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"The Source of All My Joy and All My Stress": Children and Childcare as Underappreciated Sources of Stress That Affect Farm Women

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ABSTRACT

Objective: Women have always played a crucial role in agriculture through their work on the farm, caring for the family and the household, and off-farm employment. Yet, like their essential contributions to agriculture, their mental health and well-being have largely been invisible since much of the focus of the mental health in agriculture research has been on older, male farmers. This paper seeks to address this knowledge gap by focusing on the emotional consequences stemming from the expectations of juggling childcare responsibilities, farm work and managing the household whilst keeping children safe.

Methods: The data were collected via focus groups and photovoice activity with, respectively, 68 and 33 farm women from Ohio, Wisconsin, and Vermont.

Results: The content thematic analysis first indicates that the juggling of multiple roles along with limited support deeply impacted farm women's wellbeing. Worries that the children could get hurt was a major source of stress. Stress and mental health issues connected to children do not lessen as they age but rather shift and become more complex.

Conclusion: This article highlights the implications of the lack of investment in farm women's mental wellbeing and their lived realities of caring for children on the farm. Future research should address supply chain and affordability issues, particularly for rural childcare provision.

KEYWORDS

Childcare; children; farm safety; farm women; mental health; quality of life;; triple burden

Introduction

Women have always played a crucial role in agriculture through their work on the farm, caring for the family and the household, and off-farm employment.[1–8] Yet, similar to their essential contributions to agriculture, their mental health and well-being have largely been invisible since much of the focus of the research on mental health in agriculture has been on older, male farmers.[9–15] The limited identification, and incorporation of the needs and realities of farm women into the study of mental health in agriculture means that we do not have a full understanding of how lived realities across gender shape mental health. In turn, mental health interventions may not adequately account for gender variations and needs.[16,17] This is a problematic shortcoming given the extensive research among the general population documenting variations in sources of stress across gender identities, and variations in how mental health challenges manifest themselves.[18–22]

Just in the last four years, a handful of studies have amplified the importance of focusing on the mental health needs and realities of farm women.[9,14,15,23,24] Out of the United Kingdom and Canada, studies have found that farm women report higher levels of mental health challenges (i.e., stress, depression, anxiety, loneliness) than their male counterparts. While this research brings increased attention to the gender knowledge gap, these studies are largely quantitative. This means that the breadth and depth of our understanding of the stressors experienced by farm women and their consequences is limited. Furthermore, and connecting to the work of Nichols and Davis (2023), these studies do not adequately account for the ways in which traditional gender roles and responsibilities carried out by farm women intersect with their mental health. This could be because these previous studies were modelled off scales developed and used with farm

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men. This shortcoming is nevertheless surprising as decades of rural social science research have documented differences in gender norms and expectations including the "triple burden" that farm women experience. See for example.[2,25–27] Simply defined, the triple burden refers to farm women simultaneously juggling different roles on- and off-the farm as they often do the invisible labor of caring for their households, children, and farms. The multiplicity of work embedded in the triple burden came to a head during the COVID-19 pandemic, which triggered a societal reckoning around how paid work and informal caregiving work affect women's mental health in the general population[28–31] but also among farm women.[4,32]

As much as the triple burden of farm women has long been documented, our understanding of how farm women navigate the day-to-day of the triple burden and the intersection with women's mental health has received little attention.[9,12,33] This includes how farm women navigate their caregiving responsibilities. On the contrary, raising children on the farm has often been idealized and romanticized both in the peer-reviewed literature and in farm programming.[25,26,34–36] The farm safety literature has long studied how attitudes, behaviors, and knowledge of farm parents intersects with farm children safety outcomes, yet as Becot (2022) argued, this body of work has seemingly glossed over the lived realities of raising children in a dangerous environment and the consequences on farm parents' mental health. A handful of studies on farmer mental health have noted that childcare is a source of stress for women. However these observations have been confined to a single sentence in a larger paper or as an "unexpected finding'.[9,12,33] Even when mental health was not a research focus, recent studies on children in agriculture point to the ways in which childcare challenges can have profound impacts on farm parent's mental health,[25,25,26,32,37–39] and the ways in which the lack of affordable quality childcare can impact farm business viability and farm children safety.[40,41]

In this article, we braid together three distinct, yet related elements, as the purpose of this article is to examine the ways in which farm safety, farm women's personal and professional responsibilities, and farm women's mental health intersect. More specifically we focus on two research questions: **1) How does raising children in a dangerous farm environment shape farm women's mental health?** and **2) To what extent do the interactions between children's caregiving needs and farm women' mental health vary based on the age of the children?** While farm parents must contend with the dangerous nature of the agricultural worksite for children of any age, children's cognitive, physical, social, and emotional needs shift overtime and so does their involvement in farm activities. As such we expect that farm women's stress and worries around the needs of their children and keeping them safe likely vary over time. We answer our two research questions by drawing on data from focus groups and a photovoice activity with, respectively, 68- and 33- farm with children under 18 on farms in three US states (Ohio, Vermont, Wisconsin). Our study design and interpretation of the results are driven by the merging of interdisciplinary bodies of knowledge: mental health in agriculture, women in agriculture and their triple burden, childcare in agriculture, and farm children safety. We made the choice of putting in dialog these bodies of literature over using an established theory for two reasons. First, given the dearth of studies on the topic, our study is exploratory. Second, these bodies of literature have seldom been merged, yet as our study should demonstrate, doing so provides productive and novel insights. While we use the term "farm women" as a shorthand in this article, we note that our recruitment material specifically did not use these terms, but rather "women raising children on farms". We did so in recognition that a "farm woman" is a complex term connected to a multitude of roles, and that some women would not identify as a farmer.[42] Recognizing the heterogeneity of the agriculture population, we also had chosen this broader set of terms so that the study would be inclusive of the diversity of caregiver roles and identities (i.e., biological, adoptive, foster parents, grandparent, etc.) and geographies (i.e., rural, suburban, and urban).

Literature review

How the triple burden of farm women affects mental health

A key difference between farm women and farm men are the roles and responsibilities traditionally attributed to each gender. These gender-based

roles and responsibilities in turn have varying effects on women and men's mental health.[1,4,14,15,43,44] For farm women, these roles and responsibilities have been encapsulated by the concept of the triple burden, whereas farm women are expected to do on and off farm work whilst supporting the emotional and physical needs of those in the household through care and domestic work.[2,7,45,46] Relevant to the farmer mental health literature, this care work extends to the important role farm women play in supporting their male partners experiencing mental health challenges.[47,48] Yet, family farm scholars have long noted the invisibility of women's contributions and the unrealistic expectations placed on them.[1,7,49–52] This has remained the case even as women have increasingly taken on more leadership roles on and off the farm.[6,8,43,48] As much as the COVID-19 pandemic fragilized women's social progression within the household and society, it has illuminated the complexity and the emotional burden on women from the gendered expectations surrounding unpaid care work. [4,29–32,36]

Whilst the triple burden and invisibility experienced by farm women has been extensively researched by rural social scientists, this body of work has yet to fully consider the consequences of farm women's triple burden on their lived realities and their mental health.[37] Indeed, much of the literature on women in agriculture focuses on power structures, women's identity, and their professional roles, including their ability to, or not, access these roles. See for example.[1,3,43,49,53,54] However, there is some evidence that farm women experience challenges juggling their multiple roles and that these challenges have consequences on their health and well-being.[4,14,15,25,26,37,55,56] Out of the handful of empirical studies that have specifically focused on childcare for farm families, none specifically set out to study the connection to mental health. Yet, all noted that key informants and farm parents repeatedly shared that childcare is a source of stress for farm women.[12,25,26,32,33,41,57–59]

Farm children safety affects mental health

In addition to the mental health burden from juggling professional and personal roles, some studies have noted the stress associated with keeping children safe on the farm.[25,26,58,60] Farms are dangerous environments, and farm safety experts have long noted the importance of supervising children off the worksite.[18,61–63] In reality, when farm parents experience childcare challenges (i.e., due to availability, cost, or quality), farm parents can find themselves in situations where their only choice is to bring the children to the worksite.[26,32,58,60,64] Having children on the farm work site impacts the safety of the children, farm parents ability to get the work done, and the development trajectory of the farm business,[26,38,41,58,64] leading Becot (2022) to argue that the nature of caring for children in the dangerous farm environment may also be a currently underappreciated source of stress.

Variations in farm women's mental health as children age

Anthropologists and child development psychologists have long established that as children develop, their cognitive, physical, social, and emotional needs change. In turn, these variations can present differing challenges for parents as they care for their children.[65–69] The farm safety literature also shows farm children's exposure to risks varies based on these development stages.[65,70–72] Looking across children's development stages, young children require constant and time-consuming physical care, while in comparison older children require more emotional and social support in adolescence as they begin to make decisions that will structure their future adulthoods (e.g., the relationships they are forming, the subject they want to study at school and which extra-curriculum activities they want to focus on).[68] Besides caring for their children's general cognitive, physical, social, and emotional needs, farm parents also need to contend with the dangerous nature of the agricultural worksite. Very young children are most at risk for farm incidents; as children age and become more independent, they become capable of comprehending dangers on the farm and are less likely to experience a farm incident.[70,73] As such, farm parents' mental health burden of ensuring the safety of children should theoretically decrease overtime.

However, research shows that although older children are more capable as they develop cognitively, they can still get distracted and are prone to peer pressure and risk taking.[70,71,74,75] In terms of physical needs of farm children, although greater supervision is required for younger children, the over estimation of farm children's physical abilities to operate machinery such as quad bikes and tractors can result in serious accidents.[71,76] In short, the farm safety literature hints at the fact that although the physical, cognitive, social, emotional, and safety needs of children shift as they age, keeping the children safe is not a linear burden that decreases as a children age; it should therefore follow that there is a constant and consistent impact on farm parents' mental health even as children become older.

Methods

Study background and recruitment

Our qualitative data are from 11 focus groups with 68 women raising children under 18 on farms and two rounds of a photovoice activity (33 women in the first round and 19 women in the second round) in three study states (Ohio, Wisconsin, and Vermont). Seldom used in agricultural safety and health research,[77] photovoice is a participatory and emancipatory visual narrative approach that allows participants to take on the simultaneous roles of being the researcher and the knowledge creator.[78,79] This is done via the participants taking photos and then debriefing about them afterwards in a group session. Part of a larger CDC NIOSH project on childcare and children farm safety, participants were recruited using a convenience sample approach, by asking farm service providers and farm organizations in our study states to share recruitment information through their social media accounts and listservs networks.[80] To participate in the study, participants had to: 1) be the parent or primary caregiver of at least on child under the age of 18; 2) identify as a woman; and 3) live on a farm or ranch operation in either Ohio, Wisconsin, or Vermont. As noted above, we chose inclusion criteria that would be welcoming to a diversity of caregivers who identify as a woman. For this study, we focused on people who identify as women because they continue to be the primary caregivers. We elected to not include people who identify as men because the women in agriculture literature highlight the importance of creating women identifying-only spaces, given the discrimination and invisibility they have faced in agriculture related spaces.[45,54,81] Participants in the focus groups were not required to participate in the photovoice activity. The attrition between the two activities may be in part explained by the public nature of the photovoice activity and the time commitment. The second round of the photovoice activity was the least attended, which we fully expected, since the activity was conducted in June. Depending on commodities produced, this can be busy on the farm while the childcare load increases with school being out for the summer.

Study instruments and data collection

We used a semi-structured guide during the focus groups that covered the topics of childcare arrangements, farm safety strategies, farm business decisions, and women's quality of life. Our study design and interpretation of the results were informed by interdisciplinary bodies of knowledge: mental health in agriculture, women in agriculture and their triple burden, childcare in agriculture, and farm children safety. Most relevant for this article, we asked: 1) how farm safety concerns impact what they do with the children while they work on the farm, and 2) how juggling the children, getting the work done, and keeping them safe impact their quality of life. The guide was reviewed for clarity, coverage of the topic, and potential bias by family farm and farm safety experts and by piloting the instrument twice with a total of 13 farm women recruited from outside our study area. Focus group data were collected in February 2022. On average, the focus groups lasted an hour and were followed by a 30-minute training session for the photovoice activity.

After the focus groups, we developed the picture prompts for the photovoice activity as well as the group debrief guide to provide farm women with an opportunity to show their realities and expand on the issues identified in the focus groups. We

provided participants with three sets of prompts for each of the two rounds of the photovoice activity and, most relevant to this article, we asked farm women to take pictures connected to: 1) how thinking about juggling children, farm work, taking care of the household, and off-farm work makes them feel, and 2) when juggling the children and keeping them safe, farm work, taking care of the house and off-farm work, what makes their day easier and what makes their day harder. We used the SHOWED technique to develop our debrief guides.[79] Farm women were asked to describe their picture, why they took it, how it spoke to the picture prompts, how it reflected the childcare and schooling options they have access. Women were also asked to share about what they wanted farm organizations, farm service providers, and policy makers to know and do about the picture. We conducted one round of photovoice in February–March 2022 and one round in June 2022. Across the two rounds the group debriefs lasted on average 1hour.

The focus groups and photovoice activities generated 28 hours of audio and 377 pictures. Farm women received a stipend of $50 for their participation in the focus groups and $50 for their participation in each round of the photovoice activity (participants could receive up to $150). The first and second authors conducted the data collection. Both are PhD holders with graduate-level training in qualitative data analysis and over 30 years of combined experience conducting qualitative research. After each focus group and photovoice activity debrief, we debriefed for 15–30 minutes on what had just happened, the findings we were seeing emerging, and potential changes in our approach to asking the questions and follow-up we might need to make so that we did not introduce a bias around what participants might feel like they can(not) say. Often, these debriefs included conversations around what we expected to have happened but had (not) happened and reflections on how our own positionality might be impacting the data collection.

The focus group protocol was exempt from IRB review, while the photovoice protocol went through expedited review. When designing the study instruments, we had decided to ask about quality of life but not about mental health (i.e., stress, anxiety, and depression). We chose this approach in part due to the public nature of our research activities and the stigmas around mental health in agriculture.[9,82] However, and based on studies leading up to this one,[25,26] we had noted in our IRB protocol the eventuality that mental health challenges might come up (this is in part why we sought expedited review for the photovoice activity), and we had developed a strategy to respond if participants exhibited signs of distress. For more information about the photovoice activity, including the ethical implications for an agricultural health and safety project and the IRB protocol, see Becot et al. (2023).

Study participants

Among the 68 farm women who participated in the study, almost all were either married or lived with a partner (97%). They had on average two children, including 52% with children ages 0 to 2, 48% with children ages 3 to 5, and 66% with children ages 6 to 18. Almost all (99%) reported being the biological parent of a child, but in addition, 6% reported being an adoptive parent, 4% a step-parent, and 1% a foster parent. While there was little race and ethnic diversity among our participants (94% were white), there was a fairly even split based on farm background (60% grew up on a farm or ranch) and farm experience (55% were beginning farmers). There were 84% who reported at least one person in the household had an off-farm job, and their household operated farms of varying scale: 20% reported less than $10,000 in farm sales, 42% reported sales between $10,000 to $249,999, 22% reported sales between $250,000 to $499,999, and 6% reported sales $500,000 and over. Commodities produced on their farms varied: 79% produced livestock, 52% produced field crops/hay, 45% produced fruits and vegetables, and 11% had nurseries and greenhouses.

Our sample captures a diversity of experiences on the basis of the age of the children and farm operations, and to some extent on the basis of relationship to the children. Furthermore, while we had not asked specifically about geographical location, the focus groups revealed participants were located in rural, suburban, and urban geographies. However, we note that demographically our

sample is not diverse in terms of race, ethnicity, or gender. Related to race and ethnicity, the proportion of participants of color is in line with the racial and ethnic make-up of farmers in our three study states.[83] Related to gender, we specifically recruited individuals who identify as women given that women continue to play a disproportionate role in caregiving.[29–31] We acknowledge that the lack of demographic diversity is a limitation of our study and that future studies should examine the interactions between caregiving responsibilities and mental health across race, ethnicity, and gender identities.

Coding and data analysis

We used a directed content analysis approach to code and analyze the data.[84,85] This is an iterative approach that includes both a deductive and an inductive approach. The deductive codes were based on the questions from the study instruments, while the inductive codes were generated during the coding process to capture important ideas and concepts not already captured through the deductive codes.[86] Our coding process was as follows. The first author and a research staffer first coded the same transcript to refine the codebook and ensure consistency in use. We used the Kappa coefficient to discuss necessary codebook changes and variations in the approach to coding. We repeated this step two more times, which is when we reached the threshold for excellent agreement (average Kappa score of 75% for all codes), and when we were satisfied with the usability and coverage of the codebook. From then on, we split the remaining transcripts and met bi-weekly to discuss potential adjustments to the codebook along with emerging themes and patterns. Bi-weekly meetings among coders were also used to reflect on and address potential biases in our coding.[87]

Most relevant to answer our research questions, our analysis was focused on the following codes: quality of life (family's quality of life and own quality of life), mental health, negative aspects, and positive aspects of current life, (in) visibility of women, and women's identity. The thematic analysis included reading through the text associated with each code and identifying themes and sub-themes in response to our research questions. We analyzed and coded the data using NVivo (QSR International, Burlington, MA). In what follows, we present the research findings and include quotes and pictures to illustrate these findings. The pictures represent what participants choose to share to show their lived realities and perspectives. Some of the pictures may not be in line with current farm safety recommendations but in line with the emancipatory nature of photovoice, "we can't fix what we can't see".[77,78] Throughout the analysis process, the three authors consistently reflected on potential biases stemming from our positionality and how to address these biases. The discussion of our findings in the context of the existing literature was also a way to continue the reflexivity process.

Findings

We now present the findings from the three themes and Table 1 provides an overview of the findings.

Farm women's lived realities with mental health: juggling everything

> My whole existence has felt defined by the fact I have chosen to be a farmer and a mother, those things are such gifts and they're the source of all of my joy and also all of my stress.

Reflective of what many women shared, this Vermont participant describes a trapped life and highlights the complex dual roles of being both a mother and a farmer. The constant pressures and mental health consequences were illustrated throughout the focus groups and photovoice activity with the frequent mention of negative mental health outcomes, depression, stress, and anxiety. For example, the words "depression, post-natal/post-partum depression" and "anxiety" were mentioned in 8 out of the 11 focus groups. In all the focus groups, participants consistently emphasized the "stress" they were under and how this negatively impacted on their quality of life.

The participants provided nuanced insights into their lived realities by speaking at length about their past and/or current mental health issues.

Table 1. Overview of study findings.

Themes	Definition	Supporting quotes
Farm women's lived realities with mental health: Juggling everything	This theme speaks to the emotional challenges that farm women face and how these are shaped by the multiplicity of personal and professional roles they are expected to fulfill, the support their receive (or lack thereof), the feeling of guilt from not doing enough and/or sense of not being good enough. This includes the idealized norm that children should come along while working, and the limited variation across farm type participants came from.	• "Being the scheduler for everything, expected to organize all the childcare and activities, appointments etc. This isn't shared. Again, the mental load can be intense and overwhelming at times. Trying to juggle everything is hard." • "I just handle an absurd amount of stress all the time and it makes me tired and depressed … it has a serious effect on quality of life" • "My whole existence has felt defined by the fact I have chosen to be a farmer and a mother, those things are such gifts and they're the source of all of my joy and also all of my stress". • "We feel obligated to also have our kids with us, because we want them with us, we want them learning what we are doing. But there's the social pressure that in this day and age of you're not doing enough and in reality we are doing way too much. And that is a significant impact, I would say more on the mental health and it's going to have an even bigger impact down the road as this keeps compounding."
Connections between farm women's mental health and farm safety.	This theme explored how awareness of dangers on the farm, the pressure to provide a safe environment for their children, and childcare options available (or lack thereof) intersect with farm women's mental health challenges	• "The anxiety piece comes from the fear of some of the accidents that can happen, you're always worried." • "My kids are usually at daycare during the day but when my days run long they sometimes have to come with [me] for chores. They're usually willing to tag along but it worries me when the bigger tractors are running that they're safe enough. I try to save the safer chores for when the kids are at the farm but occasionally we have to divide and conquer between adults watching kids. Juggling my 4 kids and farming is stressful, it does make me worry, but things need to get done so I do the best I can."
Mental health impacts based on the age of children.	This theme speaks to how the stress and mental health issues connected to raising children on a farm does not decrease over time, per the common refrain. Rather, the stress and mental health issues shift and become more complex as children grow.	• "It's good to know that there's light at the end of the tunnel when once your kids all start going to school so that's a little bit of a relief. I mean it is overwhelming right now with three little kids and trying to get barn work and everything done." • "I've been really, really surprised at how the emotional needs of these young adult humans how consuming those needs are and so much more physical needs when the kids were younger … now it's a much more intense emotional need from these teenagers that feels so much more important than anything I'm doing." • "As children age- the risks change for what they can do on a farm. My child is as tall as I am and can physically help with milking cows. I would not allow her to do this task alone- as mentally she is not mature enough- but supervised, yes!"

A participant from Ohio, stated she was currently dealing with postpartum anxiety and *"breaks down crying one to two times per week"*. While another participant from Vermont commented: *"I just handle an absurd amount of stress all the time and it makes me tired and depressed … it has a serious effect on quality of life"*. Across the focus groups and as the picture and caption in Figure 1 illustrate, participants frequently vocalized that women were at the end of their tether,

Figure 1. "Stressed, anxious, tired." photo credit: participant #6.

with women often vocally and visibly upset, tearing up, and on one occasion breaking down in tears.[1]

These findings are particularly noteworthy. As highlighted in the methods section, while the interview guide asked participants about their quality of life, we did not ask about mental health, stress, anxiety, or depression. Yet, over, and over, the farm women launched into descriptions of how their mental health was connected to their quality of life. Many did not hold back in describing how the pressures they were under were having detrimental impacts on their mental health and quality of life.

The tension described by participants of enjoying farming and being with their children, whilst simultaneously being aware their mental health was deteriorating highlights the emotional challenge farm women are facing. Participants consistently attributed their mental health challenges to the multiplicity of personal and professional roles they are expected to fulfill. Reflecting the concept of the "triple burden", women shared how they are expected to be the primary childcare giver alongside expectations that they will undertake on-farm and off-farm work. As one woman from Wisconsin shared: *"everything's on me, the chores, the crops, all of it's on my plate, the kids getting to and from schools, doctors' appointments, school activities*." For participants, the stress, and anxiety in part stems from the complexity of organizing childcare and multiple, sometimes overlapping priorities as explained by this participant from Ohio: *"There's been an exuberant amount of stress with managing four children and four schedules."* More specifically, women shared the ways in which running the household included not only the planning, preparing, and cleaning up of meals, it also included scheduling appointments for family members. For instance, driving children to and back from school, medical appointments, and extracurricular activities such as sports and clubs. These stresses are compounded for some by the rurality of their communities, with many participants reporting they need to drive almost an hour each way multiple times a week. The resulting mental stress and physical exhaustion were reflected in the number of women feeling overwhelmed, as illustrated in the pictures and captions from Figures 2 and 3.

Support received shaped farm women's lived realities. Indeed, while some participants reported sharing care and domestic work with their husbands, almost half of participants reported receiving minimal support from their spouses, thereby compounding the triple farm women experience. For example, one participant shared that only during the COVID-19 pandemic, 15 years into their relationship, her husband realized the extent of the work she had been doing to manage the household every day and finally acknowledged just how invisible yet vital her contributions had been. Participants who reported not getting any support

[1]On one occasion researchers became concerned about the mental health and welfare of a participant and followed the plan developed in their IRB protocol for participants exhibiting signs of distress. This plan was in part developed based on principals learned through the mental health first aid training.

Figure 2. "This picture represents how planning our week makes me feel. Planning the week involves meal planning, evaluating my work schedule with my husband, the kid's schedule, appointments, farm needs, and more, and then ensuring we contact the babysitters." photo credit: participant #7.

Figure 3. "I guess supper is coming from the freezer tonight… this picture is an example of how fatigued and annoyed I get from being the person responsible for dinner every night (and breakfast and lunch and snacks and everything else around the house)." photo credit: participant #11.

from their spouses were among the most stretched and stressed. This is illustrated by the quote below and Figure 3.

> Being the scheduler for everything, expected to organize all the childcare and activities, appointments etc. This isn't shared. Again, the mental load can be intense and overwhelming at times. Trying to juggle everything is hard.

Women consistently spoke about a feeling of guilt that they were not doing enough and/or a sense of not being good enough. Regardless of if the women felt supported by their partners, almost all participants spoke about a feeling of guilt that they were not doing enough and/or a sense of not being good enough. Participants repeatedly spoke of trying to "juggle everything" and how this is intensified by the farm and the childcare work: *"That whole part of guilt, from moving to one stage to another, we're navigating efforts between milkings, and you know normal life."* Contributing to this sense of guilt and not doing enough was the societal expectation that farm women should have their children around while they do farm work. For a number of women, this was a significant source of frustration and stress, because this idealized norm can negatively affect farm productivity and profitability while simultaneously creating stress – the dangerous nature of the worksite was seen as a compounding factor in that sentiment. For example, a Vermont focus group participant explained:

> It seems like we need to move beyond this expectation or the assumption that farmers should work with their kids … I don't want to work with my kids, I don't want to farm with my kids. I'm a worse farmer when my kids are with me because I'm totally scattered.

Several participants openly questioned why farmers are the only occupation expected to bring their children to work:

> We feel obligated to also have our kids with us, because we want them with us, we want them learning what we are doing. But there's the social pressure that in this day and age of you're not doing enough and in reality we are doing way too much. And that is a significant impact, I would say more on the mental health and it's going to have an even

> bigger impact down the road as this keeps compounding.

In other words, the societal pressure to have the children along took away and diminished women's identity as a farmer which also contributes to the invisibility of women's work on the farm. Therefore, childcare whilst performing farm tasks created mental stress among most of the farm women.

Overall, the intersection of emotional stress, physical exhaustion, and quality of life was a universal pattern that held across the full spectrum of farm types regardless of farm size, commodity mix, or market orientation and were not linked to any one "type" of agriculture in this study. We recognize farm women are not unique in experiencing challenges because of role overload and that women of all walks of life raising children experience similar challenges. However, a key difference for farm women is they must contend with an extra layer of challenges that stems from raising children in a dangerous working environment, which we turn to next.

Connections between farm women's mental health and farm safety

The pressure to provide a safe environment on the farm for their children was a significant factor contributing to farm women's mental health struggles. A sizeable proportion of the women in this study were under no romantic illusions about farm life and were highly aware of how dangerous the farm environment can be for children, as the following quote and Figure 4 illustrate: *"The anxiety piece comes from the fear of some of the accidents that can happen, you're always worried."*

Participants' constant need to simultaneously assess children's risk exposure while engaging in farm work creates stress. As one participant explained: *"they (the children) are out in the field with us for the rest of the day, which is fun but can be very stressful because I'm dealing with customers there's lots of cars around, but we want them to be part of it"*. Participants shared how farm safety fears are constant and are exacerbated by the changing nature of agriculture. While safety features on machinery have increased, machinery has also become bigger and more powerful, making the farm a more dangerous environment by some measures:

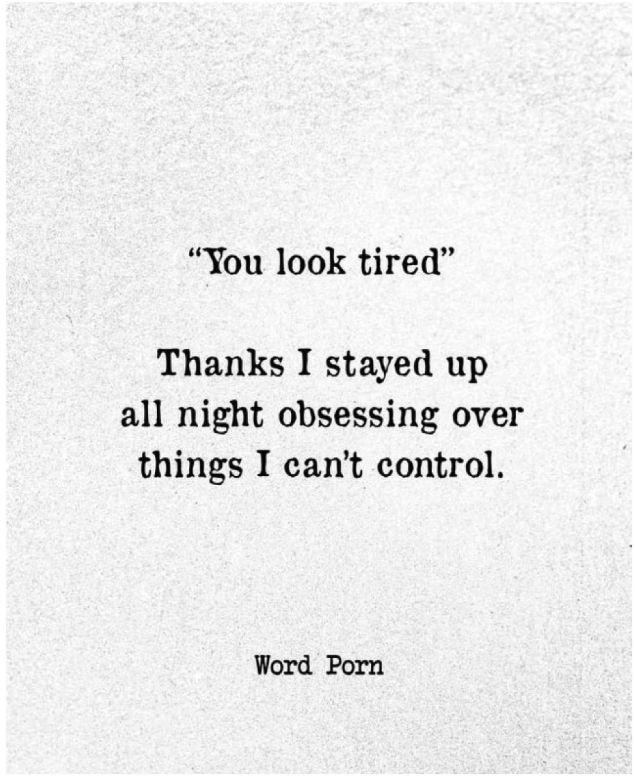

Figure 4. "This quote I feel to my core. I think as a farm mom we worry about EVERYTHING. And then worry some more. I … have many sleepless nights worrying about keeping my children safe, making sure they have a life off the farm and involved, keeping the employees happy and cows healthy. There is soooo much to worry about and keep in check. All. The. Time." photo credit: participant #8.

> Our kids are still on the farm, but everything has changed the equipment has changed the safety … now technology has progressed our farm practices have progressed, everything is so different, but there is no focus on education and staying safe.

In both the focus groups and photovoice debrief sessions participants shared how the lack of alternative childcare options (due to cost, availability, and/or quality) resulted in their having no other choice than to have the children on the farm with them. This is illustrated by the picture and caption in Figure 5.

Many women described how they simultaneously felt constrained and torn between being able to carry out farm work while caring for their children and keeping them safe on the

farm. For example, one participant shared that to limit her children's exposure to risk she needed to avoid or not do certain jobs on the farm and described having her children on the farm as a *"dichotomy of feelings of joy and stress."* The constant fear of incidents occurring on the farm and the pressure to keep children safe was reinforced by a photovoice participant as shown in Figure 6.

Mental health impacts based on the age of children

A common refrain in American parenting circles is "it will get easier", this reflects the assumption that as children grow and mature, parenting will become less stressful. In our study, the experiences of the women show how the stress and mental health issues connected to raising children on a farm does not necessarily decrease over time, it just shifts. In the focus groups parents with young children actively spoke about the acute stress they felt followed by the sentiment that they were just waiting for this period to be over and saw a light at the end of the tunnel. In particular, women expected that the childcare burden would decrease when their child would be old enough to go to school and when they would have more time to focus on work:

Figure 6. "My kids are usually at daycare during the day but when my days run long they sometimes have to come with [me] for chores. They're usually willing to tag along but it worries me when the bigger tractors are running that they're safe enough. I try to save the safer chores for when the kids are at the farm but occasionally we have to divide and conquer between adults watching kids. Juggling my 4 kids and farming is stressful, it does make me worry, but things need to get done so I do the best I can." photo credit: participant #3.

Figure 5. "My 5-year-old with me because daycare was closed that day. The hardest thing is when things change unexpectedly." photo credit: participant #4.

> It's good to know that there's light at the end of the tunnel when once your kids all start going to school so that's a little bit of a relief. I mean it is overwhelming right now with three little kids and trying to get barn work and everything done.

Sometimes in response with the expectations that stress would decrease as children age, women raising older children would explain that the stress is still there, it was just the source that changed. Children going to school created uninterrupted time to work, yet they started having to drive

children around to various activities. This was summarized by a focus group participant from Ohio:

> Now we are moving into running the kids to after school activities … so then the whole part of that guilt because we can't do all the activities like some of their friends, it doesn't fit in with my schedule, you know you move from one stage to another … it's just a different type of relief.

"Mom guilt" was experienced by a large proportion of participants, especially in relation to their older children not being able to attend all the events or activities as their peers, as the women did not have the capacity to drive them there due to the busy farm schedule, and for some the rurality of their locations created compounding challenges. Furthermore, some women reported seeing an impact on their older children. This comes from their children being raised in a stressful farm environment as well as the perception that the children did not have the same freedom or opportunities as their non-farm peers, such as participating in extracurricular activities. A farmer from Vermont explained:

> The expectations of modern life aren't necessarily lined up with farm family life, and so I don't ever want to feel like I'm preventing my kids from having a normal modern life, and yet it really creates a lot of, not friction it just creates a lot of stress, for me, because I want them to be doing, and having all the things that everybody else is doing and. it's not conducive to what we're doing on the farm.

In other words, farm women have to navigate expectations of "modern life" whilst also trying to manage the family farm schedule, which at times is not compatible.

In addition to changes in time use, women also discussed the challenges associated with the increased complexity of meeting the needs of their children as they age. For younger children, the focus was on making sure that their basic needs were met (e.g., packing enough snacks, making sure they are sheltered from the elements, having a place to nap, etc.). While meeting these needs required effort, they were seen as easier to meet than the needs of older children. Indeed, older children were seen as being able to take care of their basic needs, but their increasing need for emotional support was seen by farm women as harder to meet amidst juggling everything else. This was reflected by a farm woman from Vermont who explained:

> I've been really, really surprised at how the emotional needs of these young adult humans how consuming those needs are and so much more physical needs when the kids were younger … now it's a much more intense emotional need from these teenagers that feels so much more important than anything I'm doing.

Stress, farm safety, and the degree to which children are mobile are inherently linked. The women described that while babies are more physically demanding, from a safety perspective they were easier to manage as they were not mobile. Participants described how they used baby carriers or car seats to keep babies safe and know exactly where they were at all times. In comparison, the period when children learn to walk and develop into toddlers is particularly challenging and stressful. Toddlers are always on the move, they begin to exercise some independence, but do not understand the dangers on the farm. The women in this study shared how this stress is exacerbated when partners and family are unsupportive and ignorant of what these challenges present to completing farm work in a safe manner. One participant illustrated:

> Working with the toddler is not a feasible option. However, no matter how many times we talk about it he [participant's husband], along with the general population thinks that farming is this idyllic thing that you can just magically do with children by your side and it's not. No matter how, often we talk about it, no matter how hard it is for him to do a project around the house with the toddler next to him, I'm like this is what my life is every single day, with him, so do you see why childcare is critical for me getting my work done every week and he's like you can figure it out just let him run around outside.

As much as women described the relief that comes from older children being able to help on the farm, the concern for children's safety did not disappear. Despite describing older children as having skills and being resilient, participants described how pre-teens and teenagers still lack the cognitive capacity or risk management strategies experienced adults have. For example, one participant

Figure 7. "As children age- the risks change for what they can do on a farm. My child is as tall as I am and can physically help with milking cows. I would not allow her to do this task alone- as mentally she is not mature enough- but supervised, yes!". Photo credit: participant #18.

from Wisconsin shared: "*My kids have learned to be very independent and unfortunately with being independent they make a lot of bad decisions; I mean they're kids they are not adults.*" The picture and caption in Figure 7 further reinforces that farm parents in this study are keenly aware of the ever present dangers on the farm even for their older children. While children may be physically able they are not fully grown adults, and overestimating their abilities can be risky especially when coupled with the fact that they are emotionally immature.

Discussion and conclusion

This article has examined the ways in which farm safety, farm women's personal and professional responsibilities, and farm women's mental health intersect. By using focus groups and photovoice, an innovative data collection method for the field of agricultural health and safety, our study shows that: 1) the triple burden of farm women (i.e., caregiving and household work, on-farm work and off-farm work) impacts their mental health, 2) the dangerous nature of the farm work site is both acknowledged and a source of stress, 3) the stress of caring for children on farms does not disappear as children age but rather shifts. These insights are important contributions to the agricultural safety and health, women in agriculture, and rural social science bodies of literature because they provide in-depth understandings of farm women's lived realities, experiences raising children in a dangerous environment, and the resulting consequences on women's mental health. This study also contributes to broader calls for research specifically focusing on farm women's mental health.[14–16, 32]

Our findings examining the gender-based expectations of care work along with work on and off the farm both echo and expand previous research[2,6,7,43,48] by illustrating the ways in which social expectations and lack of support place a heavy burden on the emotional and mental health of farm women. The women in this study openly shared the ways they experience stress brought on by simultaneously needing to organize multiple schedules, plan and prepare household meals, and do the farm work. While women consistently shared how much they loved their farming lifestyle and spending time with their children, they were equally candid about the challenges of "doing it all" and their deteriorated quality of life, especially when household tasks were not shared with their spouses. This finding brings up important questions about how and why farm women reconcile seemingly opposing narratives about family and work, and what the consequences of doing so are.

By examining the issue of farm women's mental health from a farm safety perspective, we gain insights into the pressures women experience as they try to ensure children are safe on the farm while simultaneously trying to fulfill societal parenting expectations. The women in this study did not portray their farms only as idyllic places to raise children (as farms are sometimes simply portrayed to be), rather they openly shared the dangers of the farm environment. Parallel to Elliot et al.,[60] participants consistently and openly discussed the dangers of having children on the farm, the fear that children could be hurt, and were constantly weighing the risks and benefits of having children with them. Echoing other studies, many of the women explained how even though it was dangerous and not always their preference, they needed to keep their children with them on the farm because they had few alternatives due to challenges associated with the availability and cost of childcare in their respective

communities.[25,26,58,59,64,88] In this study, the lack of available and affordable childcare options emerged as a significant source of stress, one that could be addressed by making childcare more affordable and by increasing the number of childcare providers and options. Taken together, these findings reinforce the need for agricultural safety and health research and interventions to expand beyond individual level safety knowledge and attitudes to more broadly address structural and systems level issues.[25,89–91]

Our findings on variations in how the stress of raising children on farms changes and evolves as children age is a counterpoint to the common refrain in American parenting circles that "it will get easier". While the age and developmental stage of the farm children shapes and affects which factors contribute to farm women's stress, it remains that at every stage of a child's life farm women reported experiencing stress and mental health challenges that are exacerbated by the ever-present dangers on farms and the rurality of some of the farms. These findings align with child development studies demonstrating that while the immediate physical needs of children decrease as they became older, their cognitive and risk adverse abilities continue to develop well into adulthood.[74,75,92] A productive avenue for future research will not only look at the intersection between farm children and stress for the parents, it will also seek to understand how the variations in stresses as children age influence the farm operation's' production and economic viability trajectories along with the family's quality of life.

While not directly connected to our research questions, a key, albeit somewhat unexpected, finding was women's willingness and openness to speak in a group context about how the pressures of childcare impacted their mental health. This finding is a strong counterpoint to the common narrative in agricultural mental health research that farmers are stoic and do not want to talk about mental health challenges.[10,14,23] As previously noted, it is also a cautionary tale to all of us researchers and Extension professionals that we need to be careful in the narrative and myths around farmer mental health and stress that we contribute to and the ways in which we may be reinforcing social norms and expectations.[25,93] Indeed, countless farm women participants thanked us for doing this research, expressed feelings that their struggles have been invisible, and that they need help. The results of this study reinforce previous research on the invisibility of farm women and their desire for more childcare support,[2,7] and the need for mental health interventions in agriculture to account for women's lived realities.[16,17,94] This includes their needs connected to the pre/post-partum depression and the triple burden.

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Data availability statement

The data presented in this study are available on request. The data are not publicly available due to questions that could identify respondents. Furthermore, the author's institution requires a data sharing agreement before research data may be shared.

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