

Community Engaged Scholarship in a Mental Health Context: Challenges, Opportunities, and Best Practice in Dairy Communities

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Abstract

Working with livestock is stressful due to the constant, around-the-clock care of animals, finances, and stressors related to the public perception of animal agriculture. Community engaged scholarship is a critical method utilized in public health research, yet limited information is known about the best way to enter farming communities related to CES. This study explored how practitioners engage with dairy communities to develop strategies and solutions related to health, particularly mental health initiatives and programming. Six individuals who have worked in the United States (U.S.) and some international researchers participated in semi-structured interviews about their approach to community-engaged scholarship focused on mental health within agriculture, and engagement strategies with participants and communities. Participants emphasized the importance of developing relationships and trust with community partnerships as well as the use of storytelling and creative research methods to engage individuals. Funding remained a challenge for CES while communicating to communities the scientific process was identified as an opportunity to explain research timelines and lack of instant changes from research. Future research should continue to explore CES approaches within this area and extend beyond dairy producers to a larger livestock demographic.

Article History

Received: February 3, 2026
Accepted: September 11, 2026
Published: September 30, 2026

Keywords

community engaged scholarship; rural community engagement; mental health programming;
SDG 3: Good Health and Well-being

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Introduction and Problem Statement

Rural stress and distress continue to be crucial issues in global agricultural communities (Melberg, 2003; Somashekar et al., 2020). For those working in livestock, production can be a dangerous occupation as producers who work with livestock have a higher fatal injury rate compared to crop production (Bureau of Labor and Statistics, 2024). Previous studies have found that dairy farmers have increased operational and personal stressor levels than other livestock industries (Stone et al., in press). The global dairy industry is facing struggles that impact the mental health of dairy farmers and operators such as disruption to markets, production shortfalls, market volatility and more. This is due to 80% of countries relying on imported dairy from countries, making a small concentration of global suppliers including Argentina, Australia, the EU, New Zealand, and the U.S. (Polzin, 2026). Across these countries, dairy farmers face similar mental health stressors with high workloads, public perceptions, resource availability, disease outbreaks, risk of injury, financial uncertainties, and more (Doupbrate et al., 2013; Furey et al., 2016; Kolstrop et al., 2013; Powers, 2009). Additionally, previous studies show a negative stigma is associated in help-seeking behaviors for mental health care (Hagan et al., 2022; Hopkins et al., 2023). Previous research has shown that Community Engaged Scholarship (CES) and its various methodologies can be used for a variety of mental health research (Kelter et al., 2022; Teti et al., 2021). CES is collaborative across all stages of the research process (Saltmarsh & Corbin, 2021). CES and similar methodologies are critical as participatory research has been found to address key stigma-change research surrounding mental illness (Corrigan & Shapiro, 2010). Across disciplines, including public health and communication, community-based participatory research (CBPR) and community engaged research (CER) utilize different terminology to address similar approaches to share research responsibilities with communities, including, action research, participatory research, youth participatory action research, public involvement, practitioner research, collaborative research, citizen science, participatory health research, and more (Wallerstein et al., 2018). Models of engaged scholarship can be customized to meet specific societal health care needs including mental health (Grimmett et al., 2018). Given the acute need for mental health research in agricultural communities and the success of using Community Engaged Scholarship (CES) surrounding mental health, there is a need to investigate best practices in CES when investigating mental health, specifically in dairy communities.

Theoretical and Conceptual Framework

The conceptual framework informed the study design by mapping the challenges and benefits in literature implementing CES in agricultural communities. The conceptual framework directly informed data collection protocols. Although CES has multiple definitions and terminologies across disciplines, in a meta-analysis of literature, Gordon da Cruz (2018) found that there were six unified concepts that scholars frequently described or practiced related to CES:

- 1) a focus on real-life social problems that are defined with or by the community; 2) scholarly investigation of these real-life social problems or public issues; 3) community-university partnerships that are collaborative and reciprocal and in which the

community partners have shared authority in defining success; 4) the generation of knowledge to address and improve public issues that is collaboratively developed by universities and communities; 5) the utilization of institutional resources and knowledge to address these real-life social problems; and 6) the production of scholarship with relevance to faculty members' research agenda and teaching practice (p. 155).

CES has a history in land grant university's (LGU) foundations, but the practice of community engagement has evolved overtime. Originally, LGUs were to translate scientific research to stakeholders and community members, but this has shifted to universities learning from communities as a two-way form of knowledge generation (Martin & Steele, 2022). Benefits to utilizing CES in agricultural communities are that it can increase trust and participation from community members (Ryan et al., 2023). CES approaches can be used to shift the power dynamics from institutions to communities that are marginalized (Larson & McQuiston, 2022). One benefit of utilizing CES in marginalized communities for health programming is a possible increase in health literacy awareness in hard-to-reach populations (Murphy, 2023). Outside rural health, CES has been used to collaborate with agricultural communities. For instance, CES has been used widely in the dairy community related to adopting best practices created by dairy farmers for reducing antimicrobial use in the UK (Morgans et al., 2021) and for dairy farmers to provide their perspectives to improve animal welfare in New Zealand (Mills et al., 2023). CES approaches have provided benefits to dairy farm research, including participation by dairy farmers and opportunities for learning (Friend et al., 2009).

CES relies on mutual respect and highlights the importance of relationship building between universities and community organizations (Warren et al., 2018). Dick (2017) argued that due to the way some research is funded (e.g., taxpayer dollars), the research should come back to and benefit communities. Trust is vital for CES research but is not a one-size-fits-all formula between university and community organizations (Hubbard et al., 2025). Hubbard et al. (2025) found that trust can be obtained by respecting the expertise of each partner, open communication, and shared purpose. Other research-driven trust building strategies include relationship building, collaborative decision-making, and engagement (Lansing et al., 2023; McDavitt et al., 2016). Not all researchers need to stay or maintain relationships in communities where a research exit strategy should exist (Mason, 2023). To mitigate the power dynamics in CES, scholars should be transparent with the community on decision-making and create space to truly collect the diverse opinions, perspectives, and experiences of the community (Hudson et al., 2023).

CES is utilized across the globe and in diverse contexts, but there are multiple obstacles of U.S. scholars to implement CES in their work in higher education (Bell & Lewis, 2023). Often, in the U.S., community engaged scholarship is devalued and discouraged at universities (Bell & Lewis, 2023). Community engaged scholars are more likely to be women and faculty of color, making the need to recognize and reward this type of research critical (Cavalloro, 2016). Many graduate programs responsible for training the next generation of scholars face barriers to incorporating community engagement; historically, graduate programs have prioritized scientific research with specialized interests, leaving little opportunity to connect to local

communities (O'Meara & Jaeger, 2016). Additional challenges include that the outputs of CES look different than peer-reviewed published research and are not typically considered in the tenure and promotion process in the social sciences (Robinson & Hawthorne, 2018). Current federal funding pauses have left researchers, participants, and communities engaged in previously funded CES research uncertain of the future of their projects, straining partnerships that are essential for CES work (Sheehan, 2025).

Purpose

In this study, we used CES and its practitioners as the overarching phenomena of inquiry in order to encompass the broad range of methods and applications. Because CES is practiced across broad contexts in and outside of higher education (Bell & Lewis, 2023), the term 'practitioner' refers to anyone in higher education or Cooperative Extension who has utilized CES in their work. The study aims to determine recommendations and best practices for scholars wishing to engage in CES methods. The research questions guiding this study include:

1. What community engaged scholarship techniques are exercised for research and programs on rural safety and wellness in the dairy community?
2. What challenges exist to co-construct solutions in CES in the dairy community?
3. What areas of opportunity exist to co-construct solutions in CES in the dairy community?

Methods

This study followed a qualitative descriptive design and focused on engaged research in rural communities that focus on mental health. Qualitative descriptive designs are appropriate for studies that focus on events experienced by a group of individuals (Lambert & Lambert, 2012). In the fall of 2024, we purposively sampled 22 practitioners currently utilizing CES, including CER or community-based programming focused on mental health in agricultural communities. To identify participants, the research team used Google Scholar to explore publications under the following key terms: dairy mental health, dairy producer mental health, dairy producer wellness. Publication abstracts published within the last 5 years were then reviewed to confirm they (a) had a connection to the dairy industry, and (b) focused on mental health. This review was considered complete once we saw replicated listings. Abstracts were not required to explicitly mention CES, but needed to display some sort of participant engagement (e.g., interviews, mixed methods, etc.). The inclusion criteria included white papers, program reports, journal publications, theses/dissertations, or Extension publications. The lead authors connected to the publications were then directly contacted via email. Contact information was often provided through the online publication description itself. If the lead author was no longer available through provided emails, then the next co-author was contacted. After multiple attempts to recruit participants, six of the twenty-two individuals agreed to participate. Oregon State University Institutional Review Board approved this study (HE-2024-1063).

Participants all currently or previously worked for higher education institutions in either faculty or Extension roles. The research team assigned pseudonyms to maintain anonymity for participants. Five identified as male and one as female. Ages of participants ranged from 28 to 78. All individuals self-identified as growing up in an agricultural community; two were from Europe, four from the U.S., while one also had worked in Australia (see Table 1).

Table 1

Participant Descriptions

Participant Code	Gender	Pronoun(s)	Occupation	Age Range	Location of CES
					Activities
Aaron	Male	he/him	Researcher	28-46	U.S. & EU
Ben	Male	he	Researcher	59-77	EU
Mark	Male	he	Psychologist, Faculty	78+	U.S. & Australia
Roger	Male	he	Cattle farmer, Extension Educator	28-46	U.S.
Beatrice	Female	she/her	Faculty	47-58	U.S.
Roman	Male	he	Extension Specialist	78+	U.S.

We created an interview protocol based on previous literature (Sheehan, 2025; Teti et al., 2021; Warren et al., 2018) regarding the challenges of CES and personal experience working in dairy and with dairy farmers. Participants struggled to conceptualize what could be considered CES. Participants were encouraged to think of this term as broadly as possible to encourage further discussion. The interview protocol included questions, such as “How do you involve your community in participating in research or when creating programs specifically, when working with sensitive topics, such as mental health? What resources do you need to continue conducting participatory or community-engaged scholarship?” We conducted one-on-one semi-structured interviews via Zoom. Interviews were audio recorded and ranged from 47 to 63 minutes (54 minutes average). The audio files were transcribed using Sonix.AI software. The transcriptions were then manually corrected by the first and second authors for accuracy.

All members of the research team are faculty members within colleges of agriculture who broadly study social dimensions within agricultural contexts. For data analysis, the first and second author inductively coded the interviews using the constant comparative method (Glaser & Strauss, 1967). We independently coded each transcription and compared notes of findings. The first round of coding was descriptive and in the second round of coding, we used axial coding to identify relationships with challenges and benefits of utilizing CES. Codes were discussed to ensure consensus between coders. Participants reviewed the quotes used in the study via a member checking process to enhance trustworthiness (Creswell & Creswell, 2017; Miles et al., 2020). Member checking was completed via email. Participants were provided with the study findings and given several weeks to review the quotes used from their interviews and asked to share any feedback, concerns, or adjustments. No edits were provided by participants. Limitations of this study include difficulty in replication and an inability to generalize findings to

broader populations, caused by challenges in recruitment due to the niche nature of the study. The use of purposive sampling in this study could be seen as a limitation given the risk of selection bias.

Findings

Four themes addressed the research questions. RQ1 was addressed by the themes, *creating trust through shared backgrounds and relationship building*, and *funding remains a vital resource to CES with rural communities focused on behavioral health and mental health*. RQ2 was addressed by the theme, *providing a space for storytelling and arts-based methods*, while the last research question (RQ3) was addressed by *communicating the scientific process and connecting practitioners with the academic research process*.

RQ1) What community engaged scholarship techniques are exercised for research and programs on rural safety and wellness?

Theme 1: Creating trust through shared backgrounds and relationship building (RQ1)

Participants discussed creating a trusting relationship with communities through sharing their backgrounds and building relationships throughout the research process. All participants mentioned that their own connection to agriculture was important in creating a relationship with producers: “I learned that leading with my agricultural background is really important” (Roger). Shared experiences in agriculture also meant for Mark, sharing the tragedies of experiencing suicide in his community at a young age and the 1980s financial crisis while living in a farming community. Mark discussed how he understood the stressors of the community he worked in. He discussed how when farmers lose their farmland, they feel they have disappointed past family and future family members,

The threat of losing land means to them [farmers], losing everything. Letting down their ancestors who acquired the farming land and other assets needed. But also, the loss of land means that the next generation won’t be able to farm, and they feel that they have let down both their ancestors and their progeny.

However, a connection to agriculture was not the only way to connect to farmers. Aaron discussed knowing what the community goes through as well as culture that could serve as an entry point into conversations and communities:

I found that I had to kind of get myself very much up to the speed of the family context and of the community that I was engaging with in terms of getting to the grips, you know, with regulation policy in the area. And just other cultural frameworks around sport and stuff like that is always kind of how I would say, an oblique access point that you might be able to build a bit of trust...to get a greater understanding of the things that occupy their mental space.

Once these relationships were built, participants were able to return to these communities for future projects while still forming new connections: “I’ve had fairly good luck in working with

organizations as opposed to just focusing on individuals" (Beatrice). Other relationship- building techniques mentioned include utilizing advisory boards at the beginning of a project, having past participants recruit new participants and treating community members as team members and not solely as a data source. Beatrice noted she did not have an agriculture background but discussed how she worked through organizations to conduct her research: "I do rely a lot on my existing network"...."I've had fairly good luck in working with organizations as opposed to just focusing on individuals."

Creating trust was essential for participants, and many discussed how creating trust was working with farmers closely and communicating the results of the project. For instance, Ben discussed providing a written report to farmers to show that their efforts were not wasted. A final best practice identified was to share value back to the community through final products and shared reports of research findings, "We all have a good relationship, we have a high level of trust...so we very seldom have problems when we interview farmers to get them to speak (Ben)." Ben reiterated it was important to tell them that the data would be anonymous to ensure trust.

Theme 2: Providing a space for storytelling and more robust, creative methods

Several participants discussed how CES research needs to incorporate socially sustainable practices by exploring the lived experiences of communities through social science research, incorporating the arts into engaged research, and asking questions within research that will directly address community needs. For instance, Ben explained to his participants, "Make me a drawing and show us how the farm will look five years ahead...speaks much more than words...words have limits." Ben also talked about how farmers were inundated with surveys and that they would rather talk to people for research, "They [farmers] are happy if you don't come with a questionnaire." Ben stated:

Compared to all the research that's been done in animals and grass growing...all the biological things there been for hundreds of years effort to improve things but not that much effort to get to know how the farmer really feels and their challenges. So, I think that's why many farmers appreciate when we start asking not only about their cow.

Mark discussed how in his work, he had utilized over 100 workshops for storytelling around the topic of mental health. While he asked participants to write down their stories to post on the bulletin boards at the workshop, Mark would play his guitar.

Some participants discussed how research methods that have been previously utilized in this space could be expanded or revised to better capture in-depth data. For example, Roman mentioned, "[Research needs] to be done with valid and reliable stress measures pre and post, to be able to document actual changes in stress level, and using neurological or biofeedback measures, would be even better if we could do that pre and post." Most participants discussed incorporating both creative and more robust methods.

RQ2) What challenges exist to co-construct solutions in CES?

Theme 3: Funding remains a vital resource to CES with rural communities focused on behavioral health and mental health

When discussing resources and needs to continue community-engaged projects, nearly all participants mentioned the need for funding and a more complementary funding system. When discussing critical components to supporting future CES, Roger said, “partnerships are so key to this. Being able to go to trade shows where farmers are already at, that's essential. And then grant funding to be able to support the work.” While participants mentioned funding as a hurdle to navigate in some contexts, some participants, such as Aaron, also acknowledged a positive trend in funding opportunities available for mental health programming and research:

If you went to the Department of Agriculture or other farm representative bodies a couple of years ago, they'd be like, you know, this has nothing to do with it. You need to go to public health or Mental Health [European Union]. I think there has been a big culture shift around that. I think having the Department of Health, the Department of Agriculture, mental health service bodies, farmers themselves, all those [entities at] one table has kind of been central to that, I think. So that kind of cultural shift is another huge benefit in conjunction with the more micro remit of Extension agent buying into.

Participants noted not only can these funds provide opportunities for additional programming and services, but it can also elevate the scholarship surrounding those programs and communities: “We need funding for well designed, good research projects that can document the effectiveness of programs,” said Roman.

RQ3) What areas of opportunity exist to co-construct solutions in CES?

Theme 4: Communicating the scientific process and connecting practitioners with the academic research process

While there is partnership between practitioners and academics for funding opportunities, there can be a disconnect between the pace of industry programming and academic processes. Beatrice discussed how the pace of academia does not always match the pace needed by the community partners, “You’re gonna spend a lot of time in your office being really mad at your sponsored programs office because they do not understand what you are doing.” Aaron discussed how as a CES practitioner it is vital to communicate the scientific process to the community and recommended that the researcher provide some immediate tradeoff for community if the research process/results would be lengthy to avoid that community members see the value in research:

If you get access to dairy farmers... and they don’t have a good experience [participating in research], or you’ve made promises to them that they don’t see as reciprocated...then you have to be honest about the scientific processes too. These [research projects] aren’t quick things either...These things take time and there probably should be a more kind of immediate tradeoff for the community if you can as well.

CES provided an opportunity to better communicate the research process and connect practitioners with the nature of science. When looking at future opportunities within practitioner/academic collaborative projects, participants discussed shifting academic focuses from solely micro-level issues such as mental health, to systemic challenges that exacerbate or initiate mental health crises; “Reducing mental health in this [dairy] community isn’t doing the community justice...the bigger problems is the structural nature of it...they’re not getting a fair price for product” (Aaron). Similarly, Roman discussed how longer engagements in community could assist with helping bring change alongside a community, “Now here’s part of the problem in our research, single sessions, single session workshops, by Extension, do a little change. They increase a little knowledge. They don’t do much with behavioral change, and they don’t do much with attitudinal change.” Roman also questioned if some of the programs used in these communities might provide a temporary help similar to a Band-Aid, not providing longitudinal change, “Could it [mental health programming] be more effective? I don’t know. But is that just kind of a Band-Aid approach too, as well?” (Roman).

Conclusions, Discussion, and Recommendations

The U.S.’s food and fiber system provides 22.1 million jobs, representing over 10% of U.S. employment (USDA, 2023), and ensuring the well-being of this workforce is critical. Dairy producers face increasing stressors surrounding resource availability, injury, and public perceptions (Doupbrate et al., 2013; Powers, 2009; Satapahty et al., 2023). One way to support the well-being of agricultural communities, is by providing localized resources and outreach for mental health (see Culberthson et al., 2021). Six participants who worked with the dairy industry and practiced CES were interviewed about best practices and techniques. Practitioners can use these findings to help enter the community for research purposes, particularly when engaging in sensitive agricultural mental health research.

Participants discussed techniques best for entering and working in communities, including creating trust and using storytelling/creative methods were essential. Our finding aligns with previous literature as trust and relationship building is critical when working with CES (Hubbard et al., 2025; Warren et al., 2018). Although Bell and Lewis (2023) noted that CES is often conducted by women and faculty of color, our sample was primarily male. This difference likely reflects the specialized nature of CES within dairy mental health rather than the broader CES literature and suggests an opportunity for future research.

Participants discussed the use of storytelling and other creative methods to engage their CES and provoke engagement and participation in their work. The use of “serious storytelling,” or “storytelling outside the context of entertainment, where the narration progresses as a sequence of patterns impressive in quality, relates to a serious context, and is a matter of thoughtful process” (Lugmayr et al., 2017, p. 15709), is a research tool in the public health context and help participants in studies change knowledge, attitudes, beliefs, and practices (McCall et al., 2021). Previous work has also demonstrated the value of creative and

participatory approaches for engaging farming communities. For example, digital storytelling has been used in Extension to elevate agricultural voices and experiences (Ram Singh et al., 2020), while participatory approaches such as farmer dinner theatres have created opportunities for dialogue and collaborative problem solving (McCallum et al., 2022; Norrod et al., 2026). Within the dairy community specifically, participatory approaches such as photo elicitation and timelines have been successfully used with dairy farmers to facilitate discussion around future dairy systems (Mills et al., 2023). These approaches suggest that creative methodologies can complement traditional qualitative methods by fostering engagement and encouraging producers to share their lived experiences. However, it is recognized that CES is time and resource-intensive (Bell & Lewis, 2023) and that not all methods are appropriate for research purpose and community culture/shared goals of a project.

Challenges in producing CES included the lack of funding to engage in this type of research, though it was mentioned that some agencies are increasing their funding in the mental health space. Funding is essential to continue to engage in CES and also to demonstrate mental health program effectiveness. For better access to funding and long-term impacts, the researchers recommend potentially pursuing interdisciplinary research teams and funding opportunities (Specht & Crowston, 2022; Sun et al., 2021).

One finding was participants' recommendation that future CES move beyond individual-level mental health interventions and examine the broader structural conditions contributing to psychological distress in agricultural communities. This finding aligns with previous research demonstrating that financial uncertainty and occupational stressors are closely tied to dairy producers' mental well-being (Furey et al., 2016; Kolstrup et al., 2013). Because CES is designed to address complex public issues through collaborative partnerships (Gordon da Cruz, 2018), it may provide an effective framework for addressing these upstream challenges.

Participants recognized an opportunity to better communicate the scientific process to communities to provide transparency of progress and the slow process of change. To mitigate frustration with the slow nature of the research process, CES scholars can attempt to provide an immediate trade off with communities and routinely engage with the communities throughout the process to keep them informed on progress and outcomes (Lansing et al., 2023; McDavitt et al., 2016). Participants also emphasized that meaningful change often requires sustained engagement rather than one-time interventions. This reflects a core principle of CES, which prioritizes long-term partnerships over isolated interactions (Gordan da Cruz, 2018; Warren et al., 2018). Continued collaboration may not only strengthen community relationships but also provide greater opportunities to evaluate lasting behavioral and community-level outcomes.

Further data should be collected from additional partners in the dairy industry as well as in other agricultural industries including researchers, lenders, producers, Extension professionals, and health service providers. Future research should also continue to explore differences in CES based on cultures existing within different countries, and opportunities for better including underrepresented voices and languages in mental health communication resources.

Acknowledgments

Funding Information: No external funding was received for this project.

Conflict of interest: There are no conflicts of interest.

Previous Dissemination: Findings from this study were presented as an oral abstract at the Association for International Agricultural and Extension Education Conference, Inverness, Scotland (2025, April 14-17).

Artificial Intelligence: Unless already described in your methods, please indicate how any artificial intelligence tools were used, including the tool used and the version of the tool.

Author Contribution Statement: **Wegley, J.** – conceptualization, methodology, formal analysis, investigation, writing-original draft, writing-reviewing and editing, project administration, supervision. **Stone, W.** – conceptualization, methodology, formal analysis, investigation, writing-original draft, writing-reviewing and editing. **Chase, L.** – formal analysis, writing-original draft, writing-reviewing and editing. **Foerster, T.** – investigation, writing-original draft, writing-reviewing and editing.

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