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Research Questions: 1) How are dairy farmers using robotic milking systems doing in terms of their mental health?
 2) What are the factors related to their mental health?

We surveyed farms to assess management, cow health, production, and farmer mental health

34 dairy producers from Ontario completed an online survey that included validated psychometric scales to assess:

<p>Stress</p> <ul style="list-style-type: none"> Perceived stress level based on 10 questions Associated with: <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Gender </div> <div style="text-align: center;"> Milk yield & protein % </div> <div style="text-align: center;"> Feeding method </div> </div> <p>(greater stress: for females, with lower yield/cow and protein, and with manual vs. automated feeding (i.e. automated TMR or conveyer))</p>	<p>Resilience</p> <ul style="list-style-type: none"> Ability to thrive against hardships, based on 10 questions Associated with: <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Herd average SCC </div> <div style="text-align: center;"> Feeding method </div> <div style="text-align: center;"> Milk yield per robot </div> </div> <p>(higher resilience: with higher SCC, with lower yield/robot, and with automated (i.e. automated TMR or conveyer) vs. manual feeding)</p>
<p>Anxiety</p> <ul style="list-style-type: none"> Level of potential anxiety based on 7 questions Associated with: <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Gender </div> <div style="text-align: center;"> Milk yield & protein % </div> <div style="text-align: center;"> Feeding method </div> <div style="text-align: center;"> Working alone </div> </div> <p>(greater anxiety: for females, with lower yield/cow and protein, and if feeding manually or working alone on the farm)</p>	<p>Depression</p> <ul style="list-style-type: none"> Level of potential depression based on 7 questions Associated with: <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Milk protein % </div> <div style="text-align: center;"> Feeding method </div> <div style="text-align: center;"> Working alone </div> </div> <p>(greater depression: with lower protein and if feeding manually or working alone on the farm)</p>

Take Home Messages:

- Dairy farmers using robotic milking systems may be experiencing less stress, anxiety, and depression than other farmers**, when comparing our results to a recent survey (Jones-Bitton et al., 2019) of all commodity groups across Canada that used similar methods.
- Not only was milk yield related to mental health, so was cow health** (SCC and the proportion of lame and under-conditioned cows - because these variables were correlated, we could only offer one variable to our models and we chose milk yield).
- Our results highlight the potential benefits of automated milking and feeding systems for mental health, and the greater risk of poor mental health for producers working alone.**