

Gender and Stress Coping Strategies of Poultry and Cassava Farmers in Nigeria

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KEYWORDS Farmers. Stress. Elimination. Counselling. Food Security

ABSTRACT The study focused on stress-coping strategies employed by poultry and cassava farmers based on gender. Very large proportions of them were married (78%) and educated (63.3%). Mean age and mean income of 40 years and ₦11, 000- ₦15, 000 respectively were recorded; family size also had a mean of 4 members. With respect to farm size, an average of 5.56 plots was recorded for cassava and 1073 birds were in the poultry farms. Sources of stress are basically financial, weather, work-related, health-related and other people, social and psychological stress. Stress coping strategies are copious problem solving for financial, weather, work-related stressors and other people, relaxation and spiritual techniques for health related stressors and seeking social support from other people. The results of the study also revealed that there are no differences in stress coping strategies employed by gender among the poultry and cassava farmers (Financial stressor $t=1.097$; $P=.275$; weather $t=1.644$; $P=.103$; work relate $t=.355$; $P=.724$; health $t=-1.902$; $P=.060$ and other people $t=.942$; $P=.348$). To maintain and improve the current level of agricultural productivity in the country, all conditions that reduce farmers' efficacy must be eliminated. The farmers also need counselling services in order for them to be able to cope with stressful conditions.

INTRODUCTION

Around the world and across occupations, individuals suffering from stress often have reduced productivity especially as measured by their output at work. In times past, in-depth research studies have been conducted mainly on job-related stress. Akinboye et al. (2002), recent estimates reveal that job stress cost employers huge sum of money in absenteeism, lower productivity, high turnover, tardiness, burnout, workers compensation and medical payments. It is however noteworthy that little has been done on stress among farmers. This may be due to difficulties in totally separating farming as an occupation from day to day life of farmers, as these revolve around their occupation. Stress is evoked by stressors, which are stimuli that throw the body's equilibrium out of balance. Kosslyn and Rosenberg (2001), conceptualized that stressors can be short-term (acute) or long-term (chronic): they can be physical, psychological or social (or some combination).

Farming in Nigeria encompasses both livestock and crop production. Prominent among such are poultry farming and cassava production. Poultry farming is often characterized by high and quick turnover due to the short gestation period of the enterprise. Cassava production has greatly

increased due to the recent government policies, which have been favourable towards it. In the course of production of poultry and cassava products, farmers experience quite a lot of stress. Gender variations among these farmers may result in differences in stressors and stress experienced, Wortman et al. (1999), reported that there is evidence that women in western cultures experience more stress than men. Whatever the case, type of stress experienced and severity of the stressor, is a determinant of coping strategy employed. It therefore follows that gender variations may exist in the use of coping strategies. In order to maintain and improve the current level of agricultural productivity in the country, all conditions that reduce farmers' efficacy must be eliminated. Stress reduces motivation for work (Akinboye et al., 2002). Prior studies show stress to be a potential risk factor for mortality and as such should be explored. Chronically "Stress-out" individuals are accompanied by physical and mental exhaustion and a sense of low accomplishment. Chronic stressors on the job, physical and mental exhaustion all add up to 'burnout' (Kosslyn and Rosenberg, 2001). Despite the growth of stress and coping strategies research, gender-based analyses in this area are limited. Davidson and Fielden (1999) and Greenglass (1995) argued that

stress research has focused primarily on men. The recent conceptualization of stress is based almost entirely in the normative perspectives of men, and existing measures of stress have been criticized as male-oriented, which may undermine their usefulness for assessing stress in women's lives. Brannon (1999), therefore, contended that researchers cannot simply identify sources of stress but must investigate how people perceive various stressors and how they cope with them in their daily lives. Gender differences arise as a result of differences in roles played within the farm family and on the farm. These have a socio-cultural background and so determine what stressors farmers are exposed to and to what degree. The research study determined gender differences in stress coping strategy employed by cassava and poultry farmers in Nigeria in order to make policy recommendation on how to help farmers in such situation.

METHODOLOGY

The study was carried out in Iddo Local Government of Oyo State. Iddo Local Government, formerly known as Akinyele West, was created in May 1989, and has its headquarters at Ido town. It is located between longitude 2°30 and 50°15E and latitude 6°45N and 9°41. The local government has a population of about 55.893 with a sex distribution ratio of 1:1. It occupies a landmass of 865.49km² with about 57 percent of the total land used for agricultural purposes (NPC, 1995). It is bounded along the sides by Akinyele, Oluyole, Ibarapa local government areas of Oyo State and Odeda local Government Area of Ogun State. The people are predominantly farmers and farming is accountable for about 63 percent of total economic status in the local government area. The fertile land supports the growth of arable and cash crop such as cassava, kola nut, cocoa, oil palm and yam maize. Animal husbandry is also extensively practiced. The local government consists of about 78 settlements distributed into 10 wards. The target population for this study is all cassava and poultry farmers in Iddo Local Government of Oyo State. Out of the 10 wards in the Local Government Area, three (3) were randomly selected two (2) communities were randomly selected from each of the 3 wards making 6 communities in all. Twenty respondents were interviewed in each community with adequate representation of both gender involved

in cassava and poultry farming, a total of 120 respondents were therefore interviewed. Data was gathered primarily using open and closed items in a structured questionnaire. Data collected were analyzed with descriptive (Frequency, Percentage and mean) and inferential statistics (Chi-square and t-test).

RESULTS AND DISCUSSION

The selected socio-economic characteristics analyzed include gender, age, faith based, marital status, educational status, farm size and family size. The result reveals that 54.6 percent of the farmers were male while 45.4 percent were female. The distribution is an indication of near-equity in the study area, which could be as a result of the government new policy on cassava which has made more male to come into cassava farming enterprise. This assertion is due to the fact that past studies have found that women are actually more involved in agriculture in Nigeria and Africa in general, especially with regards to some crops such as cassava, which is regarded as a woman's crop, Spiro (1980). Also, Pinstrip-Anderson and Pandya-Lorch (1998) documented that women in Sub-Saharan Africa, account for 70-80 percent of household food production despite unequal access to land, inputs and information as compared to men.

The results on table 1 shows that finances is the most frequent source of stress to all the farmers causing a minimum of 87.9 percent as a result of significant and sudden increase in debt load and a maximum of 100 percent as a result of rising expenses and insufficient cash flow to meet daily obligations. This is a reflection of poverty that has penetrated all sectors of the economy. Indications from recent surveys has shown that poverty is on the increase in Nigeria with well over 67 million people (about 66% of the population) living below the poverty line in 1996, compared to 18.4 million people (about 27%) in 1980 (Okunmadewa, 2002). Weather, which is a variable upon which the farmers have no form of control at all, contributes far less stress than finances to their well-being, although it is still a substantial source of stress. Work related stressors occurred at a maximum level (95.2%) where there was loss of farm help and increased workload. A minimum level (4.8%) of stress was caused as a result of machinery breakdown; this may be due to the very low level of mechanical

Table 1: Distribution of sources of stressors to the farmers

<i>Stressors</i>	<i>Number of responses</i>	<i>Frequency</i>
<i>Financial Stressors</i>		
1. Rising expenses on inputs	107	107(100)
2. Insufficient regular cash flow to meet obligation/daily necessities	108	108(100)
3. Poor sales/ low commodity prices/Glut period	108	106(98.1)
4. Purchase of major machinery, facilities	108	100(92.6)
5. Difficulties in obtaining credit facilities	108	105(97.2)
6. Sudden and significant increase in debt load.	107	94(87.9)
7. Deciding when to sell.	107	104(97.2)
8. Concerns about continued financial viability of the farm	106	104(98.1)
<i>Weather Stressors</i>		
9. Prolonged bad weather e.g. drought/flooding	107	65(60.7)
10. Delay in farm operation e.g. harvesting due to weather	107	95(88.8)
11. Crop or bird loss due to weather	106	66(62.3)
12. Production loss due to seasonal outbreak of diseases and pests.	106	69(65.1)
13. Problem with weeds and insects	106	63(59.4)
14. Re-productive difficulties with livestock e.g. low egg production	103	46(44.7)
15. Lesser yield than expected at harvest	98	77(78.6)
<i>Work-related Stressors</i>		
16. No farm help or loss of help when needed.	105	100(95.2)
17. Increased work load at peak time/long work hours	106	96(90.6)
18. Machinery breakdown at critical time.	104	5(4.8)
19. Having to travel long distances to farm or market	105	87(82.9)
20. Keeping up with new technology and products	104	64(61.5)
21. Significant change in type or size of farm	106	89(84.0)
22. Scarcity of inputs e.g. feed materials, fertilizer.	107	92(86.0)
<i>Health-Related Stressors</i>		
23. Use of hazardous chemicals on the farm operations.	107	60(56.1)
24. Personal illness during major farm operations.	107	15(14.0)
25. Farm-related accident/injury	107	19(17.8)
<i>Other People as Stressors</i>		
26. Problems in balancing work and family responsibilities	105	85(81.0)
27. Not enough time to spend with spouse.	107	85(79.4)
28. Feeling isolated on the farm/not seeing enough people.	107	89 (83.2)
29. Problems with a partnership	104	3(2.9)
30. Problems of farm operation with employees.	106	54(50.9)
31. Major decisions being made without my knowledge or inputs	108	0(0)
32. Conflict with spouse over spending priorities	105	5(4.8)
33. Daughter or son leaving home	106	2(1.9)
34. Trouble with parents in-law	105	2(1.9)
35. Unplanned interruption (specify)	106	31(29.2)
36. Divorce or marital separation	107	3(2.8)
37. Death of a friend	107	4(3.7)
38. Death of member of immediate family -----	105	4(2.9)
39. Death of a spouse	106	7(6.6)
40. Land tenancy and ownership issues	106	93 (87.7)
41. Adjustment to new government regulation/policies	107	90(84.1)

farming practices in the study area. And lack of maintenance culture as regards to caring for the old equipment.

With the health-related stressors, use of hazardous chemicals is seen to be at a more considerable level (56.1%) than farm-related injuries (17.8%) and personal illness during major operations (14.0%). Chemicals in the form of pesticides and herbicides are used in cases of pest and disease outbreaks. This may become hazardous to the health of farmers as a result of poisoning especially when not properly administered

Other people are also a constant source of stress except where decisions are made without farmers' inputs. This may be explained by the fact that most poultry and cassava farming operations are basically entrepreneurial and so decisions are taken by farmer himself. This also explains why only 3 percent of stress is caused by problems with partnership. Land tenancy and ownership issues (87.7%) and adjustment to new government policies and regulations (84.1%) are seen to be very frequent sources of stress to farmers. Okunmadewa (2002) stated, that more than 50 percent of farmers own their land

(invariably small pieces of land) and few are in rental or squatter tenureship. Interestingly, the owner-operators in view of the fragmented structure of such farmlands, as well as other issues surrounding the operations of such land are less prosperous than renters and squatters. Ownership issues may also be stressful where there is divorce or widowhood. Government policies and regulation may become stressful to farmers as a result of non-existence of infrastructure for its execution, lack of appropriate technology and weak extension services for effective utilization of modern farming technologies.

From table 2, financial stressors contributed to 87.5 percent physical stress, 92.3 percent of social stress and 93.1 percent of psychological stress. Work-related stressors and other people also contributed high percentages of these types of stress. All of these occur mostly daily and seasonally meaning that both chronic and acute stress is felt as a result. Little of these types of

stress were felt as a result of weather (4.0%) or health related stressors and when these occurred they are of a seasonal nature. The small proportions of health related stressors, which resulted in daily and monthly stress (physical, social and psychological) may be due to peculiar health conditions such as a permanent disability or due to cyclical processes such as menstrual-related pains in women. Summarily, the largest percentage of physical stress (93.2%) is work related. The largest percentage of social stress (92.3%) is due to bad finances and psychological stress is highest (92%) as a result of other people. Weather stressors and health stressors occur seasonally that is acute in typology while the others are chronic in nature (occurring regularly).

From the results in table 3, planning how to solve was most used to cope with financial stressors (58.9%) and weather stressors (94.4%) and other people as stressors (47.2%) for work-related stressors, accepting responsibility as best

Table 2: Distribution of types of stress experienced by the farmers

Stressor category	Type of stress experiences	Frequency of occurrence			
		Daily	Weekly	Monthly	Seasonally
Financial	(i) Physical	14(87.5)	-	-	2(12.5)
	(ii) Social	96(92.3)	2(1.9)	-	6(5.8)
	(iii) Psychological	95(93.0)	1(1.0)	-	6(5.9)
Weather	(i) Physical	1(1.0)	-	-	89(98.9)
	(ii) Social	1(1.0)	-	-	75(98.7)
	(iii) Psychological	2(2.0)	-	-	96(98)
Work related	(i) Physical	96(93.2)	3(2.9)	-	4(3.9)
	(ii) Social	91(91.9)	3(2.9)	-	5(5.1)
	(iii) Psychological	95(93.1)	2(2.0)	-	5(4.9)
Health related	(i) Physical	7(8.6)	-	1(1.2)	73(90.1)
	(ii) Social	6(6.7)	-	1(1.1)	83(92.2)
	(iii) Psychological	8(7.8)	-	2(2.0)	92(90.2)
Other people as stressor	(i) Physical	80(93.0)	-	-	6(7.0)
	(ii) Social	93(89.4)	1(1.0)	-	10(9.6)
	(iii) Psychological	92(92.0)	-	-	8(8.0)

Percentages in parenthesis

Table 3: Distribution of stress-coping strategies used by the farmers

Coping strategies	Financial	Weather	Work-related	Health related	Other people as stressors
Confrontational	31(29.0)	1 (.9)	2 (1.9)	2(1.9)	5(4.7)
Planned problem solving	63(58.9)	101(94.4)	27(25.2)	1(.9)	50(47.2)
Seeking social support	4(3.7)	2	2(1.9)	-	19(17.9)
Self control	8(7.5)	-	11(10.3)	-	20(18.9)
Re-appraisal	-	-	23(21.5)	-	3(2.8)
Escape/Avoidance	-	-	2(1.9)	-	3(2.8)
Accepting responsibility	1 (.9)	2(1.9)	39 (36.4)	-	-
Distancing	-	-	1 (1.9)	-	4(3.8)
Spiritual techniques	-	-	-	33 (30.8)	2(1.9)
Relaxation techniques	-	1(1.9)	-	71 (66.4)	-

Percentages in parenthesis

used (39%) while relaxation techniques (66.4) were most used in cases of health-related stressors, followed by spiritual techniques (30.81%). These findings are in line with those of Wortman et al. (1999), that problem-focused coping (planned problem solving, confrontational coping) is commonly used when it is believed that actions can affect the stressor. It is also in line with their reports that emotion focused coping is more used when people do not perceive their action as a solution to the stressor itself. A good example of emotion-focused coping is relaxation techniques, which is copiously used for health related stress. The results are also supported by the reports of Kosslyn and Rosenberg (2001) that, different people tend to use different coping strategies, and that the use of particular strategy may also depend on the situation.

The results of the chi-square analysis on table 4 shows, that there is significant relationship between educational status, cassava farm size, income, marital status and stress-coping strategy used. This means that there is significant relationship between each of the following educational status, cassava farm size, income,

marital status and stress coping strategy. Stress-coping strategy and each of these variables are therefore interdependent. However, the results show the relationship between each of gender, age, religion, poultry farm size and stress-coping strategy is not significant. Meaning that, stress coping strategies employed by the farmers is not dependent on their gender, age, faith and farm size with regards to poultry farm size.

The results of the t-test as presented in table 5 shows no significant difference in stress coping strategy by gender with respect to financial, weather, work-related and other people as stressors. These findings are supported by those Hamilton and Fagot (1988) from a survey of stress-coping strategy among male and female college students that although gender differences occurred in types of stress experienced, similarities were observed in use of coping strategies, for similar situations.

The t-test results in table 6 shows that there is no significant difference between stress-coping strategies employed by poultry and cassava farmers with respect to financial stressors, weather, work related, people stressors except for

Table 4: Chi-square analysis of socio-economic characteristics and stress-coping strategies.

<i>Socio-economic characteristics</i>	χ^2	<i>Df</i>	<i>P</i>	<i>Decision</i>
Gender	0.926	2	0.336	Not Significant
Age	39.306	3	0.076	Not Significant
Educational status	34.519	7	0.000	Significant
Perceived monthly income.	19.685	5	0.001	Significant
Marital Status	147.119	4	0.000	Significant
Size of Poultry farm holding	20.872	3	0.467	Not Significant
Size of Cassava farm holding	53.966	3	0.000	Significant
Faith base	0.084	2	0.772	Not Significant

Table 5: Results of t-test analysis of gender and stress-coping strategies

<i>Coping strategies used</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>Standard error mean</i>	<i>t</i>	<i>df</i>	<i>Sig.</i>	<i>Decision</i>
<i>For Financial Stressors-</i>							
Male	2.03	.88	.18	1.097	105	.275	NS
Female	1.84	.96	.14				
<i>For Weather Stressors-</i>							
Male	2.33	1.39	.18	1.644	105	.103	NS
Female	2.00	0.00	.00				
<i>For Work-related Stressors-</i>							
Male	4.88	2.28	.29	.355	105	.724	NS
Female	4.73	1.87	.27				
<i>For Health- Stressors-</i>							
Male	9.26	1.7	.22	-1.902	105	.060	NS
Female	9.73	0.45	.02				
<i>For Other People Stressors-</i>							
Male	3.20	1.86	.21	.942	104	.348	NS
Female	2.89	1.46					

* NS= Not Significant

Table 6: Results of t-test analysis of agriculture enterprise and coping strategies used.

<i>Coping strategies used</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>Standard error mean.</i>	<i>t</i>	<i>df</i>	<i>Sig.</i>	<i>Decision</i>
<i>For Financial Stressors-</i>							
Cassava Production	2.16	1.05	.15	2.30	105	.023	NS
Poultry Production	1.14	.77	.10				
<i>For Weather Stressors-</i>							
Cassava Production	2.22	.98	.14	.362	105	.718	NS
Poultry Production	2.14	1.08	.15				
<i>For Work-related Stressors-</i>							
Cassava Production	4.37	1.80	.25	-2.112	105	.037	NS
Poultry production	5.21	2.27	.30				
<i>For Health- Stressors-</i>							
Cassava Production	9.90	.03	.02	3.369	105	.001	S
Poultry Production	9.00	1.70	.25				
<i>For Other People Stressors-</i>							
Cassava Production	2.92	1.27	.18	-.839	104	.404	NS
Poultry Production	3.19	1.99	.27				

* N.S= Not significant

* S= Significant

health stressors. The result shows that there is significant difference in the strategy employed by poultry and cassava farmers to cope with as regards to health stressors.

CONCLUSION

There are significant relationships between each for educational status, income, marital status, cassava farm size, and stress coping strategies used. Relationships between gender, religion, and poultry farm size are however not significant. Also, no significance relationship is found in gender use of coping strategies for all stressors categories by both gender. Therefore, coping strategies employed as regards such stressful situations are similar between gender. In order to enhance the stress-coping ability of farmers and hence increase their productivity and well being, the following recommendations should be focused on:

- Government efforts at education for all should be intensified since income and ability to cope is positively correlated to educational status.
- Training should be carried out regularly for farmers in specific, identified and problematic areas of farming processes, which may become sources of stress to them.
- Promotion of social networks through which farmers relate together and jointly find solution to problems, relaxation can also be benefited from these.
- Incorporating recreational activities into extension service with adequate funding to educate the farmers on the importance of relaxation.

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