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# INCORPORATING MENTAL HEALTH CEU'S IN STATEWIDE VIRTUAL PESTICIDE WORKSHOPS

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## ABSTRACT

Based on an expressed need from agricultural producers, an overall increase in attempted suicide, and the prevalence of mental illness in agricultural and rural audiences, USU Extension created, implemented, and delivered a rural focused agriculture mental health literacy curriculum. Utilizing already established virtual agricultural education events for curriculum implementation, general programmatic reach was multiplied. Over 379 attendees were able to better understand mental illness and what resources are available for help. A post-training survey indicated program efficacy with a response of 78% of attendees that were willing to make behavioral changes toward mental health or already had made changes.

## INTRODUCTION

In 2017, nearly 38,000 persons of working age (16-64 years) in the United States died by suicide, which represents a 40% rate increase in less than two decades. The agricultural industry was found to be in the top five major industry groups with higher suicide rates than the general study population, with 36.1% of the total numbers of suicide were represented by those working in an agriculture field (Peterson et al., 2020).

Instances of suicide, depression, and other mental health issues are on the rise, not only throughout the country, but especially throughout Utah. In the State of Mental Health in America report (Reinert et al., 2020) Utah ranked 51 out of 51 (50 states and Washington D.C.) for the prevalence of adults with a mental health illness and 46th out of 51 for the prevalence of mental illness and access to care as measured in both adults and youth. According to the National Council on Behavioral Health, rural areas continue to have higher rates of completed suicides when compared with urban areas (National Advisory Committee on Rural Health and Human Services, 2017). Of the 29 counties in Utah, over half are considered rural (County classifications map, 2018). In a report from the University of Utah, Utah faced a shortage of mental health professionals with an average of 30 or less professionals per 100,000 people (Summers et al., 2019).

Many farmers, ranchers, and their families need help to deal with mental illness and suicide, but there is a clear lack of providers and resources that serve rural audiences. A team from Utah State University (USU) Extension consisting of faculty from both the Agriculture and Home and Community departments sought to address this problem by developing a curriculum that could be presented to these rural audiences. This curriculum was originally planned to be taught in person, but due to COVID-19 guidelines, a change to a virtual platform was needed. Going virtual provided an opportunity to expand to a larger audience by being included as a safety continued education unit (CEU) for statewide pesticide training.

## METHODS

In February of 2020, a team of USU Extension faculty taught and attended a Mental Health First Aid training. "Mental Health First Aid is a course that teaches you how to identify, understand and respond to signs of mental illnesses and substance use disorders" (National Council for Mental Wellbeing, 2021). Although the information was very timely and helpful, they agreed that a more concise curriculum was needed to address mental health needs in farmers, ranchers, and rural audiences. The team wanted to make a curriculum that would be shorter and point rural audiences to the resources that they have available in their specific areas. The goal of the curriculum was to educate and bring awareness so that more people in rural areas would know where to go to get help. Information for the curriculum was adapted from previously existing curricula as well as farmer and rancher specific mental health research and studies.

Once the curriculum was developed, the team sought to teach and expand this information for rural audiences. Due to COVID-19 and university restrictions, the team struggled to find audiences to teach and were not able to pilot the program until an opportunity to partner with the Pesticide Safety Education Program

came along. Knowing of our intentions, the director of the Pesticide Safety Education Program reached out to see if the team wanted to be the safety component for the applicator workshops. This allowed for a captive audience to be able to expand mental health awareness throughout the state of Utah.

Using the curriculum over Zoom did not require significant change. The team used the same developed powerpoint and presented it online like they would have in person, adding one activity to generate more discussion and changing one visual that would not work in an online setting. Most of the activities and discussion prompts translated to an online setting with no problems.

The pesticide workshops were held over Zoom which allowed for statewide participation. Four presentations were given. Each presentation was 50 minutes (45-minute presentation and 5-minute quiz). The presentation covered topics such as, how to handle stress, mental health illness vs. stress, anxiety, depression, suicide, how to respond to someone experiencing a mental health crisis, and appropriate resources to seek help. The following quiz questions were used to assess participant learning and award the safety credit. Correct answers are bolded:

What is the biggest asset to your business?

- Equipment
- Labor
- You**
- Wealth

What is the best way to manage stress?

- Isolation
- Healthy Habits (Exercise, Relationships, Hobbies, Sleep)**
- Crying
- Self-Medicare

Is all stress bad?

- Yes
- No**

What is your role (how to help) when you run into someone struggling with mental health?

- Ask, Respond, Connect**
- Run and hide
- Ignore, wait for a professional to help
- Diagnose the Symptoms

The following programmatic evaluation questions were given in addition to the quiz :

How would you rate your knowledge about the following topics BEFORE attending this training?

1 = very low, 5 = very high

How would you rate your knowledge about the following topics AFTER attending this training?

1 = very low, 5 = very high

As a result of the following presentations do you intend to change behaviors or practices?

## RESULTS

Four mental health presentations were given to 379 participants from all 29 counties in Utah. Of the 379 attendees, 353 were able to receive one CEU safety credit and 186 completed the evaluation survey (Table 1). Results of a pre-post self-evaluation revealed an increase of participant mental health knowledge (Pre-presentation = 3.12; Post-presentation = 3.81) due to the mental health presentation. For self-reported behavior changes, participants most commonly indicated that they intended to change their behaviors and practices towards mental health after going through the presentation (62%; Table 2). Of the remaining participants, 16% stated that they already had made recommended changes, 13% indicated they might make changes, and 9% determined that they would make no changes in their behaviors and practices towards mental health.

**Table 1.** Mental Health Presentation Data. Overview of total participants, Continuing Education Units (CEU) safety credits awarded, and amount of evaluation surveys completed for the mental health presentation.

Mental Health Presentation Data	Totals
Total Number of Participants	379
CEU Safety Credits Awarded	353
Evaluation Surveys Completed	186

**Table 2.** Showing self-reported behavioral change responses from participants across all four mental health presentations. Responses were from the question "As a result of the mental health presentation do you intend to change behaviors or practices?".

Behavioral Changes	Total	Percent of Response
Yes	115	62%
Already Doing This	30	16%
Maybe	24	13%
No	17	9%

#### Qualitative Results

To determine the impact of the mental health presentation, evaluation and participation number results have been used to quantify the results. However, comments made by participants during and after the mental health presentation reveal a larger impact that may not be quantifiable. One of the major discoveries from these presentations was that by discussing mental health and sharing stories, often the stigma surrounding mental health is lifted and others are willing to share their stories.

As the mental health presentation was given in a virtual format, attendees were asked to participate through the chat feature. Many of the comments that were shared were responses to questions asked by presenters. However, some participants willingly commented and shared information that they had gathered or thought was important to the group (Table 3). Other participants shared their personal experiences that they or their family have had with suicide.

**Table 3.** Selected informative comments from participants who attended the mental health CEU presentation virtually. The following comments were given freely and were not from prompted questions.

Informative Comments
"I think young adults/teenagers most at risk of suicide itself. not necessarily depression. It has to do with not fully emotionally mature and reasoning not fully developed. Plus just stinking hard time in life."
"Thank you for using the word "complete" as opposed to "commit", suicide is not a crime"

**Table 4.** Selected comments from participants who attended the mental health CEU presentation virtually. Comments were related to participants, or their families, experience with mental health illnesses and issues. The following comments were given freely and were not from prompted questions.

Comments on Participants Experience With Mental Health Illnesses and Issues
"Interesting....we say that we can see it but my wife learned of a suicide in the fire service that caught everyone by surprise"
"Many suicides come as a surprise. I've had friends"
"So I had a situation when a friend was talking about basically indicating they were going to take their life. I was on the phone with them. the line got disconnected and they were not answering my calls. I called the police and let them know where he was at. He later thanked me for getting him help. So like Jake said if you are seeing signs or they are indicating that is what they are thinking then ask them those questions"

## DISCUSSION

The stigma associated with mental health has created barriers among many audiences. One audience that has specifically been affected is agriculture and rural communities. Many agricultural producers try to "tough it out" rather than realize a problem exists and that resources are available to help with mental health symptoms and illness. While this topic is important, many farmers and ranchers did not feel that they have the time or just are not interested in attending mental health workshops.

While agriculture producers might not be willing to attend workshops specifically on mental health, many are required to attend other workshops such as pesticide CEU presentations in order to get credits for their private or commercial applicator license. Incorporating mental health discussions/presentations/talks into pesticide CEU events provided access to many target audience participants who would have been missed otherwise.

While mental health presentations would ideally be taught face-to-face, utilizing a virtual format has allowed for a much broader impact. Across four mental health presentations, 379 people were reached. Compared to face-to-face presentations, reaching 379 people would take far more presentations than what was possible when these presentations were held virtually. However, participation varied across presentations largely due to the chat function being the only venue for participation. After reviewing the chat dialogue many comments were not seen due to participants being in a direct chat with another individual, and

not changing the feature back to the everyone setting while commenting with the presentation. Participation may have been more consistent and allowed for more personal comments and shared experiences in a face-to-face setting.

Although participation was inconsistent among presentations it is important to note that chat participation was far higher than presenters originally anticipated. Certain participants were eager to participate and share personal experiences and the mental health resources they had gathered. When a single participant would begin to share personal resources or experiences it seemed that participation among all attendees began to increase. In multiple presentations, SafeUT was posted in the comments as a resource for teenagers struggling with suicide. It became apparent among certain participants that mental health was an important issue and they were eager to learn. Multiple participants asked for a PDF copy of the mental health presentation after the meeting was complete.

However, even with inconsistent participation 353 of the 379 participants (93%) passed the quiz at the end of the presentation and were awarded one safety CEU credit. Quiz questions were not extremely difficult, but were made to identify those who paid attention throughout the presentation.

Evaluation results revealed that the majority of participants (78%) were willing to make behavioral changes toward mental health or already had made changes. One reason behind the behavioral changes could be that many participants had a lot of knowledge on the subject of mental health before coming to the presentation (Mean Mental Health Knowledge Before Presentation = 3.12). Even with a higher mental health knowledge level before the presentation, an increase in mental health knowledge was still found (Mean Mental Health Knowledge After Presentation = 3.81). Having 23% of participants who state that they might or would not change their behaviors towards mental health is still a high number, and the mental health curriculum will be evaluated to determine what changes could be made to improve this. The stigma towards mental health may also have some effect on this participant group. Evaluation data has shown that this program is effective and as of now, no changes to the program have been made.

## CONCLUSIONS

By providing virtual mental health training in conjunction with existing workshops for the target audience, the USU Extension Rural Mental Health Team is making it possible for more people to become aware of the resources available and how they can help someone experiencing a mental health issue. By discussing, normalizing, and educating on this topic, we are building a knowledgeable network of community members who will be able to break the barriers and help those around them who may be experiencing a mental health crisis. The USU Extension Rural Mental Health Team has continued moving forward in providing mental health resources, education, and awareness to rural audiences. Additional Mental health presentations are planned to be delivered to rural counties across Utah. Agriculture-specific mental health resources are being created to be utilized by Utah's rural communities. A mental health needs assessment has been sent out across Utah to pin-point the exact needs of our farmers, ranchers, and rural communities. By continuing to provide mental health education and resources to rural and agricultural communities, the goal is to help the stigma of mental health fade away, and to provide help to those individuals who are struggling.

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