



RESEARCH PAPER**Understanding Stress in the Crop Farming Community of Rawalpindi, Pakistan****Gul Rehan* and² Prof. Dr. Shazia Khalid**

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ABSTRACT

This study aimed to explore the stress among crop farmers, focusing on the causes and types of stress. Farming has always played a crucial role in Pakistan's economy. However, it can be a stressful occupation, with farmers facing various stressors. The data was collected from the crop farmers of the District Rawalpindi. The sample size consisted of 60 crop farmers with an age range of 35 to 55 years. All participants were male, owned some cultivated land and were personally involved in farming. Interviews were based on open-ended questions to check the prevalence of stress among crop farmers. The result of the study indicated that small-scale crop farmers faced more stress than large-scale crop farmers. The major stressor reported by crop farmers was inclement weather conditions, and they often used a talking coping strategy. The study suggests implementing stress management programs and revising agricultural support policies to reduce stress.

KEYWORDS Stress, Large-Scale Crop Farmers, Small-Scale Crop Farmers, Coping, Stressors, Farming, Rawalpindi, agricultural, Cultivated Land, Farmers

Introduction

Agriculture is the second biggest occupation of the people of Pakistan. Almost 67 % of the aggregate general population of the nation lives in rural regions and farming is their source of living (Government of Pakistan, 2007; 2008). The growth of the agricultural region is dependent on favourable conditions of weather. The agricultural community of Pakistan consists of small farmers having different limitations in their day-to-day farming practices (Government of Pakistan, 2016). The district Rawalpindi is a home to approximately seventy thousand farmers. Ninety-five percent of them are small-scale crop farmers who own twelve and a half acres of land or less. The remaining 5 percent are large-scale crop farmers who own more than twelve and a half acres of land in the district (S. Bano, personal communication, January 24, 2017).

Ghatul (2013) described that the very nature of farming itself is the cause of many strains for farming families. Farming can be an isolating profession, as farmers traditionally work long hours, outside, often in bad weather and alone. A farmer takes all the necessary steps to ensure proper nourishment of the attempts that he raises and then sells the items to purchasers. Some farmers have been able to capitalize on the need for high-demand products that they produce such as organic vegetables and livestock. Ghatul (2013) also reported that the extensive population in developing countries consists of landless workers and small-scale farmers, most of whom face considerable pressure. The coordinated nature of playing, living, and working with each other for a long time appears to prompt stressors that might be remarkable among ranch and farm families (Ghatul, 2013).

Stress is defined by many scholars in different ways. One of the definition given by Fletcher as a “continuous procedure that includes a person transacting with their surroundings, settling on examinations of the particular circumstances they discover themselves and able to cope with problems (Fletcher (2006) cited Rumbold, Fletcher, & Daniels, 2012, p. 173)”. Balraj (2016) define stress as "Stress is a prominent negative emotion, which repents constraining influence expressed by way of physical, emotional or mental pressure on the physical body" (Balraj, 2016).

Literature Review

There are two basic concepts discuss in Lazarus Theory (1993) one is appraisal which is defined as how a person evaluate the demands of work or significance according to his motivation, values, goals and expectancies. Second concept is coping defined as person mental and physical efforts to meet these demands (Krohne, 2002).

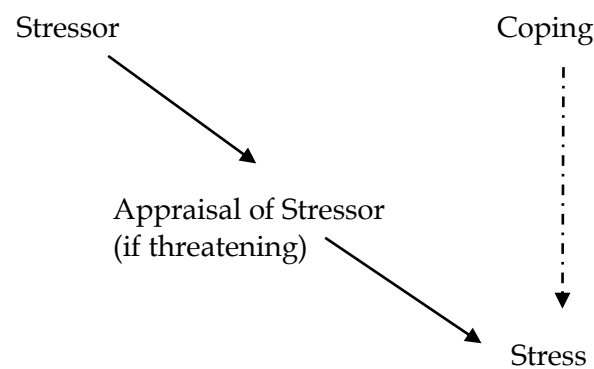


Figure 1. Conceptual Model of Stress Appraisal and Coping Based on Lazarus' Theory (Lazarus,1993).

National Safety Council, (1976-2012) analyzed more than 22,000 Tennessee workers, their health records, hospital admissions, mental health center admissions, and death certificates and found that 12 categories of workers of farm owners showed a high frequency of stress-related problems. By analyzing only death certificates it displayed that crop farmers were second among workers in the rate of death from stress-related illnesses. A study of 1,343 residents of a farm in Iowa showed their top ten stressors which include disabling injury to oneself, disabling injury of a family member, death of a child, death of a spouse, divorce, foreclosure on a mortgage or loan, machinery breakdown during harvest, severe weather conditions, loss of crop to weather, and loss of crop to pests or disease (Freeman, Schwab, & Jiang, 2008). McLarren and Challis (2009) reported that generally, it was observed that the most important stressors in dairy farmers were bad weather, time pressures, hardware failures, and policies of the government.

A research of 1,015 people from 669 New Zealand farms reported that their major stressors were “dealing with workers, increased workload at peak times, bad weather, compensation, and complying for health assets in adapting to huge existence stressors and especially notable "around farm and farm groups previously, and good social structure is in the set up (McLarren & Challis, 2009). Most families deal with many stressors at the same time (Xu, 2007). Marotoz-Baden and Colvin (1986) identified three types of stressors that contribute to the impact on families. The first type is early stress, which puts a family in a crisis. The second type consists of normal life changes that a family experiences, such as the birth of a baby or the death of an elderly family member, and non-typical life changes, such as a sudden increase in fertilizer, diesel costs, or feed.

The third type of stressor is associated with how a family copes with hardship or crisis (Fetsch, 2014).

Ramesh and Madhavi (2009) conducted research in India and found that the psychological outcomes of extreme stress can decrease productivity and effectiveness, prevent the farmers from enjoying the joy of life and pleasures, aggravate them extra inclined to accidents in the farms, and undermine the happiness and health of farm families. Ramesh and Madhavi (2009) found that more amazing utilization of mechanization of technology, utilization of natural production, a decline in the price of agricultural items, and new confounded legislations have given the farmers a greater amount of stress. The results of their study showed that the occupation of farming prompts stress because of weather, finances, worth-of-effort overload, social connection and farm hassles. Most alarming was the fact that every aspect of farming was generating high or medium levels of stress among farming individuals. It was noted that stress due to financial problems was the most prevalent compared to the other stressors. In the rural area of the province of Punjab (India), suicides due to financial distress have been observed since the mid-1980s (Gill, 2005).

Kaur, Dhillon, and Kaur, (2016) conducted a research in India and found different reasons for agricultural distress. Financial issues result in poor economic position, debt burden, higher reliance ratio, high cost for production, crop failure, unviable land holding, falling benefits, and unavailability of easy credit. Some social causes are social stigma, court cases, weight about bank officials/money lenders, consumerism, and consumption around social events, totally spread reliance and drug/medications needs. Psychological reasons include depression, property debate, and non-cordial marital relations.

Kaur, Dhillon, and Kaur, (2016) also conclude that the large-scale crop farmers have sufficient wellsprings (money and land) to earn for living so they don't face a lot of issues, yet the small farmers are even now suffer (Kaur, Dhillon, & Kaur, 2016). However, a significant number of studies have reported varied findings in the literature regarding the prevalence of mental health problems in farmers. Some authors found no clear data, while others found an increased prevalence in English, Welsh, and Norwegian farmers compared with non-farmers. There are two types of risk factors: some factors are not under the control of farmers, such as disease, weather, and legislative regulations, while others are within the control of farmers, such as their physical health, managing workloads, and financial issues (Goffin, 2014).

Material and Methods

Participants

A purposive sampling technique was used to collect data from different villages in Rawalpindi District. The Sample size of the present study consisted of 60 crop farmers, (n = 30 small-scale crop farmers and n = 30 large-scale crop farmers) based on the area they owned. All participants were male, owners of cultivated land and personally involved in farming. The age range of the farmers was 35 to 45 years (n = 38, small-scale crop farmers n = 19 and large-scale crop farmers n = 19), and while the age range of crop farmers was 46 to 55 years (n = 22, small-scale crop farmers n = 11 and large-scale crop farmers n = 11). Small-scale crop farmers (n = 26) and large-scale crop farmers (n = 23) belonged to a joint family system. Small-scale crop farmers (n = 03) and large-scale crop farmers (n = 07) lived in the nuclear family system. Additionally, a similar number of

participants, small-scale crop farmers ($n = 28$) and large-scale crop farmers ($n = 27$) were married.

Measures

Demographic Information Sheet

The Demographic Information Sheet was used to collect the demographic information of participants. It consisted of the following demographics: age, education, marital status, family system, children, area of ownership (less than or more than twelve and a half acres), major crops (divided into Rabi crops and Kharif crops), and Usage of new technology.

Interview

An open-ended interview schedule was designed to gain a deep understanding of the unique stresses experienced by crop farmers. It was developed based on the Farm Stress Inventory by Walker, Walker, and MacLennan (1986).

Procedure

Data was collected using a purposive sampling technique across different villages in the Rawalpindi District. The participants were individually approached and all provided signed consent. Following the completion of a demographic sheet, a brief interview was conducted. Seven open-ended questions were asked of participants during the interview. The interview was conducted at a comfortable place and at a time convenient for the research participants. The time period of the interview was 10 to 20 minutes with an average of 15 minutes. After the collection of the data, it was transcribed and analyzed.

Ethical consideration

This study followed strict ethical standards. Before conducting the interview, informed consent was signed from the participants. A briefing was provided regarding the purpose and importance of the study. Confidentiality and privacy of the participants were upheld.

Results

Table 1
Frequencies of Prevalence of Stress among Crop Farmers ($n = 60$)

Question	Categories	Small Scale Crop Farmers ($n=30$)	Large Scale Crop Farmers
		<i>f</i> %	<i>f</i> %
Do you feel stress in relation to farming?	Yes	22 (73.3)	17 (56.7)
	No	8 (26.7)	13 (43.3)

Table 1 represents the frequencies and percentages of responses given by the study participants. The table indicates that the first question of the interview was 'Do you feel stressed about farming?' The table also shows that most small-scale crop farmers (73.3%) reported yes, whereas 56.7% of large-scale farmers reported feeling stressed. The result of the study revealed that while both groups experienced stress, small-scale crop farmers reported more frequent stress than large-scale crop farmers.

Table 2
Frequencies of Emotional State on Loss of Production (n=60)

Question	Categories	Small Scale Crop Farmers (n=30)		Large Scale Crop Farmers (n=30)	
		Yes (n=22)	No (n=8)	Yes (n=17)	No (n=13)
		f %	f %	f %	f %
How do you feel about the loss of production due to disease?	Tension	16(72.7)	3(37.5)	12(70.6)	3(23.1)
	It is Allah's will	6(27.3)	5 (62.5)	2(11.8)	10 (76.9)
	Financial Loss	0(0.0)	0(0.0)	3(17.6)	0(0.0)

In table 2, the frequencies of emotional states experienced by crop farmers due to crop disease-related production loss are described. The second question was "How do you feel about the loss of production due to disease?" The result indicates that 72.7% of small-scale crop farmers and 70.0 % of large-scale crop farmers who reported stress felt tension. The result of the study indicates that most small-scale crop farmers faced stress more feel tension than large-scale crop farmers if they had a loss of production due to diseases of crops. Additionally, it was found that large-scale farmers who did not experience stress attributed the loss to religious beliefs, accepting it as the will of Allah.

Table 3
Frequencies of Emotional State on Weather Stressors (n=60)

Question	Categories	Small Scale Crop Farmers (n = 30)		Large Scale Crop Farmers (n = 30)	
		Yes (n=22)	No (n=8)	Yes (n=17)	No (n=13)
		f %	f %	f %	f %
How do you feel if there is a delay in planting and harvesting due to bad weather?	Tension	11(50.0)	3(37.5)	8(47.1)	4(30.8)
	It is God will	7(31.8)	4(50.0)	7(41.2)	7(53.8)
	Feeling of Loss	4(18.2)	1(12.5)	2(11.8)	2(15.4)

Table 3 presents the frequencies of the emotional states reported by crop farmers in response to weather stressors. The third question was; "how do you feel if there is a delay in planting and harvesting due to bad weather?" The results show that 50.0% of small-scale crop farmers and 47.1% of large-scale crop farmers who reported stress said they felt tension. Small-scale farmers reported that they feel tension when there are delays in planting and harvesting due to bad weather, most of the large-scale crop farmers who did not report stress expressed a religious point of view.

Table 4
Frequencies of Prevalence of Financial Stressors (n=60)

Question	Categories	Small Scale Crop Farmers (n=30)		Large Scale Crop Farmers (n=30)	
		Yes (n=22)	No (n=8)	Yes (n=17)	No (n=13)
		f %	f %	f %	f %
Does purchasing major machinery, facility, land or livestock make you stressed?	Yes	14(63.6)	1(12.5)	5(29.4)	3(23.1)
	No	4(18.2)	5(62.5)	12(70.6)	10(76.9)
	Not purchasing	4(18.2)	2(25.0)	0(0.0)	0(0.0)

Table 4 indicates the frequencies of financial stressors among crop farmers, the question was "Does purchasing major machinery, facilities, land or livestock make you

stressed?" The table shows that participants of both groups who reported stress answered 63.6% of small-scale crop farmers said yes and 70.6% of large-scale crop farmers said no. The study findings indicate that a majority of small-scale farmers reported feeling stressed when making such purchases. Among large-scale crop farmers, those who reported feeling stressed answered yes, while those who reported no stress answered no as well, indicating that purchasing major machinery, facility, land, or livestock did not cause them stress.

Table 5
Frequencies of Opinion about Government Policies (n=60)

Question	Categories	Small Scale Crop Farmers (n=30)		Large Scale Crop Farmers (n=30)	
		Yes (n=22) f %	No (n=8) f %	Yes (n=17) f %	No (n=13) f %
What is your opinion about government policies related to framing?	Good	2(9.1)	1(12.5)	5(29.4)	0(0.0)
	Not Satisfactory	19(86.4)	6(75.0)	12(70.6)	12(92.3)
	Not interested	1(4.5)	1(12.5)	0(0.0)	1(7.7)

Table 5 indicates the frequency of opinions of crop farmers regarding government policies. The question posed to them was, "What is your opinion about government policies related to framing?" It shows that the highest number of both groups who reported experiencing stress also mentioned that they were not satisfied with the government policies. This suggests that there is a need for improvement in the farming-related government policies.

Table 6
Frequencies of Managing Techniques for Work Over Load (n=60)

Question	Categories	Small Scale Crop Farmers (n=30)		Large Scale Crop Farmers (n=30)	
		Yes (n=22) f %	No (n=8) f %	Yes (n=17) f %	No (n=13) f %
How do you manage the increased workload at peak times?	Planning	17(77.3)	5(62.5)	11(64.7)	7(53.8)
	With labours/machine	2(9.1)	1(12.5)	5(29.4)	6(46.2)
	With friends/family member's help	3(13.6)	2(25.0)	1(5.9)	0(0.0)

Table 6 presents the frequencies of management techniques for coping with work overload among crop farmers at peak times. The interview question was, "How do you manage the increased workload at peak times?" The table indicates that farmers of both groups who reported stress, 77.3% of small-scale crop farmers and 64.7% of large-scale crop farmers reported that they manage increased workload with planning at peak times.

Table 7
Frequencies of Coping Strategies (n=60)

Question	Categories	Small Scale Crop Farmers (n=30)		Large Scale Crop Farmers (n=30)	
		Yes (n=22) f %	No (n=8) f %	Yes (n=17) f %	No (n=13) f %
How do you manage stresses related to farming?	Discuss With friends/family member	8(36.)	2(25.0)	3(17.6)	0(0.0)

Discuss With experienced farmers/agriculture department	6(27.3)	0(0.0)	7(41.2)	4(30.8)
Find solution	4(18.2)	4(50.0)	3(17.6)	7(53.8)
Religious practices	4(18.2)	2(25.0)	4(23.5)	2(15.4)

Table 7 illustrates the frequencies of coping strategies employed by farmers. The question of the study was, "How do you manage stresses related to farming?" The data in the table shows that small-scale crop farmers and large-scale crop farmers who experienced stress stated that 36.4% of small-scale crop farmers discussed with friends and family members and 41.2% of large-scale crop farmers reported that they discussed with experienced farmers or the members of the agriculture department. The results indicate that large-scale crop farmers preferred discussions with experienced farmers or agricultural department members, while small-scale crop farmers relied on support from friends and family to manage farming-related stresses.

Discussion

The research aimed to extend the knowledge of the stress experienced by crop farmers, as well as to gather information on the various causes of stress and the coping strategies used by both small-scale and large-scale crop farmers. The findings of the study showed that while both groups experienced some level of stress, small-scale crop farmers reported experiencing stress more frequently than large-scale crop farmers. Ramesh and Madhavi (2009) reported it is very interesting that farming originated as one of the occupations that creates high stress (Ramesh & Madhavi 2009).

Small-scale farmers reported feeling tension when faced with delays in planting and harvesting due to adverse weather conditions, while most large-scale crop farmers who did not report stress expressed a religious point of view. Ramesh and Madhavi (2009) described that farmers have always had to face the challenge of unpredictable weather. This may be one of the reasons why farming is a stressful occupation. Good weather is one of the elements of successful farming. For the production of best harvesting, the weather must cooperate in producing a minimum and maximum range of temperature, moisture and sunshine (Ramesh & Madhavi 2009).

The purchase of major machinery, facilities, land, or livestock was reported to cause stress for mostly small-scale farmers. Large-scale crop farmers who experienced stress also reported that these major purchases caused stress. On the other hand, large-scale crop farmers who did not experience stress reported that these purchases did not cause them stress. Ramesh and Madhavi (2009) described that present farm financial crises are serious causes of stress in farm families. Low prices of products, lack of a regular flow, high debt load, rising expenses and not sufficient money for necessities are basic sources of stress among farming families (Ramesh & Madhavi 2009).

Both groups of farmers indicated dissatisfaction with government farming policies, highlighting the need for improvement in these policies. A study conducted among farmers in Mid Wales by Pollock, Deaville, Gilman, and Willock (2002) found that financial problems, time pressure, and government policy are key factors leading to stress among farmers (Pollock, Deaville, Gilman, & Willock, 2002). Most small-scale crop farmers and large-scale crop farmers reported that they manage the increased workload with planning during peak times. Ramesh and Madhavi (2009) discovered that the occupation of farming prompts stress due to work overload.

Additionally, the study revealed that large-scale crop farmers sought advice from experienced farmers or the agriculture department, and tried to find solutions to their challenges. On the other hand, small-scale crop farmers discussed with friends and family members how to manage farming-related stresses. Weigel and Weigel, (1987) reported that one of the coping strategies used by farmers is "Talking". Talking (Talking with others), addresses the importance members place on discussion about stress and problems. This coping strategy consists of discussing with immediate family, relatives, other farmers, and professionals (Weigel & Weigel, 1987).

Conclusion

Both groups of crop farmers experienced some level of stress, but small-scale crop farmers experience more stress compared to large-scale crop farmers. Small-scale crop farmers encounter financial challenges such as low income and high prices of seeds and fertilizers. Both groups of farmers faced stress due to weather conditions. The coping strategy utilized by both groups was talking. The study revealed that most farmers were not satisfied with government policies related to farming.

Recommendations

Despite the effort and care put into the present study, it still has some limitations. Data collection was quite difficult because most farmers were not willing to participate in the study due to feeling insecure. Additionally, in the present study, only male farmers were selected. Usually, all family members are involved in farming activities so both genders should be included in further studies. The study revealed that most farmers were not satisfied with government policies related to farming. The government needs to review the policies and make them easier and farmer-friendly. There should be counselors and psychologists in health care centers and hospitals in rural areas.

Implications

The present study has implications for rural communities, 67% of the population of Pakistan live in rural areas and their main source of income is farming (Government of Pakistan, 2007; 2008) as result of the study revealed that both groups of farmers suffer from stress. The study is important for researchers and scholars. This study has implications for counselors and psychologists. They will find out the stressors of farmers and teach them some stress management techniques and coping strategies. This study has important implications for policymakers and government.

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