the practitioner's response (Novalis, 2017)

Strategies:

- Collaborate with workplace facilities to add suicide screening tools and suicide prevention resources in staff departments
- Allow for extra time during the evaluation and intervention process to ensure family members understand the symptoms of suicidal ideation and the need for treatment (Gutman, 2005)
- Use a list of local behavioral health or primary care providers when making referrals during discharge planning (National Action Alliance for Suicide Prevention, 2018)
- Provide suicide safety plans in the workplace facility to ensure safety for the client (National Action Alliance for Suicide Prevention, 2018)
- Develop interprofessional suicide prevention teams in workplace facilities
- Adapt or modify current occupational therapy tools to include brief suicide screening tools

Dissemination Methods:

- Target agents of change, such as administrators, managers, supervisors, and leaders in the OT profession through:
 - Mailing screening tools and resources
 - Free webinars through AOTA and SAMHSA
 - Educational workshops
 - Presentations at National/State Conferences

Prevent

Definition: Preventing negative outcomes by targeting the person, context, or task factors (Dunn, 2017).

Goals:

- OT practitioners will identify people at risk of dying by suicide (Novalis, 2017)
- OT practitioners will advocate for programs and initiatives that support suicide prevention awareness in the community (Novalis, 2017)
- OT practitioners will follow protocols during emergency situations when clients demonstrate suicidal thinking and behaviors

Strategies:

- Prevent suicide by training OT practitioners on warning signs and symptoms of suicidal ideation (Hewitt et al., 2014)
- Consult with workplace facilities to provide suicide prevention programs and raise awareness of suicide (AOTA, 2014)
- Assist communities in the prevention of suicide by developing protocols and safety plans to manage suicidal thinking and behaviors (National Action Alliance on Suicide Prevention, 2018)
- Encourage OT practitioners to be trained in evidenced-based community suicide prevention programs
- Prevent suicide by promoting suicide prevention and positive coping strategies on social media campaigns (Roy et al., 2017)
- Ensure that OT practitioners have adequate places to refer clients who may have suicidal ideation

Dissemination Methods:

- Targeting all communities, OT practitioners, and administrative staff through:
 - **OT Practice article raising awareness of suicide**
 - Educational workshops
 - Presentations at National/State conferences
 - Free webinars through AOTA and SAMHSA

<p><i>Create</i> Definition: Making the circumstances needed to have optimal performance for all populations and persons (Dunn, 2017).</p> <p>This intervention strategy is not appropriate due to the inability to change new facilities, legislative policies, and other aspects needed to create an optimal circumstance for all OT practitioners to contribute towards suicide prevention.</p>	
<p><i>Alter</i> Definition: Identifying what aspects of the persons context promote engagement and match activity demands and moving to the context that is optimal (Dunn, 2017).</p> <p>This intervention strategy is not appropriate due to needing to move to a completely new context to provide the OT practitioner with the optimal context to perform suicide prevention and intervention in practice.</p>	

Note. Bold font were the selected products

CHAPTER V

Summary

Chapter V consists of an overview of the products, the strengths and limitations of the products, and recommendations for further action. The purpose of this project was to create a product to raise awareness of suicide among farmers and ranchers in rural communities. The farming and ranching population have a higher risk of suicide and encounter barriers to receiving appropriate treatment (NACRHHS, 2017; Scheyett et al., 2018). Another goal of this project was to address the accessibility of care for farmers and ranchers by defining the role of occupational therapy in suicide prevention. A limited number of occupational therapy practitioners currently implement suicide prevention strategies in practice (Hewitt et al., 2014).

Overview of Product

The first product, Table 1 *Farmers, Ranchers, and Risk of Suicide*, evaluated the factors associated with the concerning rates of suicide among farmers and ranchers. Table 2, *Suicide Prevention and Intervention Strategies for Farmers and Ranchers*, includes strategies to promote positive mental health and suicide prevention. These strategies aligned with dissemination methods that will be used to educate farmers and ranchers on risk factors of suicide and coping strategies. The authors developed the second product, Table 3 *OT Practitioner's Role of Screening for Suicide*, to determine how occupational therapy practitioners can contribute to suicide prevention in practice. Table 4, *Suicide Prevention and Intervention Strategies for Occupational Therapy Practitioners*, includes

strategies to increase a practitioner's confidence in the ability to work with a client who may have suicidal ideation. The authors also included dissemination methods to train practitioners on screening for suicide. These products were informed by the Ecology of Human Performance (EHP) model (Dunn, 2017) to target the issue of suicide in a holistic, community-based manner.

Following these tables, the authors of the project created two informative articles on suicide prevention. The goal of the first article was to raise awareness of farmer and rancher suicide in a rural community newspaper. This article includes ways to establish positive coping strategies and promote social connectedness throughout the community. The second article was created to demonstrate occupational therapy's role in suicide prevention. This article includes information on the prevalence of suicide, screening tools for suicide, and access to resources on this topic. The authors also included a brief case scenario to show practitioners how to screen farmers for suicide in a rural health setting. The effectiveness of these products will be measured through publication of the articles. This outcome measure reflects the primary purpose of the products, which is to disseminate information on suicide prevention and increase outreach to a wide audience.

Strengths of The Product

The product that targets farmers and ranchers has many strengths to effectively promote suicide prevention. First, this product reflects the trends in public health and suicide. Currently, a disparity exists between rural and urban suicide rates (Ivey-Stephenson et al., 2017). The authors addressed the issue of suicide by targeting populations who are at risk, including farmers and ranchers in rural communities. The goal of this product also aligns with the mission of *Healthy People*, which aims to

prevent disease and improve the health of all people in the U.S. (Office of Disease Prevention and Health Promotion, 2019). Furthermore, a primary goal of *Healthy People 2020* was to reduce the national suicide rate (U.S. Department of Health and Human Services, 2019). Another strength of this product is that it was designed to meet the unique needs of the farming and ranching population.

In comparison, the product for occupational therapy practitioners has a strength of implementing suicide prevention in clinical practice. This product provides initial techniques for practitioners to screen, identify, and treat individuals at risk of suicide. In addition, this product helps practitioners understand their role in suicide prevention by clearly identifying steps of action to take. This product aligns with the current vision of the occupational therapy profession, which encourages practitioners to be leaders in influential issues around the world (AOTA, 2018). This product also supports interdisciplinary collaboration by identifying appropriate protocols and points of referral for clients who may have suicidal ideation.

Overall, much thought was put into designing these products. Both products were based on evidence-based practices for suicide prevention in the U.S. (NACRHHS, 2017). These evidenced-based practices were reflected in the variety of opportunities identified to address farmers, ranchers, and occupational therapy practitioners. The product included multiple activities to target suicide prevention in the future. Both products were organized to clearly inform readers on the issue of suicide. Lastly, these products incorporated the core concepts of the EHP model (Dunn, 2017), which involves using a holistic perspective to evaluate information. The EHP model (Dunn, 2017) facilitated the

best outcomes for this project, because suicide is a complex issue that impacts many different aspects of a person.

Limitations of The Product

There are some limitations in the development of the products mentioned above. Although the authors of this project extensively reviewed literature on suicide prevention, they have limited training or expertise on this topic. The authors of this project also lack clinical experience with farmers and ranchers, as well as with screening for suicide. This may impact the credibility of the tables and articles that were produced for dissemination. In addition, the dissemination of these products are unknown, due to the limited feasibility in addressing all farmers, ranchers, and occupational therapy practitioners in the U.S. The authors could only execute two methods of dissemination, due to the time constraints of developing the project. Another limitation of this product is that it only addresses the role of occupational therapy practitioners in suicide prevention. The role of other allied health professionals and primary care professionals were not considered, which limits the transferability of the products to a multidisciplinary health care team. Both of these products are introductions to suicide prevention. The products developed for farmers and ranchers do not include specific interventions to deal with suicide-related thoughts and behaviors. In addition, the product developed for occupational therapy practitioners does not provide a specific guide to develop and follow protocols for suicide prevention.

Recommendations for Further Action

The authors of this project intended to implement these products by publishing the articles in sources that target farmers, ranchers, and occupational therapy practitioners.

Opportunities for further development of this project were identified through the dissemination methods that were included in Table 2, *Suicide Prevention and Intervention Strategies for Farmers and Ranchers*, and Table 4, *Suicide Prevention and Intervention Strategies for Occupational Therapy Practitioners*. Further action could be taken to establish healthy coping strategies, promote wellness, and prevent suicide in farmers and ranchers. This could include developing educational workshops on implementing safe practices for storing firearms, utilizing telehealth to increase mental health support, and responding to warning signs of suicide. The authors could also share resources and tools related to stress management for the farming and ranching population. It is recommended that research be conducted to evaluate the effectiveness of suicide prevention practices for farmers and ranchers.

Other actions were identified to improve the role of occupational therapy practitioners in the future. These developments include developing educational workshops to train practitioners on screening for suicide, creating change in their agencies, and promoting suicide prevention in the community. In addition, the authors could present at national or state conferences to increase awareness of suicide within the profession. Lastly, the authors could share screening tools, resources, and free webinars with practice settings. Aside from these developments, it is recommended that research be conducted to better understand occupational therapy's role in suicide prevention for all populations. Research could also be conducted to evaluate the impact of suicide-specific training on the confidence of practitioners in addressing suicide prevention and intervention.

Conclusion

Before these recommendations can be implemented, people need to be aware of how to take action. These products are a unique approach to addressing suicide, because they employ people with the tools and knowledge needed to independently promote prevention. These products were developed to enhance the wellbeing of farmers and ranchers through a community-based perspective. Furthermore, occupational therapy practitioners are well-equipped to meet the comprehensive needs of this population. The authors of this project hope that these products call people to action to facilitate suicide prevention and health promotion initiatives for all people.

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