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Economic Stress, Family Distress, and Work-Family Conflict among Farm Couples

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ABSTRACT

Despite recognition that farming has substantial economic uncertainty, few recent studies have investigated how economic stress may impact the family dynamic among family farmers. This study sought to address this gap in the literature by examining both personal and global economic stress as a predictor of family distress and work-family conflict among a sample of farm couples. Participating in the study were 217 husband-wife dyads (434 individuals) in which farming was the primary occupation of the husband. A cross-sectional survey design was used to assess economic stress, family distress, and work-family conflict. Spouses completed separate online surveys to ensure independent responding. Both individual (spillover) and dyadic (crossover) effects were examined. Results demonstrated farmers' personal economic stress was positively related to individual and spousal family distress. Furthermore, family distress was a mediator of the relationship between personal economic stress and work-family conflict for both farmers and their spouses. In sum, economic stress is an important variable to consider when examining the work-family interface of farm couples. Moreover, personal economic stress had a larger impact on family distress and work-family conflict than global economic stress. By providing a better understanding of the family mechanisms by which economic stress may impact farm couples, it is hoped the current results can be used to assist in the development and application of mental health resources for farm families.

KEYWORDS

Economic stress; farming; family distress; work-family conflict; crossover

Introduction

The farming profession has long been recognized as an industry involving substantial economic unpredictability.[1, 2] This uncertainty has been magnified recently due to fluctuations in farm land prices, trade tensions impacting farm commodity prices, and the coronavirus pandemic.[3,4] Kuhns and Patrick note recent trends in the farm sector have led to comparisons between agriculture's current economic environment and the period leading up to the farm financial crisis in the 1980s.[5] Accordingly, it is important to understand the various effects associated with economic stress among today's farming population.

Individual consequences of economic stress on farmers' general well-being (e.g., anxiety, depression, suicide) are well-established within the farm stress literature.[6] Less is known, however, about how economic stress may impact the work-family interface among farm families. Previous research has suggested that because farmers are largely at the mercy of the local and global economy, stress associated with economic unpredictability is likely to spill into farmers' and their spouses' family experiences in the form of martial quality and life satisfaction.[7,8] Although economic distress has been linked to family-related outcomes among farm couples, the construct of work-family conflict has received little attention in previous research on the farming population. Furthermore, many studies that have examined the impact of economic stress on the farm family system have focused largely on the impact of the 1980s farm financial crisis. A modern examination of the influence economic stress has on farm families will provide an opportunity to compare and contrast the impact of economic stressors in times of crisis (as in the 1980s) versus a less severe, albeit still tumultuous, economic climate (as seen today).

The present study sought to extend the literature by examining economic stress as a predictor of family distress and work-family conflict (WFC) among farm couples.[1,2] Examining this topic will be beneficial in two ways. First, it will allow for the

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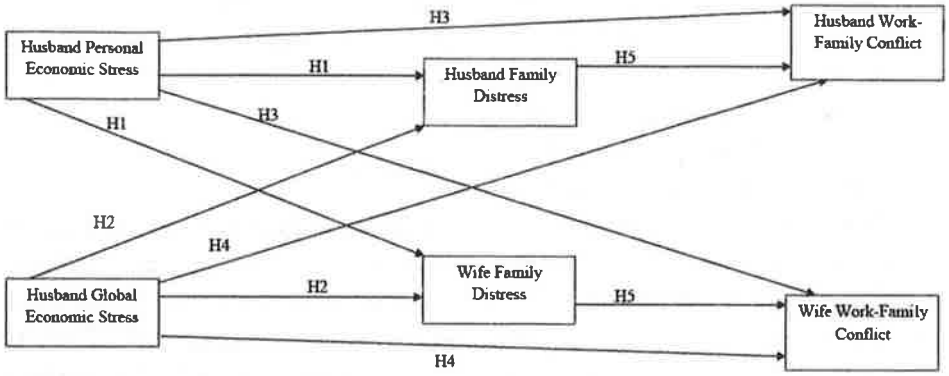

Figure 1. Conceptual model of Economic stress, Family Distress, and Work-Family Conflict among Farm Couples.

integration of two theoretical approaches – the Family Stress model and role theory – each of which will be discussed further below. Second, from a practical perspective, it is hoped this research will aid in the development and application of mental health interventions for farm families through a better understanding of the mechanism by which economic stress impacts farm couples. Both individual and dyadic (couple-level) processes by which economic stress may contribute to WFC were examined. Figure 1 depicts the hypothesized model for the current study.

Economic stress among farmers

Of the many stressors associated with farming, economic stressors are especially salient. In a review of the various sources of farm stress, Ramesh and Madhavi suggest financial stressors are consistently ranked as one of the most stressful aspects of the farming profession.[9] This is likely due to a farmer's income and expenses being highly variable from year to year, unpredictable, and strongly influenced by factors outside of their personal control.[10] These economic uncertainties, paired with many other uncontrollable factors within the agricultural industry, put farmers in a unique and precarious financial position. Therefore, although economic stress is likely to impact the wellbeing of workers in all vocations, it seems especially influential to farmers' well-being due to the amplified financial uncertainty associated with the occupation.[11]

Eberhardt and Pooyan outline two forms of economic stress farmers face.[1] *Personal* economic stress represents worry related to immediate individual farming concerns such as repayment of farm loans, market prices for crops/livestock, and the price of farm land. *Global* economic stress represents worry pertaining to more general economic conditions such as governmental price supports and export policies. Both forms of stress impact farmers on a regular basis. Given farmers' lack of control over several external financial factors in the agricultural industry, and paired with the close proximity of the work and family domains among farmers, it is likely both forms of economic stress have ramifications that extend beyond the work domain and into farmers' family lives.

Role interactions among farm families

Theoretical rationale for the current study can be drawn from Conger and Elder, Jr.'s Family Stress Model.[12] Broadly, their model proposes that economic pressure can lead to a variety of conflict in one's family relations, including marital conflict, emotional distress, and disrupted parenting. The authors highlight rural families – and farm families in particular – as high risk populations for experiencing economic hardship. Although this model focuses heavily on the economic hardships faced by farmers during the financial crisis of the 1980s, the general theoretical network linking economic pressure to the farm family system is just as relevant for today's farm families.

Additional theoretical support for the current study is provided by role theory,[13] which posits that people enact multiple roles across the different domains of their lives (e.g., work and family), and these roles interact and influence one another. Simply put, separate life domains cannot be understood in isolation. This is particularly the case for farm families due to the close proximity and integrated nature of their work and family roles. For example, previous research has demonstrated that work, family, and leisure are not separate entities for farm families. Instead, they are intertwined, overlapping, and infused into daily life.[14,15] Moreover, Fulton and Vanclay note that "More than just a job, farming is a way of life, a way of making a living, and has social meaning much deeper than most other occupational identities."[16,p.17] This suggests that the 'work' and 'family' roles are inextricably linked within farm families. Gregoire provides further support for this assertion, stating a farmer's work is intimately tied with nearly every aspect of their own life, and the lives of his/her family members, across several generations.[18]

Integrating these two theoretical perspectives will help provide an understanding of whether and how economic stress and WFC are linked among farm couples. This information can be useful in developing and tailoring policies and mental health interventions to assist farm families. For example, whereas economic stress may be the instigating factor in reducing farmer wellbeing, subsequent family interactions could be the mechanism through which mental health suffers. Due to the unpredictability of economic stressors, it may be useful to not only address the economic stress head on (through policy interventions), but also address the side effects of the economic stress (i.e., family distress, WFC) to prevent the development of more serious mental health outcomes like anxiety and depression. WFC has been linked to a variety of work outcomes (satisfaction, commitment, and performance), and health related outcomes (life satisfaction, burnout, depression, and anxiety).[19] As such, understanding how economic stress contributes to family processes may have economic and health-related implications for farmers and their spouses. Given the unique work-family dynamic associated with farm couples, both individual (spillover) and dyadic (crossover) processes are important to explore within the context of economic stress.

Spillover

Spillover represents an individual process and occurs when a person's experience in one domain (i.e. work) is transferred into another domain (i.e. family) and affects his/her experience in that domain.[20] For example, stress stemming from financial issues associated with the work domain may impact a person's family experience in the form of family distress. Specifically, a person who is preoccupied with work-related stress may experience more psychological uneasiness and tension within the family setting.[21] Although the general mental health effects of economic stress on farmers has been highlighted in recent research,[6,11,22] less focus has been directed at the extent to which farmers' economic stress may spillover into the family domain. Previous research, specifically focused on the 1980s farm financial crisis, demonstrated that economic stress among farmers can have a detrimental impact on marital relationships, quality of life, and family satisfaction.[7,8,23] The current study seeks to extend upon these findings by examining two domains of economic stress in relation to general family distress. Specifically, both personal and global economic stress are expected to be positively related to farmers' family distress.

According to role theory, when demands from one role consume available resources, this may prevent or disrupt performance in another role, leading to role conflict. WFC is a specific form of role conflict in which aspects of the work role make participating in the family role more difficult, or vice versa.[24] Therefore, economic stress may not only impact farmers' distress in the family setting – as proposed by the Family Stress Model – but also the ability to enact their work and family role(s). When farmers are experiencing higher levels of economic stress, this preoccupation may disrupt their ability to be fully present in family endeavors. As mentioned previously, although economic distress has been shown to

impact farmers' family experiences,[7,8] the construct of WFC has received little attention in previous research on the farm population. Accordingly, economic stress is expected to be positively related to WFC. Moreover, family distress is expected to mediate the relationship between economic stress and WFC. Specifically, a farmers' stress concerning economic issues may cause him/her to be more bothered, upset, or frustrated when spending time with family. This increased family distress, in turn, may lead to a greater degree of WFC, as the stress associated with the work domain may spillover to the family setting and impact the farmer's ability to engage effectively in family activities.

Crossover

Whereas spillover refers to the transfer of stress or attitudes from one domain to another within a single person, crossover is a dyadic process by which stress or attitudes are transferred from one person to another. For example, crossover occurs when stress experienced by an individual in the workplace leads to the experience of stress by the individual's partner at home.[25] Because individuals in relationships are influenced by their partners, the behaviors and attitudes of one member of a dyad cannot be fully understood without considering the other member of the dyad. This is particularly the case for farm couples, because, as highlighted previously, the domains of work and family are highly permeable and integrated among farm families.[15,16,18] When a farmer experiences more personal and global economic stress, this increase is likely to be associated with not only their own family distress and WFC, but also their spouse's reported family distress and WFC (i.e., crossover).

Previous research has shown one spouse's job stress may crossover and negatively impact social interactions with his/her spouse in the family setting, as well as spousal anxiety, depression, burnout, and general well-being.[26–29] Rosenblatt et al. noted that among farmers, specifically, tension from a farmer's stress is likely to have an impact on the farmer's spouse, particularly because farm spouses are commonly working together on farm business issues.[11] This idea is further corroborated by Amarapurkar and Danes, who found business tensions were related to relationship conflict among a sample of farm business-owning couples.[30] Accordingly, in the current study, a farmers' personal and global economic stress is viewed as a significant business concern that will impact the spouse's family experience in the form of family distress and WFC.

Similar to the proposed spillover mediational effect for farmers, family distress is expected to mediate the crossover relationship between farmers' economic stress and spousal WFC. Specifically, a farmers' economic stress may crossover and cause his/her spouse to be more bothered, upset, or frustrated during family activities. This increased family distress is expected to be associated with a greater degree of WFC for farm spouses, as the stress that crossed over from the farmer may not only impact spousal attitudes but also impede their ability to function productively in the family setting. Increased WFC is a likely outcome given that farm spouses are typically closely connected and an integral part of farm activities and operations (e.g., managing finances, assisting with livestock and grain production) regardless of whether or not they are employed off the farm.[31,32]

The hypotheses for the current study are listed below, and a full model of the predicted spillover and crossover effects is shown in Figure 1.

Hypothesis 1: Farmers' personal economic stress will be positively related to primary farm operator and spousal family distress

Hypothesis 2: Farmers' global economic stress will be positively related to primary farm operator and spousal family distress

Hypothesis 3: Farmers' personal economic stress will be positively related to primary farm operator and spousal WFC

Hypothesis 4: Farmers' global economic stress will be positively related to primary farm operator and spousal WFC

Hypothesis 5: Family distress will be positively related to WFC for both spouses

Hypothesis 6: Family distress will serve as a mediator in the process by which personal and global economic stress lead to WFC

Methods

Participants and procedure

A combination of convenience and snowball sampling was used to recruit farm couples within the state of Iowa. The survey was conducted in the summer (June-August) of 2012. To partake in this study, participants had to be a member of a married couple in which farming was the primary occupation of the husband. These criteria were used to expedite and simplify the data collection process, given the low likelihood of obtaining other farm couple configurations in the region in which data were collected. Despite the benefits provided by the inclusion criteria for simplifying data collection, this does represent a potential limitation to the study and is discussed further in the limitations section. Couples were recruited with the assistance of the Iowa Farm Bureau and based on personal contacts of the author. Husbands and wives completed separate online surveys to ensure independent responding, and couples that fully completed both surveys were given a 30 USD cash incentive.

The final sample consisted of 217 farm couples (434 individuals). Husbands (100%) and wives (99.5%) were primarily Caucasian with similar mean ages (Husbands: M = 52.56, SD = 11.68; Wives: M = 50.82, SD = 11.67). Most couples (94.4%) had children, and 48.4% had at least one child living at home. Regarding off-farm employment, 20.4% of husbands reported working a second job in addition to farming full-time, and 56.7% of wives were employed off the farm. A full list of demographic and farm characteristic information is presented in Appendix B. According to the Census of the U.S. Department of Agriculture, this sample was demographically similar to the overall farming population within the state of Iowa.[33]

Measures

All items used for measuring the following constructs are displayed in Appendix A.

Personal Economic Stress. Personal economic stress was assessed with four items from the Farm Stress Survey (α = .70).[1] These items ask participants to indicate the extent to which aspects associated with one's farm operation are a source of personal worry or concern. Examples include "market prices for crops/livestock" and "financing your retirement." Participants responded on a 5-point scale ranging from 1 (*not at all*) to 5 (*very often*).

Global Economic Stress. Global economic stress was measured with four items from the Farm Stress Survey (α = .74).[1] These items ask participants to rate the extent to which factors associated with the global economy are a source of personal worry or concern. Examples include "land prices (inflation/deflation)" and "government farm price supports." Participants responded on the same 5-point scale as used for personal economic stress.

Family Distress. Family distress was assessed with a six-adjective checklist developed by Kandel et al.[21] Participants were asked to evaluate how often they feel certain reactions during their family experiences. The items included adjectives such as "unhappy," and "frustrated." Participants responded on a 5-point scale ranging from 1 (*never*) to 5 (*very often*). The observed reliability was .85 for husbands and .84 for wives.

Work-Family Conflict. Work-family conflict was measured with the 18-item Work-Family Conflict Scale.[34] To ensure participants were reporting WFC associated with farming, the scale was modified by replacing "job" with "farm work." The following represents an example item: "My farm work keeps me from my family activities more than I would like." Participants responded on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly*

Table 2. Intercorrelations between Age, Acres farmed, and the Variables of Interest.

Variable	Husband Age	Wife Age	Acres Farmed
1. Personal Economic Stress *Husbands*	−.22**	−.26**	−.02
2. Global Economic Stress *Husbands*	−.11	−.14	−.10
3. Family Distress *Husbands*	−.11	−.12	−.10
4. Work-Family Conflict *Husbands*	−.06	−.03	−.08
5. Family Distress *Wives*	.01	.03	.02
6. Work-Family Conflict *Wives*	−.07	−.05	.04

Note. *$p < .05$, **$p < .01$; $N = 217$.

agree). This scale had adequate reliability for both husbands ($\alpha = .91$) and wives ($\alpha = .92$).

Analysis

When dyads (i.e., pairs of individuals) are the focus of research, it is likely the responses of each individual are not independent, as individuals are often influenced by the characteristics and qualities of the other dyad member.[35] The actor-partner interdependence model, developed by Kenny et al., was used as a framework for data analysis to account for interdependence in the dyadic data. Accordingly, in the current study, the unit of analysis was the dyad (not the individual) and effects for husbands and wives were calculated simultaneously in the same model using structural equation modeling (SEM) with Amos 25.[36] Specifically, hypotheses were tested in SEM via path analysis with directly observed variables. All endogenous variables were centered before running the analyses to reduce potential issues of multicollinearity.[35]

Preliminary *t* tests (presented in Table 1) and correlation analyses (presented in Table 2) were conducted to determine if control variables were necessary in the final model. The following demographic and farm characteristic variables were examined in relation to the hypothesized variables of interest: age, whether or not farmers owned livestock, whether or not children were living at home, farm size (in acres), and off-farm employment. Two of these variables emerged as significantly related to personal economic stress. Age was significantly related to personal economic stress for both husbands ($r = -.22$, $p = .002$) and wives ($r = -.26$, $p < .001$). Regarding off-farm employment, a *t* test revealed husbands with wives working off the farm reported higher personal economic stress ($M = 3.13$, $SD = .66$) than those who did not have wives working off the farm ($M = 2.87$, $SD = .77$; $t(216) = 2.78$, $p = .006$). However, neither age nor off-farm employment were significantly related to the outcome variables of interest (family distress and WFC). Because none of the demographic and farm characteristic information was significantly related to both the predictor and outcome variables in the current study, they were not controlled for in the final model.

Table 1. *T* test Results examining Demographic and Farm Characteristics in Relation to Study Variables.

	Yes		No			
Livestock	*M*	*SD*	*M*	*SD*	*t*	*p*
Pers Econ. Stress	3.06	0.76	2.95	0.63	1.03	0.303
Glob Econ Stress	3.1	0.81	3.09	0.7	0.05	0.96
Husband Fam Distress	2.27	0.58	2.14	0.54	1.71	0.089
Husband WFC	2.53	0.55	2.37	0.59	1.95	0.052
Wife Fam distress	2.14	0.54	2.09	0.55	0.608	0.544
Wife WFC	2.31	0.52	2.29	0.66	0.263	0.793
	Yes		No			
Child at home	*M*	*SD*	*M*	*SD*	*t*	*p*
Pers Econ Stress	3.12	0.69	2.94	0.72	−1.93	0.054
Glob Econ Stress	3.16	0.74	3.05	0.78	−1.13	0.261
Husband Fam Distress	2.27	0.52	2.19	0.6	−1.09	0.274
Husband WFC	2.55	0.52	2.42	0.6	−1.67	0.096
Wife Fam Distress	2.1	0.5	2.15	0.58	0.615	0.539
Wife WFC	2.31	0.63	2.3	0.53	−.143	0.887
Off-Farm Employment	Yes		No			
Husband	*M*	*SD*	*M*	*SD*	*t*	*p*
Pers Econ Stress	3.07	0.73	3.01	0.71	0.517	0.606
Glob Econ Stress	3.09	0.75	3.1	0.77	−.074	0.943
Husband Fam Distress	2.14	0.54	2.24	0.57	−1.02	0.308
Husband WFC	2.44	0.66	2.49	0.54	−.430	0.668
Wife Fam Distress	2.06	0.57	2.13	0.54	−.843	0.4
Wife WFC	2.36	0.61	2.29	0.56	0.763	0.447
Off-Farm Employment	Yes		No			
Wife	*M*	*SD*	*M*	*SD*	*t*	*p*
Pers Econ Stress	3.13	0.65	2.87	0.77	2.78	.006**
Glob Econ Stress	3.12	0.77	3.06	0.79	0.687	0.493
Husband Fam Distress	2.24	0.53	2.2	0.62	0.534	0.594
Husband WFC	2.49	0.56	2.47	0.58	0.263	0.793
Wife Fam Distress	2.11	0.56	2.15	0.54	−.581	0.562
Wife WFC	2.35	0.6	2.27	0.53	0.82	0.413

Note. *$p < .05$, **$p < .01$; $N = 217$

Results

Descriptive statistics and intercorrelations for study variables are presented in Table 3. Structural equation modeling using Kenny et al.'s[35]

Table 3. Descriptive Statistics and Intercorrelations among Variables.

Variable	*M*	*SD*	1	2	3	4	5	6
1. Personal Economic Stress *Husbands*	3.10	.71	–					
2. Global Economic Stress *Husbands*	2.99	.80	.58**	–				
3. Family Distress *Husbands*	2.22	.57	.25**	–.01	–			
4. Work-Family Conflict *Husbands*	2.48	.57	.19**	.10	.39**	–		
5. Family Distress *Wives*	2.13	.55	.20**	–.01	.38**	.23**	–	
6. Work-Family Conflict *Wives*	2.31	.57	.08	–.06	.08	.41**	.40**	–

Note. *$p < .05$, **$p < .01$; $N = 217$.

actor-partner interdependence model was used to examine the hypotheses presented in Figure 1.

Path model

The proposed path model in Figure 1 fit the data well (χ^2 (2) = 3.11, p = .21, CFI = .99, RMSEA = .05, SRMR = .02). Standardized and unstandardized parameter estimates for the non-mediational hypotheses are shown in Figure 2. Because the overall model demonstrated adequate fit to the data, path estimates were examined to explore the nature and significance of the hypothesized relationships.

Main effects

Hypothesis 1 proposed farmers' personal economic stress would be positively related to family distress. This was fully supported, as personal economic stress was positively associated with family distress for both husbands (b = .25, $p < .05$) and wives (b = .24, $p < .05$). To the extent a farmer experienced increased personal economic stress, higher family distress was reported for both spouses.

No support was obtained for hypothesis 2, which proposed a positive relation between global economic stress and family distress. Counterintuitively, a significant *negative* relation emerged between global economic stress and family distress among wives. Although this path reached statistical significance in the SEM model, the non-significant bivariate correlation between global economic stress and wives' family distress (r = –.01, p = .709) – paired with the strong correlation between personal and global economic stress (r = .58, $p < .001$) – suggest this finding is inconclusive.

Regarding hypotheses 3 and 4, no support was obtained. Neither personal nor global economic stress had a direct effect on WFC for husbands or wives.

Hypothesis 5 suggested a positive relation between family distress and WFC for husbands and wives. This hypothesis was fully supported. Specifically, family distress was a significant predictor of WFC for both husbands (b = .39, $p < .05$) and wives (b = .37, $p < .05$).

Mediation effects

Hypothesis 6 proposed family distress would mediate the relationships between economic stress and WFC. This hypothesis received partial support.

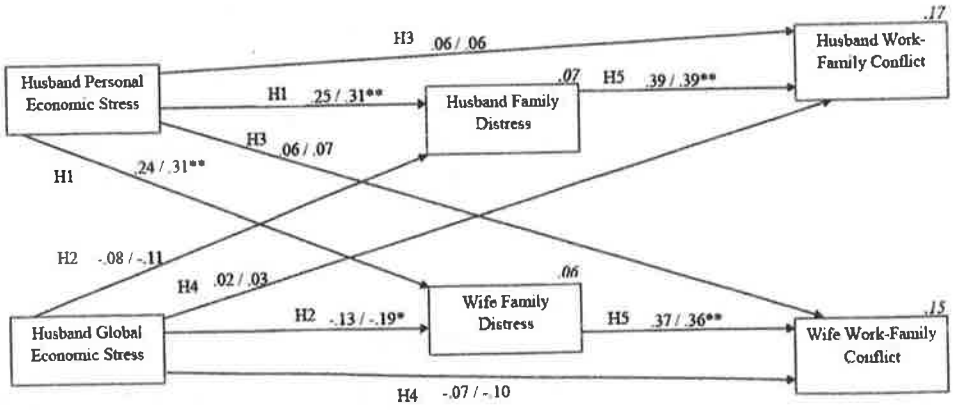

Figure 2. Final empirical model with unstandardized and standardized path coefficients (seen as unstandardized/standardized). Squared multiple correlations for endogenous variables are reported in italics.

Specifically, the indirect effect of personal economic stress on WFC (through family distress) was significant for both husbands (b = .10, p < .05) and wives (b = .09, p < .05). Thus, to the extent farmers reported greater personal economic stress, this was related to higher family distress and higher WFC. No significant indirect effects were found for global economic stress.

Post hoc analyses

As mentioned previously, no controls were used in the final model. However, age and wives' off-farm employment were both related to husbands' personal economic stress. To be sure these variables were not impacting the demonstrated relationships, a separate SEM model was run with the addition of age and wives' off-farm employment as control variables. The model fit was quite similar (χ^2 (5) = 7.41, p = .19, CFI = .99, RMSEA = .05, SRMR = .03), and there were no significant changes to any of the proposed relationships compared to the original model.

Discussion

The purpose of this study was to examine the impact of economic stress on family distress and WFC among farm couples. The following sections discuss the current findings and their contributions to the literature.

Personal economic stress

Spillover. Broadly, the current findings demonstrate that economic distress can have a significant impact on attitudes and distress within the family domain. Consistent with role theory and the Family Stress Model, personal economic stress was positively related to family distress and WFC among farmers. This corroborates previous research conducted during the farm crisis in the 1980s, which highlighted that economic stress may spill into the family domain in the form of lower family satisfaction, poorer quality of life, and increased marital distress among farmers.[7,8,23] Furthermore, the current findings extend previous research by demonstrating the impact of farm-related economic stress is not limited to general forms of family distress, but can also impact role performance in the form of WFC. Thus, farmer's general functioning in their work and family roles may suffer as a result of personal economic stress. This converges with a previous finding suggesting economic resources may have direct implications for farmer decision-making and implementation.[37] Paired with the present findings, economic stress may negatively impact farmers' decision-making tendencies, thereby making family distress and WFC more likely.

Crossover. In addition to the spillover effects discussed above, the current study advanced the literature by examining crossover effects by which personal economic stress may be transferred between farm spouses. As predicted, farmers' personal economic stress was positively associated with spousal family distress. Although many previous sources have qualitatively outlined the interacting work and family systems among farm families,[15,16] this is one of the first studies to explicitly examine the crossover process linking farmers' economic stress to spousal family experiences. Moreover, this relationship is consistent with a previous finding by Johnson and Booth, who discovered economic distress was linked to marital happiness and thoughts of divorce among farm couples going through the 1980s farm financial crisis.[38]

The finding that stress crosses over to one's spouse is also consistent with previous crossover research examining dual-career couples outside of the farming profession.[27–29] An interesting area for future investigation would be to compare farm couples with non-farm couples to determine if crossover effects are more intense in one setting versus the other. There is some research to suggest work-linked couples (those working in the same organization or occupation) may have less stress-related crossover and potentially more support-related crossover, thereby reducing the impact of stress.[33,34] It would be interesting to examine if this effect generalizes to farm couples.

Finally, although personal economic stress showed no direct effects in predicting WFC, mediational analyses suggest personal economic stress indirectly effects WFC through family distress. This effect was significant for farmers,

representing a mediational spillover effect, and their spouses, representing a mediational crossover effect. This provides additional support for role theory and is consistent with previous work-family research suggesting family distress as an antecedent of WFC.[24,35] Moreover, this extends research on Conger and Elder, Jr.'s Family Stress Model by explicitly demonstrating both spillover and crossover mediational effects related to economic stress. Because previous research has shown economic stress may be related to decision making,[37] and business tensions are related to relationship conflict among farm couples,[30] it would be interesting to explore whether decision making is a mediating or moderating factor in the relation between economic stress, family distress, and WFC.

Global economic stress

The current findings suggest global economic stress has much less of an impact on the family domain than personal economic stress. This finding makes intuitive sense in that global economic stress is less individualized and, therefore, may be perceived as an issue related to the broader farming community. In other words, global economic stress can be taken less personally, as there is a greater psychological distance associated with these types of stressors. Furthermore, global economic issues do not necessarily impact all farmers equally. Personal economic stress, on the other hand, is by its nature inherently linked to the individual farm operation. For example, personal economic stress is often directly linked to the challenge of meeting material needs, such as purchasing farm inputs, machinery repair, and necessary living amenities. Because of this, personal economic stress is likely to be more concerning to farm couples.

It is also possible global economic stress may be more salient and impactful during times of financial crisis, such as during the 1980s farm crisis or during the coronavirus pandemic of 2020, and less impactful during more typical economic times. The data for the current study were collected at a time when there were no substantial crises at play, and this may have played a role in the non-significant findings for global economic stress. Comparing the impact of global economic stress in times of crisis to more typical economic situations represents an interesting area of future research, and would likely shed some light on reasons why personal and global economic stress may have a differential impact on the family setting. Research on this topic may also help generate and tailor practical interventions to be most effective for reducing the negative effects associated with economic stress.

Economic stress vs. economic crisis

The current study, when paired with previous research, demonstrates that spillover and crossover of personal economic stress into the family domain may occur not only as a result of a severe economic crisis (such as the 1980s farm financial crisis), but also due to more general, everyday forms of economic stress (as measured in the current study). Because much of the previous research on the relation between economic stress and family outcomes has focused on the 1980s farm crisis, it is useful to briefly examine and contrast the similarities and differences in the economic situations of farmers in the 1980s compared to farmers of today.

Although the content and general types of economic stressors and concerns are similar for each generation (e.g., trade policy, land and commodity prices, loan interest rates), there are some key differences in the magnitude of stressors being faced by farm families today compared to the 1980s. For example, while land prices represent a concern for both generations, land prices were extremely volatile in the 1980s (plummeting by over 60%), whereas land prices over the past 10 years have remained much more stable.[39] Furthermore, loan interest expenses have remained relatively stable over the past few decades due to declining interest rates. This contrasts greatly with the 1980s, when interest rates and expenses were much higher.[40] On the other hand, there is much more uncertainty and faster-paced change for today's farmers regarding regulations and policy related to environmental issues (e.g., renewable energy, sustainable agriculture), and affordable health care.[41]

Regarding affordable health care, off-farm employment represents a more prevalent concern for farmers today compared to those of the 1980s. Off-farm employment has risen steadily in recent decades, with nearly 50% of family farm operators and spouses reported as having a job off the farm in 2018.[42] Furthermore, Inwood et al. discovered 65% of commercial farmers identified the cost of health insurance as the most serious threat to their farm.[43] Access to employer sponsored health insurance is often cited as one of the primary reasons for taking off-farm employment, as health care is increasingly expensive and more difficult to obtain for family farmers due to their self-employed status.[44,45] Accordingly, future research is encouraged to examine how off-farm employment (and access to health benefits) may impact the distress experienced by farm families. Although off-farm employment did not play a significant role in the current study with regard to family distress and WFC, possibly due to the relatively homogenous sample, it would be interesting to examine this topic among a broader sample of farm couples and a more diverse array of farm operations.

Perhaps one of the biggest generational differences in farm stress is the availability of mental health resources today, compared to the 1980s.[46474849] Due to the magnitude and wide-ranging effects of the 1980s farm crisis, this served as a valuable learning experience for farmers and policy makers alike. Over the past few decades, farm media resources – such as magazines, radio, and television – have had a large influence in dispersing mental and behavioral health information to farmers. As a result, there is a better understanding among farmers of the connection between their own mental and behavioral health and the productivity of their farm operation, and more willingness among farmers to be open to reaching out for help. This is an encouraging trend, and further research on the antecedents and consequences of farm stress will help this trend continue into the future. Furthermore, farmer's *perceptions* of the availability of mental health and financial resources represents a valuable area of future research. The items used to assess economic stress in the current study (see appendix A) were taken from the Farm Stress Survey, which was developed in 1990. These items do not take into account more modern stressors such as perceptions of mental health and financial resource availability, or accessibility of health benefits. Accordingly, incorporating these factors into future studies assessing farm stress would be highly beneficial.

Although there is more availability and accessibility to mental health resources for farmers today compared to the past, previous research has indicated the current focus of mental health interventions and resources may fall short of addressing the root causes of farmer mental health issues.[44] A key contributor to this disconnect is that many of the stressors farmers face are structural, rather than individual and interpersonal, and therefore lie outside the control of the individual farmer.[45] Economic stress, in particular, is difficult to address through mental health interventions alone. DeLind notes that for agricultural programs to assist the family farm, it is important to address not only the individual farmer(s) behavior, but also the extra-farm relationships between the farmer and local, national, and international organizations and policymakers, as these are key factors that have implications for farmer behavior.[46] Thus, in the context of the current study, it is crucial to address both the root causes of economic stress (e.g., lower commodity prices), as well as the side effects associated with the economic stress (e.g., anxiety, family distress, WFC).

Practical implications

Given that the majority of farm economic stress is uncontrollable, it is important to advocate for the accessibility and distribution of financial resources for farm families when economic turbulence occurs. This would entail a two pronged approach of 1) making sure farm families are aware of the financial resources available to them, and 2) ensuring the process of applying for (and receiving) financial aid is feasible and relatively burden free. These goals could be accomplished through pairing with local and national organizations, such as the Farm Bureau and the United States Department of Agriculture, to provide

informational sessions and in-person or virtual assistance to farmers in applying for federal aid in times of economic stress. Doing so could reduce the amount of family distress and WFC experienced as a result of economic stressors. A recent example of this is the Coronavirus Food Assistance Program (CFAP). To the extent local and national organizations, as well as commodity insurance providers, provide informational and instrumental assistance in applying for programs such as CFAP, this is likely to reduce the economic tension felt by farm couples. A larger scale initiative might be to examine the possibility of setting floor prices (similar to minimum wage for other jobs) for farm commodities.[50] This would ensure farmers can, at the very least, recover their cost of production for the commodities they produce.

In addition to direct financial supports, supplemental interventions could focus on the continued improvement of mental health support for farm families. For example, mental health assistance programs could focus on directly reducing family distress and WFC by providing counseling sessions and various forms of instrumental (tips for stress relief) or emotional (support groups) support for those feeling the pressure of economic stress. Focusing on these intermediary factors may prevent economic stress from spiraling into more severe mental health issues such as anxiety, depression, and suicide. Moreover, it would be productive to include information pertaining to farm-related financial support opportunities within these mental health resource programs (whether through in-person counseling sessions or online websites), as this could help address financial stress and family distress concurrently. Given that economic stress has been shown to be related to farmers' decision-making,[37] generating more accessible economic and mental health support services for farmers can enhance their ability to make decisions that will positively impact their farm and family settings, thereby assisting their ability to productively cope with economic stress.

Finally, although financial assistance is likely a key factor in ameliorating economic stress, financial support via agricultural policy is not necessarily sufficient for addressing family-related issues, as the implemented policies are not designed with the family in mind.[51] There is a growing body of research suggesting the well-being of the farm family could be supported through social policies aimed at ensuring farm households can meet their economic and social needs.[51,52] These social policies can address issues not only related to financial viability, but also concerns with regard to health care, retirement, and succession planning, to name a few. For a full review of this area of research, see Becot and Inwood (2020).[51] Accordingly, to adequately address economic stress and its associated side effects, a combination of agricultural policy change, mental health support, and social policy change may provide the most effective improvements to the lives of farm families.

Limitations

The current findings are based on cross-sectional data, and as such, causal conclusions cannot be made. While this is a limitation, our results provide initial evidence for the importance of economic stress as it contributes to the family dynamic among farm couples. A second potential limitation is the sampling method employed. Because convenience sampling was used, the results may have been impacted by who volunteered to participate in the study. However, given the uniqueness of the population of interest, convenience sampling was the most appropriate sampling method. This technique has been shown to be a useful data collection method when studying unique and understudied populations.[17] Future studies are encouraged to examine whether the current results can be generalized to other samples of farm couples. To participate in the current study, participants had to be a member of a married couple in which farming was the primary occupation of the husband. Even though this is the most traditional and most common farm family configuration, there are many farm families in which the wife, rather than the husband, is the primary farmer.[33] Moreover, farm couples may be unmarried, cohabiting, or part of a same-sex couple. These different configurations may potentially impact the work-family dynamic among farm couples in different ways. Accordingly, future research

is encouraged to explore whether the findings in the current study generalize to more varied and diverse farm family configurations.

Another limitation involves the scope of the data collected. Regarding economic stress, information on this variable was only collected from the primary farmer. Although the primary purpose of the study was to examine the spillover and crossover of farmers' perceived economic stress, it is highly likely that perceptions of economic stress may vary within the couple. For example, farm spouses may often have a good grasp on (and perhaps an even better understanding) of the economic situation of the farm if they are the person keeping track of the bookkeeping associated with the farm enterprise. Therefore, it would be interesting to examine the extent to which spousal perceptions of economic stress converge and how this may impact the spillover and crossover process.

Finally, the current study did not control for farm household and farm operation characteristics: these include, but are not limited to, the scale and type of farm operation, commodities produced, off-farm employment, household and farm income, accessibility and availability of marketing channels, and child involvement in the farm business. These factors, among many others, are likely to have an impact on the perception of stress and family dynamics among farm couples. While the current study provides a broad, generalized view of the relation between economic stress and family-related outcomes among a relatively homogenous sample of farm couples, it would be interesting to explore how additional characteristics related to the farm setting may impact the spillover and crossover process. For example, although the current study collected data on whether or not livestock production was involved in the farm business, the specific *type* of livestock produced on any given farm, as well as the quantity, is likely to have implications for economic stress and family dynamics. Given the uniqueness and specialization of each individual farm operation, investigating specific contextual factors and farm characteristics is necessary to develop a full understanding of how economic stress impacts family distress and WFC among the overall farm population.

Conclusion

Taken as a whole, the results of the current study demonstrate personal economic stress may have a direct impact on family distress and an indirect effect on WFC for farmers and their spouses. Furthermore, personal economic stress seems to have a larger influence on farm couples' family lives than global economic stress. Because farming has received little attention regarding work-family issues, future research is encouraged to continue exploration of the unique work-family interface among farm families with an eye towards potential strategies that may assist farm couples in dealing with personal economic stress.

Notes

1. Due to the farming demographic, the current study examined male farmers with female spouses, as this represents the majority of farming couples according to the U.S. Department of Agriculture.
2. The reported alpha scores for each construct is Cronbach's alpha, computed by reliability analysis within SPSS.

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Data Accessibility Statement

The data that support the findings of this study are openly available in figshare at 10.6084/m9.figshare.13554668.v1

Disclosure statement

No potential conflict of interest was reported by the author.

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Appendix A

Personal Economic Stress[1]

Please indicate the extent to which each of the following items is a source of personal worry or concern for you

(1) Repayment of farm loans
(2) Market prices for crops/livestock
(3) Financing your retirement
(4) Concern over the future of your farm

Not at all = 1 Rarely = 2 Sometimes = 3 Often = 4 Very Often = 5

Global Economic Stress[1]

Please indicate the extent to which each of the following items is a source of personal worry or concern for you

(1) Land prices (inflation/deflation)
(2) Government farm price supports
(3) Government export policy
(4) The budget deficit in this country

Not at all = 1 Rarely = 2 Sometimes = 3 Often = 4 Very Often = 5

Family Distress[18]

Overall, when thinking about your current family situation and day-to-day family experiences, how often do you feel each of the following reactions due to your family experiences?

(1) Relaxed
(2) Pleased
(3) Fortunate
(4) Unhappy
(5) Bothered or upset
(6) Frustrated

Never = 1 Rarely = 2 Sometimes = 3 Often = 4 Very Often = 5

Work-Family Conflict[33]

Please rate the extent to which you agree/disagree with the following statements

(1) My work keeps me from my family activities more than I would like.
(2) The time I must devote to my job keeps me from participating equally in household responsibilities and activities.
(3) I have to miss family activities due to the amount of time I must spend on work responsibilities.
(4) The time I spend on family responsibilities often interfere with my work responsibilities.
(5) The time I spend with my family often causes me not to spend time in activities at work that could be helpful to my career.
(6) I have to miss work activities due to the amount of time I must spend on family responsibilities.
(7) When I get home from work I am often too frazzled to participate in family activities/ responsibilities.
(8) I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.
(9) Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.
(10) Due to stress at home, I am often preoccupied with family matters at work.
(11) Because I am often stressed from family responsibilities, I have a hard time concentrating on my work.
(12) Tension and anxiety from my family life often weakens my ability to do my job.
(13) The problem-solving behaviors I use in my job are not effective in resolving problems at home.
(14) Behavior that is effective and necessary for me at work would be counterproductive at home.
(15) The behaviors I perform that make me effective at work do not help me to be a better parent and spouse.
(16) The behaviors that work for me at home do not seem to be effective at work.
(17) Behavior that is effective and necessary for me at home would be counterproductive at work.
(18) The problem-solving behavior that work for me at home does not seem to be as useful at work.

Strongly Disagree = 1 Disagree = 2 Neither Agree nor Disagree = 3 Agree = 4 Strongly Agree = 5

Appendix B. Demographic and Farm Characteristics of Study Sample.

Factor		
Age: *Husbands*		Age: *Wives*
M	52.56	M 50.82
SD	11.68	SD 11.67
Race: *Husbands*		Race: *Wives*
% Caucasian	100%	99.5%
% Non-Caucasian	0%	0.05%
Off-farm employment: *Husbands*		Off-farm employment: *Wives*
Yes	20.4%	56.7%
No	79.6%	43.3%
Children living at home		
Yes	48.4%	
No	51.6%	
Livestock production		
Yes	63.1%	
No	36.9%	
Crop production		
Yes	98.6%	
No	1.4%	
Acres farmed		
M	1067.65	
SD	1484.79	

Note. N = 217 farm couples