Rural Mental Health: Promoting Resilience in Farmers and Ranchers

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Objectives for Today

- Build awareness around potentially stressful conditions affecting farmers
- Build awareness around mental health concerns for farmers and ranchers
- Learn about preliminary findings from studies about farmers and ranchers in the Midwest
Agriculture: Current issues

• Farming is one of the most dangerous occupations.¹
• Agriculture sustains one of the highest mortality rates from stress-related illnesses.²
• The impact of stress on the mental health of farmers is an international concern.

Farm stress³

• Long days
• Social isolation
• Heavy workload
• Technological innovation
• Business management
• Farm administration
• Disease outbreaks
• Natural disasters
• Government regulations
• Climate changes
• Market fluctuations
• Family roles
• Health care costs
Mental health concerns of farmers & ranchers

- Recent depression rates in agricultural workers have varied from 7.4% to 24%.\(^4\),\(^5\)
- Suicide in agricultural workers is a global concern as farming is an occupation with a higher suicide rate than the general population.\(^6\)
- Gender differences exist as rural males maintain higher suicide rates than rural females in most countries.\(^7\)
- Farmers may have a tendency to ignore both physical and mental health symptoms unless their work productivity is reduced.\(^8\)
Suicide crisis in farmers
The US farmer suicide crisis echoes a much larger farmer suicide crisis happening globally:

- An Australian farmer dies by suicide every four days.
- One farmer per week takes his or her own life in the UK.
- One farmer dies by suicide every two days in France.
- More than 270,000 farmers have died by suicide since 1995 in India.

Possible contributors to the high suicide rate in farmers:

- Social isolation
- Potential for financial losses
  - Most commodity prices remain below the cost of production.
- Barriers to and unwillingness to seek mental health services
- Access to lethal means
Mental health stigma

• A negative stigma exists regarding mental health issues, and to protect their family reputation, farming families tend to view psychiatric treatment as least desirable.\textsuperscript{10}

• Farmers tend to disclose to family members or friends rather than seeking professional help.

• Farm families may live in isolated geographic locations in which access to mental health services is limited.

Current survey

• Survey of farmers/ranchers from KS, MI, MO, SD

• Survey sent to 1000 randomly selected farmers/ranchers per state

• 14.8% response rate ($n = 568$)
Current survey

- Items include:
  - Demographics
  - Farming characteristics and history
  - Farm/Rancher Stress Inventory
  - GAD-7 (anxiety)
  - PHQ-9 (depression)
  - SBQ-R (suicide history and ideation)
  - Brief COPE (coping strategies)
  - MSPSS (support from friends/family)

Demographics

- Age: 20 to 94; mean 63
- Gender: 81.2% male
- Marital status: 82.8% married
- Race: 96.4% white
- Veteran status: 18.2%
- Education: 50.4% associates or higher
Demographics

- Years farming: 0 to 80; mean 42
- Head of livestock: 1 to 63,000; mean 746
- Acres farmed: 10 to 200,000; mean 2326
- Farm role: 61.2% principle/primary owner/operator
- Off-farm job: 17.6%
- All income from farming: 40.3%
- Use pesticides: 87.3%

Demographics

- Generation: 22% first
- Primary commodity:
  - 67.6% field crops
  - 21.6% beef
- Experienced a disaster: 34.5%
- Experienced loss in net farm income: 9%
  - $1000 to $681,000
  - 50% lost $20,000 or less
MSPSS

• 12 items about who a person can rely on in difficult times
  • 1 very strongly disagree to 7 very strongly agree
• 3 composite scores/areas:
  • Significant other (mean: 5.6)
  • Family (mean: 5.48)
  • Friend (mean: 5.05)

Preliminary Findings: Social support

• Who would you be willing to reach out to for support?
  • Family: 80.9%
  • Friend: 47.0%
  • Pastor/priest: 24.5%
  • Medical provider: 13.7%
  • Counselor/social worker: 5.6%
Farm/Ranch Stress Inventory

- 28 items about various stressors for farmers and ranchers
  - 1 no stress to 4 very stressful
- 5 factors
  - Government and external stress (mean: 2.49)
  - Work (mean: 2.02)
  - Finances (mean: 2.15)
  - Operation (mean: 2.10)
  - Isolation (mean: 1.39)

Preliminary Findings:
Percent Rating as Moderately/Very Stressful

<table>
<thead>
<tr>
<th>Stressor</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>High debt load</td>
<td>36.8</td>
</tr>
<tr>
<td>Outsiders not understanding</td>
<td>37.7</td>
</tr>
<tr>
<td>Problems with machinery</td>
<td>39.2</td>
</tr>
<tr>
<td>Season variations in workload</td>
<td>44.8</td>
</tr>
<tr>
<td>Concern over the future of farm/ranch</td>
<td>46.0</td>
</tr>
<tr>
<td>Government export policy</td>
<td>47.2</td>
</tr>
<tr>
<td>Taxes</td>
<td>50.4</td>
</tr>
<tr>
<td>Health care costs</td>
<td>62.3</td>
</tr>
<tr>
<td>Weather</td>
<td>70.7</td>
</tr>
<tr>
<td>Market prices for crops/livestock</td>
<td>75.8</td>
</tr>
</tbody>
</table>
Preliminary Findings: Depression

- Average score: 3.81 (range 0-19)
- Negatively associated with age (p<0.01)
- No significant differences
  - Gender
  - Military service

<table>
<thead>
<tr>
<th>PHQ-9</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal or none</td>
<td>381</td>
<td>70.7</td>
</tr>
<tr>
<td>Mild</td>
<td>99</td>
<td>18.4</td>
</tr>
<tr>
<td>Moderate</td>
<td>37</td>
<td>6.9</td>
</tr>
<tr>
<td>Moderately severe</td>
<td>11</td>
<td>2.0</td>
</tr>
<tr>
<td>Severe</td>
<td>11</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Preliminary Findings: Anxiety

- Average score: 3.31 (range 0-21)
- Higher among female than male (p<0.01)
- Higher among no military service (p<0.05)
- Negatively associated with age (p<0.001)
- Negatively associated with yrs farming (p<0.01)

<table>
<thead>
<tr>
<th>GAD-7</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal</td>
<td>398</td>
<td>73.0</td>
</tr>
<tr>
<td>Mild</td>
<td>97</td>
<td>17.8</td>
</tr>
<tr>
<td>Moderate</td>
<td>27</td>
<td>5.0</td>
</tr>
<tr>
<td>Severe</td>
<td>23</td>
<td>4.2</td>
</tr>
</tbody>
</table>
Preliminary Findings: Suicide Risk

<table>
<thead>
<tr>
<th>SBQ-R</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No significant risk</td>
<td>494</td>
<td>92.3</td>
</tr>
<tr>
<td>Significant risk</td>
<td>41</td>
<td>7.7</td>
</tr>
</tbody>
</table>

- Average score: 3.83 (range 3-17)
- Negatively associated with years farming (p<0.05)
- Negatively associated with age (p<0.05)
- No significant differences
  - Gender
  - Military service

Preliminary Findings: Mental Health

- Significant association between depression and anxiety symptom experiences (p=0.000)
- 20.7% of sample experienced symptoms of both
- Significant associations:
  - Anxiety and suicide risk (p=0.000)
    - 16.9% with anxiety symptoms are at significant risk compared to 4.5% without anxiety symptoms
  - Depression and suicide risk (p=0.000)
    - 20.8% with depression symptoms are at significant risk compared to 2.8% without depression symptoms
Preliminary Findings: Mental Health

<table>
<thead>
<tr>
<th></th>
<th>GAD</th>
<th>PHQ</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever diagnosed - depression</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Ever diagnosed - anxiety</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

- Association between depression and anxiety diagnoses with current anxiety, depression symptoms and suicide risk
- 26.5% with depressive symptoms not diagnosed
- 23.5% with anxiety symptoms not diagnosed

Preliminary Findings: Physical Health

<table>
<thead>
<tr>
<th></th>
<th>GAD</th>
<th>PHQ</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>coronary heart disease</td>
<td>-</td>
<td>0.042</td>
<td>0.06</td>
</tr>
<tr>
<td>asthma</td>
<td>0.053</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>COPD</td>
<td>0.026</td>
<td>0.008</td>
<td>-</td>
</tr>
<tr>
<td>arthritis</td>
<td>0.001</td>
<td>0.000</td>
<td>0.085</td>
</tr>
<tr>
<td>high blood pressure</td>
<td>0.048</td>
<td>0.056</td>
<td>-</td>
</tr>
</tbody>
</table>

- No significant relationships:
  - Heart attack, stroke, skin cancer, other cancer, kidney disease, diabetes, high cholesterol
### Relationship of MSPSS

<table>
<thead>
<tr>
<th>MSPSS</th>
<th>GAD</th>
<th>PHQ</th>
<th>SBQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r-squared</td>
<td>p-value</td>
<td>r-squared</td>
</tr>
<tr>
<td>Significant other</td>
<td>-0.136</td>
<td>0.002</td>
<td>-0.124</td>
</tr>
<tr>
<td>Family</td>
<td>-0.186</td>
<td>0.000</td>
<td>-0.169</td>
</tr>
<tr>
<td>Friend</td>
<td>-0.257</td>
<td>0.000</td>
<td>-0.253</td>
</tr>
</tbody>
</table>

- Weak, negative associations between support and mental health outcomes
- Strongest associations between:
  - Friend support and anxiety, depression, suicide risk

### Relationship of FRSI

<table>
<thead>
<tr>
<th>Farm/Ranch Stress Inventory</th>
<th>GAD</th>
<th>PHQ</th>
<th>SBQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r-squared</td>
<td>p-value</td>
<td>r-squared</td>
</tr>
<tr>
<td>Government and external stress</td>
<td>0.477</td>
<td>0.000</td>
<td>0.432</td>
</tr>
<tr>
<td>Work</td>
<td>0.492</td>
<td>0.000</td>
<td>0.451</td>
</tr>
<tr>
<td>Finances</td>
<td>0.498</td>
<td>0.000</td>
<td>0.459</td>
</tr>
<tr>
<td>Operation</td>
<td>0.457</td>
<td>0.000</td>
<td>0.409</td>
</tr>
<tr>
<td>Isolation</td>
<td>0.315</td>
<td>0.000</td>
<td>0.357</td>
</tr>
</tbody>
</table>

- Moderate, positive associations between FRSI and anxiety, depression
- Strongest associations between:
  - Friend support and anxiety, depression, suicide risk
Implications

• Importance of friendship
• Co-morbidity between anxiety and depression

National Resources

• National Suicide Prevention Lifeline:
  • 1-800-273-TALK (8255)
• National Suicide Prevention Lifeline Crisis Chat
  • http://www.suicidepreventionlifeline.org/gethelp/lifelinechat.aspx
• Crisis Text Line: Text “GO” to 741741
• Veterans Crisis Line: 1-800-273-8255
  • Press 1 (website also has a chat option)
• IOWA Concern 24-hour hotline: 1-800-447-1985
  • https://www.extension.iastate.edu/iowaconcern/faq
• Farm Crisis Center
  • https://farmcrisis.nfu.org/
Cooperative Extension Resources

• MSU Extension Farm Stress Management workshops
  https://www.canr.msu.edu/managing_farm_stress/

Cooperative Extension Resources

• SDSU: A Five-Step Approach to Alleviating Farm Stress
  https://extension.sdstate.edu/five-step-approach-alleviating-farm-stress
Cooperative Extension Resources

• NDSU – Responding to Distressed People
  https://www.ag.ndsu.edu/casscountyextension/pdfs/fs-1805-responding-to-distressed-people

Questions?
Thank you!

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References


Brief COPE

• 28 items about how someone copes with stressors
• 14 constructs
  • Self-distraction
  • Active coping
  • Denial
  • Substance use
  • Emotional support
  • Instrumental support
  • Behavioral disengagement
  • Venting
  • Positive reframing
  • Planning
  • Humor
  • Acceptance
  • Religion
  • Self-blame