

GOAT OWNERSHIP PATTERN AND EFFECTS OF GOAT MORTALITY ON OWNERS IN GHANA

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Original Article

Abstract

A cross-sectional study was employed to obtain data on goat ownership and the effects of goat mortality on some psychosocial and socio-economic determinants of goat owners in the Ashanti region of Ghana. Data was obtained using pretested questionnaires with a total of three hundred and eighty-four (384) goat owners randomly selected from the study area. Data collected included demographic information on the respondents, management practices, herd size, choice of the management system, sources of feed and stock, goat mortality as well as psychological and economic effects on goat owners. Results showed the majority of goat owners (83.3%) were males, and 77.1% were married. Most of the goat owners were between 18-25 years old (42.2%). Majority of the goat owners (63.3%) had primary-level education. Majority of the respondents (89.1%) had herd sizes varying between 1 and 10. Management system was mostly semi-intensive (95.8%). Sources of feed for goats varied from purchased feed (8.9%) and a combination of crop residue which are often purchased (91.1%). Most (99.5%) obtained their stock through purchase while 60.9% indicated frequent loss of goats. Goat mortality was mostly attributed to diseases by 67.5% of the goat owners. All of the goat owners indicated that goat mortality affects them economically whilst 95.57% indicated the death of their goats affects other people in their household. Despite the economic and social effects of the death of their goats, majority of the goat owners (95.57%) were not psychologically affected by the death of their goats. Conclusively, goat rearing in the Ashanti Region of Ghana is practiced by all age groups and gender, most of whom were literate. Management system was mostly semi-intensive due to its convenience in terms of labor and capital requirements. Goat mortality existed; however, the economic effects of goat mortality were strongly agreed upon by the goat owners as compared to the psychological effects.

Keywords: Goat, flock size, management, socio-economic impact, Ghana

INTRODUCTION

Goats are versatile creatures that hold considerable importance in the economic and nutritional aspects of landless, small, and marginal farmers in several developing nations, such as Ghana (Pandey and Upadhyay, 2022). The practice of goat husbandry is widely seen among a significant portion of the rural population (Laouadi et al., 2018). Small ruminants, particularly goats, have demonstrated remarkable adaptability in harsh environments characterized by poor fertility lands, where the growth of other crops is unviable. These animals exhibit efficient survival capabilities by effectively utilizing the shrubs and trees that are readily available in such environments (Sejian et al., 2021; Mataveia et al., 2021). Goat production plays a significant role in the agricultural sector by providing valuable contributions to the business through the production of milk, meat, skin, and hair (MoFA, 2010). Despite being consistently neglected and receiving minimal attention, goats have still played a significant role in providing essential resources such as milk, meat, hair, leather, and other goods to a portion of the human population (MoFA, 2010; Mataveia et al., 2021). Despite the positive impact of goat rearing on farmers in developing nations like Ghana, goat owners may be vulnerable to psychological and emotional distress due to the wide range of risks associated with raising such animals (Padhy, 2018). In other African countries such as Nigeria and Kenya, there is enough documentation on the goat ownership pattern in the reports of Oyewole et al. (2020) and Njuki and Sangiga (2013) respectively. Nevertheless, in Ghana, this area on the dynamics involved in goat ownership has not been properly documented hence this study sought to fill that gap in the literature.

Goat populations in Ghana's 2023 mid-year report have been forecasted to 8 million with a corresponding decrease of about 2% percent respectively, with respect to the 2022 report (USAID, 2023). This reduction could be due to goat mortalities or reduced productivity of animals In Ghana however, animal mortalities could be due to disease (such as ecto-parasitism, helminthiasis, viral and bacterial diseases, among others), drought, and accidents which are also faced by African livestock producers, all of which have become more common in recent years (FAO, 2018; Tseren, 2018). As a result of this phenomenon, many goat owners suffer the devastating loss of animals and find themselves in precarious financial positions which impacts their well-being in the industry (ILO, 2016; Kolstrup et al., 2013). Despite, the economic, productive, and mental health of livestock producers being negatively impacted due loss of animals, research is lacking in understanding the socioeconomic and psychological impact of goat mortality on goat owners in Ghana. This research therefore aimed at investigating the goat ownership pattern, and the effect of goat mortality on goat owners in the Ashanti Region of Ghana.

MATERIALS AND METHODS

Research Design

This study adopted a cross-sectional design to examine the goat ownership pattern, goat mortality, and the impact of goat mortality on the psychosocial and socio-economic well-being of goat owners in the Ashanti Region of Ghana.

Study Area

The study was conducted in the Ashanti Region of Ghana. Within the Ashanti Region, certain communities were selected and served as the study sites. The study sites that were selected included Offinso,

Ejura, Afranso, Atwima, Agogo, Tafo, Anwomaso, Bretuo, and Old Tafo which are located in the Kumasi Metropolis. The Metropolis has only 8.5 percent of households engaged in agricultural activities. These agricultural households which number 37,456 households have their farms around their dwelling units often along wetlands in the Metropolis (KMA, 2013). Out of the 37,456 households that are into agricultural activities, 91.6% are into crop farming and 10.7% of them are into rearing of livestock. Collectively, 440,009 livestock are reared by 5,482 keepers with an average of 82 animals per keeper in the Metropolis. Almost half (49.5%) of the livestock reared in Kumasi Metropolis are chicken, 11.0% goats, and 8.6% sheep (KMA, 2013).

Population

The target population comprises all the goat owners within the Ashanti Region of Ghana irrespective of their demographic background. A purposive sampling technique was employed to select the goat owners within the selected areas in the Ashanti Region of Ghana. The goat owners selected had experienced goat mortalities and were interested in participating in the study. A total of three hundred and eighty-four (384) farmers were selected based on the Cochran formula for calculating sample size (Cochran, 1977).

$$n = (Z_{1-\alpha/2})^2 PQ / d^2$$

Where;

n = required sample size,

α = level of significance (0.05),

Q = 1-p,

$Z_{2(1-\alpha/2)}$ = standard normal deviate within 95% confidence interval (1.96)

P = the proportion of individuals within the study area = (50%).

d = level of precision at 5% (standard value 0.05)

$$n = (1.9622 \times 0.5 \times 0.5) \div 0.052$$

n = 384 goat owners

With regard to the goat owners used in this study, 42 farmers were sampled from each of the 9 communities in this study.

Data Collection

The primary data was obtained directly from the research study area using a well-constructed self-developed questionnaire. The questionnaire consisted of 3 sections. Section I comprised the demographic data of the goat owners. Section II comprised questions on goat ownership and Section III comprised questions that sought responses on the effect of goat mortality on some psycho-social determinants among goat owners. The questionnaire items were adapted from various research papers based on the review of the literature.

The in-person approach of questionnaire administration was used in this study to ensure that the researcher was able to explain the objectives of the study to the farmers appropriately as well as guide them in clarification of any statements that farmers may have difficulty in understanding. Questionnaires were successfully administered to the goat owners after obtaining their consent.

Validity

The content validity of the questionnaire was ensured by facts identified from the literature review. The responses to the structured questionnaire were subjected to the Cronbach Alpha Test to verify the reliability of the questions asked in the questionnaires; thus, the reliability coefficient (Cronbach alpha) was compiled. A Cronbach alpha which had a reliability coefficient of 0.72 was deemed acceptable.

Statistical Analysis

The research employed descriptive statistics such as tables, mean, standard deviation, and charts to show relevant data. Percentages and frequency

distributions were generated to help in data analysis to achieve findings to answer the research objectives. Data analysis was undertaken with the aid of Statistical Package for the Social Sciences (SPSS) version 25. The study used percentages to determine the goat ownership pattern and the effect of mortality on some psychosocial determinants in goat owners in Ghana.

RESULTS

The demographic characteristics of the goat owners have been described and reported in Table 1 below. The results on the goat owners' gender distribution showed that 83.3% of the 384 goat owners were males whilst the remaining 13.7% were females. The results of the gender distribution reveal that more males are involved in goat production than females in the study area. With the age distribution of the goat owners, the findings showed that 42.2% of the goat owners were between the ages of 18-25 years.

Table 1: Demographic characteristics of goat owners

Variable	Categories	Frequency (N)	Percentage (%)
Gender of goat owners	Female	64	16.7
	Male	320	83.3
Age of goat owners	Less than 18 years	1	0.5
	18 to 25 years	162	42.2
	25 to 35 years	109	28.4
	35 to 45 years	89	23.2
	Above 45 years	22	5.7

Marital Status of goat owners	Married	296	77.1
	Partner	6	1.6
	Single	82	21.4
Educational Status	High school(junior)	243	63.3
	No school completed	129	33.6
	Undergraduate	12	3.1

Additionally, it was found that 28.4% of goat owners were between the ages of 25-35 years, 23.2% of the goat owners were between 35-45 years, whilst 5.7% of goat owners were above 45 years of age. It was also found that only 1 (0.5%) goat farmer was less than 18 years of age as shown in Table 1. The results on the age of goat owners, the findings also reveal that majority of the goat owners (70.6%) were within the youthful age category of between 18-40 years. The findings on the marital status of the goat owners indicate that the majority of the goat owners indicated by 77.7% were married followed by 21.4% of the goat owners being single, whilst 1.6% were having partners but not married as shown in Table 1 below. The educational level of the goat owners was also considered in this study as shown in Table 1. This was needful because the differences in the educational level of the goat owners present with different levels of knowledge when it comes to taking care of goats. The findings showed that the majority of the goat owners represented by 63.3% have had junior high school education. In addition to the findings, 33.6% of the goat owners have never completed any school whilst 3.1% of the goat owners were undergraduates or have had tertiary education. The findings indicate that the educational level of the

goat owners on average is relatively low since majority of the goat owners have had up to junior high school education (as shown in Table 1).

Table 2: Economic characteristics of goat owners

Variable	Categories	Frequency (N)	Percentage (%)
Occupation of Goat owners	Artisan	1	0.5
	Farming	329	85.7
	Trading	54	13.8
Employment Status of Goat owners	Fulltime	239	62.2
	Part-Time	145	37.8
Household Size	1 to 5	229	59.6
	11 to 15	16	4.2
	16 to 20	12	3.1
	6 to 10	127	33.1
Household Monthly Income	Less than 500	8	2.1
	500 to 1000	138	35.9
	1000 to 2000	4	1.0
	2000 to 3000	230	59.9
	Above 4000	4	1.0

The economic characteristics of the goat owners have been described and reported in Table 2 below. The results on the goat owners' occupation showed that 85.7% of the 384 goat owners were engaged in farming whilst 13.8% of the goat owners were in the trading business and the remaining 0.5% was artisan. With the employment status distribution of the goat owners, the findings showed that 62.2% of the goat owners were full-time workers

whilst the remaining 37.8% were part-time workers within their different occupations. The findings on the household size of the respondents as shown in Table 2 indicated that 44.3% of the respondents were in a household of 3-6 persons, whilst 27.9% of the respondents were in a household of 1-3 persons. In addition, 21.30% of the respondents indicated that their household size was between 7-9 persons whilst the remaining 6.6% of the respondents had a larger household with a size of more than 10 persons. The findings on the average monthly income of the respondents showed that 59.9% of the respondents earned between GH¢2000.00 - GH¢3000.00 every month, 35.9% of the respondents earned between GH¢500.00 - GH¢1000.00 every month, whilst, 2.1% of the respondents earned less than GH¢500.00 every month. It was also observed that 1.0% of the respondents earned between GH¢1000.00 - GH¢2000.00 every month whilst 1.0% of the respondents also earned above GH¢4000.00 every month as shown in Table 2.

Table 3: Goat Ownership Pattern Amongst Goat owners

Variable	Categories	Frequency (N)	Percentage (%)
Years spent in goat production	Less than 10 years	225	58.6
	11 to 16	4	1.0
	16 to 20	10	2.6
	26 to 30	2	0.5
Caretakers of goats	Laborer	2	0.5
	Owner	374	97.4
	Other people	8	2.1
	1 to 10	342	89.1
	11 to 20	20	5.2

Flock Size	21 to 30	16	4.2
	31 to 40	6	1.6

Table 3 shows the findings on the length of years in goat keeping, flock size, and caretakers of goats in this study. It was observed that the majority of the goat owners (58.6%) had spent less than 10 years keeping goats. 2.5% of the farmers had kept goats between 16-20 years, 1.0% of the farmers had kept goats for about 11-16 years, whilst 0.5% of the farmers had kept goats for about 26-30 years. It was also observed that majority of the respondents (97.4%) were the caretakers of the goats, whilst 2.1% had other people being caretakers of their goats. It was also observed that 0.5% of the respondents had a laborer taking care of their goats. It was observed that majority of the respondents (89.1%) had a flock size between 1-10, whilst 5.2% had a flock size between 11-20, and 4.2% had a flock size between 21-30. It was also observed that 1.6% of the respondents had a flock size between 31-40 as shown in Table 3.

Table 4: Goat Ownership Pattern Amongst Goat owners

Variable	Categories	Frequency (N)	Percentage (%)
Type of Housing	Partial enclosed pen	207	53.9
	Open space	20	5.2
	Fully enclosed pen	157	40.9
Type of Management System	Extensive	16	4.2
	Semi-intensive	368	95.8
	All the above	2	0.5

Reason for choice of system	Convenience	148	38.5
	Low cost of production	234	70.0
	Convenience and Low cost of production	2	0.5

The findings on management systems adopted by goat owners in the study location was mainly semi-intensive and extensive with a percentage of 95.8%, and 4.2% respectively as shown in Table 4. The type of housing for goats in the study was open space (5.23%), partially enclosed pen (53.93%) and fully enclosed pen (40.9%). The major reason for choice of housing and management system in the study area was identified to be the low cost of management indicated by 70.0% of the goat owners whilst 38.5% chose the housing and management system because of convenience and 0.5% chose the type of housing and management because of convenience and low cost of production (as shown in Table 4).

Table 5: Source of feed and source of animals

Variable	Categories	Frequency (N)	Percentage (%)
Source of Feed	Crop residue and Purchase of feed	350	91.1
	Purchase of feed	34	8.9
Source of	Inheritance	2	0.5

Animals (Goats)	Purchase	382	99.5
Causes of goat mortality	Diseases	259	67.5
	Vehicular accidents	40	10.4
	Helminths	85	22.1

The findings in Table 5 below show the sources of feed and the source of goats. The sources of feed for goats in this study area were purchased feed (8.9%) and a combination of crop residue and purchase of feed (91.1%). The results obtained revealed that most of the goat owners obtained their stock through purchase (99.5%). However, 0.5% of the respondents acquired their stock through inheritance, Table 5.

In this study, the high proportion of acquisition through purchase may suggest high interest in goat keeping, due to some perceived potentials namely; festivity (2.10%), high demand (47.7%), hardiness of the goats (49.2%), pleasure (0.5%) and for keeping as pet (0.5%). This indicates that because of the hardy nature and the high demand for goats are the major reasons why goat owners within the study area keep goats as shown in Figure 1 below.

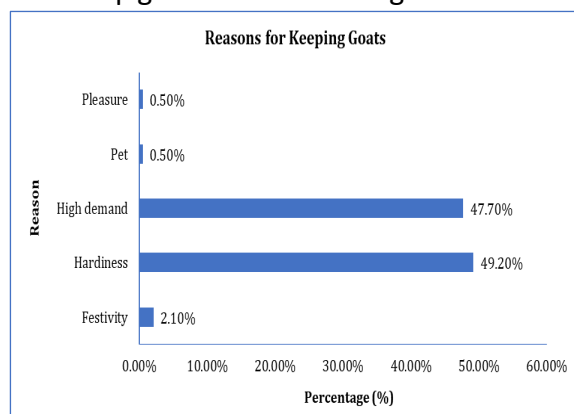


Figure 1. Reasons for goat farmers keeping goats

This study further considered the response of the farmers to the frequency of loss of goats. A greater majority (60.9%) of the farmers strongly agreed that they frequently lose their goats. Furthermore, 0.5% agreed to frequently losing their goats, whilst 35.90% were neutral on frequently losing their goats. In addition, 2.60% disagreed with frequently losing their goats as shown in Figure 2 below.

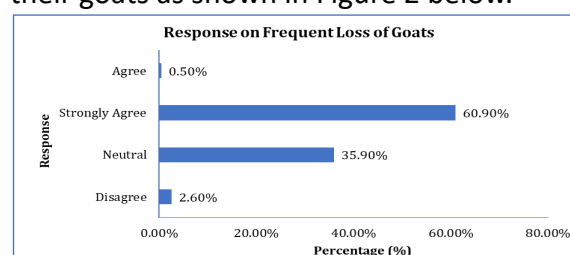


Figure 2. Farmers' response on frequency of loss of goats

With the death of goats as an issue of concern in this study, the majority of the farmers (60.9%) indicated that they lose their goats frequently. This is a matter of concern as these deaths were as a result of diseases, vehicular accidents and helminths as indicated by 64.5%, 10.4% and 22.1% of the goat owners respectively (Table 5).

Table 6: Effects of Goat Mortality on Farmers

Query Statement /	Response	
	Strongly Agree	Disagree
The death of my goats affects me economically	384 (100%)	0 (0.0%)
The death of my goats affects me psychologically	17 (4.43%)	367 (95.57%)
The death of my goat affects other people in my household	352 (91.7%)	32 (8.3%)

The findings on how goat mortality affects farmers were ascertained in this study. The findings are displayed in Table 6 and they showed that all of the goat owners 384 (100%) strongly agreed that the death of their goats affects the economy. It was also observed that 17 (4.43%) strongly agreed that the death of their goats affects the psychologically whilst the remaining 367 (95.57%) disagreed to the death of their goats affects them psychologically. In addition, 352 (91.7%) strongly agreed that the death of their goats affects the other people in their household whilst the remaining 32 (8.3%) disagreed to the death of their goats affects other people in their household as shown in Table 6.

The findings on farmer reactions to the death of goats were ascertained in this study. The findings are displayed in Table 7. The findings showed that all of the goat owners 376(97.9%) were neutral on feeling that they were the cause of the death of their goats whilst 2.1% felt they were the cause of the death of their goats and that the death of their goats affects the economically.

Table 7: Reactions to the death of Goats

Query / Statement	Response		
	SA	N	SD
I was the cause of the death of the goat	8 (2.1%)	376 (97.9%)	0 (0.0%)
I put measures to prevent future occurrences	384 (100%)	0 (0.0%)	0 (0.0%)
I don't care about the death of my goat	0 (0.0%)	0 (0.0%)	384 (100%)

SA- Strongly agree, N- Neutral, D- Disagree, SD- Strongly disagree

It was also observed that all of the 384 (100%) strongly agreed that they put measures in place to prevent future goat death occurrences. In addition, all of the 384 (100%) strongly disagreed that they don't care about the death of their goats. This shows that the farmers cared about their goats and their deaths were a matter of concern to them, Table 7

Table 8: Response to economic effects of goat death on goat owners

Query / Statement	Response			
	SD	D	N	SA
The death of my goats affected me paying of school fees	0 (0.0%)	2 (0.5%)	100 (26.0%)	282 (73.5%)
Death of my goats affected financial provisions for family	0 (0.0%)	15 (3.9%)	124 (32.3%)	245 (63.8%)
Death of my goats affected my average	0 (0.0%)	0 (0.0%)	5 (1.3%)	379 (98.7%)

annual revenue				
Death of my goats reduced my profit margins	0 (0.0%)	0 (0.0%)	2 (0.5%)	382 (99.5%)

SA- Strongly agree, N- Neutral, D- Disagree, SD- Strongly disagree

The response of the farmers to the economic effects of the death of their goats was ascertained and the findings are shown in Table 8 below. The findings show that majority of the goat owners (384, 100%) agreed that goat mortality affects their paying of school fees. In addition, financial provisions for the family were affected due to goat mortality as indicated by 63.7% of the farmers. It was also ascertained that goat mortality negatively affected the annual revenue and profit margins of goat owners in this study indicated by 98.7% and 99.5% of the farmers in this study as shown in Table 8.

The research found that the death rate of goats was a problem for goat owners. All of the farmers said that the loss of goats has a financial impact on their family, and 95.57 percent said that the loss of goats has an impact on other members of their household. The majority of goat owners (95.57%) were not emotionally impacted by the loss of their goats, despite its economic and social impact. The loss of their goats had a significant emotional impact on just 4.43 percent of the goat owners.

The response of the farmers to the psychological effects of the death of their goats was ascertained and the findings are shown in Table 1X below. The findings show that all of the goat owners (384, 100%) disagreed with the statement “I

cried when my goat died”. With the statement “I was very sad about the death of my goat”, 260 (67.7%) of the goat owners strongly agreed to feeling sad whilst 124 (23.3%) were neutral on feeling sad about the death of their goats. With the statement “I will never get over the death of my goat”, 99.5% of the farmers disagreed whilst 0.5% were neutral as shown in Table 9.

Table 9: Response to psychosocial effects of goat death on goat owners

Query / Statement	Response			
	SA	N	D	SD
I cried when my goat died	0 (0.0%)	0 (0.0%)	0 (0.0%)	384 (100%)
I was very sad about the death of my goat	260 (67.7%)	0 (0.0%)	124 (32.3%)	0 (0.0%)
I will never get over the death of my goat	0 (0.0%)	2 (0.5%)	382 (99.5%)	0 (0.0%)
Feel angry at the veterinarian for not saving my goat	0 (0.0%)	384 (100%)	0 (0.0%)	0 (0.0%)
Feel angry at my friends and family	0 (0.0%)	0 (0.0%)	0 (0.0%)	384 (100%)

for not being helpful				
Feel very angry for not taking care of my goat	384 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Feel guilty for not taking better care of my goat	0 (0.0%)	384 (100%)	0 (0.0%)	0 (0.0%)
I feel bad that I didn't do more in saving my goat	0 (0.0%)	384 (100%)	0 (0.0%)	0 (0.0%)

SA- Strongly agree, N- Neutral, D- Disagree, SD- Strongly disagree

With the findings on feeling angry at the veterinarian for not saving my goat, all of the farmers (384, 100%) were neutral on that statement. With the psychological effects of feeling angry at my friends and family for not being helpful, all of the goat owners (100%) strongly disagreed with that statement. Nevertheless, all of the farmers (100%) felt very angry at themselves for not taking care of their goats. In addition, all of the goat owners (100%) were neutral on feeling guilty for not taking better care of my goat. Furthermore, all of the goat owners (100%) were neutral on feeling bad that they didn't do more in saving their goats from death as shown in Table 9.

The relatively low psychological effect of goat mortality on farmers was expressed in 97.9% of the goat owners not blaming themselves for the death of their animals

though they care about the death of their goats. None of the farmers in this study cried when their goat died though 67.7% of the farmers were very sad about the death of their goats. This could be attributed to their concern about the loss of investment in feeding and taking care of these animals coupled with not being able to sell these animals to generate revenue

DISCUSSION

This study investigated goat ownership patterns and the effects of goat mortality on goat owners in Ghana. According to the findings, men in the Ashanti region of Ghana are far more likely to possess goats than females. This finding is consistent with that of Oyewole et al. (2020), who found that 58.7% of men and 41.3% of women in Nigeria owned goats. It is possible that variations in the demographic features of the respondents in the various research locations account for the considerably greater proportion of male goat owners found in this study compared to the survey done by Oyewole et al. (2020). Contrary to reports from Kenya by Njuki and Sangiga (2013), where women own the vast majority of poultry, lambs, and goats, the present research found that males were the predominant owners of these animals.

In this study, the young population (18–25 years) was more active in goat production than in any other agricultural sector. The results of this research are consistent with those of a study by Mwale and Rasto (2020) on the impact of a dairy goat growing program on the economic well-being of youth groups in rural Nakuru. Oyewole et al. (2020) found that 26.8% of goat owners were in their 20s and 30s, which is consistent with this result. Despite the high rate of young unemployment in

the research area, the high rate of participation in goat production shows that there is hope for expanded goat production in the region.

In a finding comparable to that of Nigerian research by Oyewole et al. (2020) where those who were married and/or had completed high school were more likely to engage in goat farming which was also the case of this study. There is hope for the adoption of new technologies and innovations in goat farming in the study region since a higher percentage of goat owners there have completed some sort of formal education. Since literate people in working age groups are predicted to be more open to new technology break

throughs, this study suggests that opportunities exist for better production processes. As is often understood, education enhances one's capacity for comprehension by providing them with new information and abilities. (Garba et al, 2015).

The finding on flock size agrees with the report by Oyewole et al. (2020) who reported 43.6% of goat owners have a flock size of 1-10. It can be deduced that most goat owners within the study area are not engaged in commercial goat farming. The management systems adopted by goat owners in the study location were mainly the semi-intensive system of farming practiced by 95.8% of the farmers. This finding disagrees with the findings of Oyewole et al (2020) who reported that an extensive system of rearing goats was practiced by 59.8% of the goat owners in Nigeria. Most of the goats in the area may therefore be exposed to reduced adverse environmental conditions, theft, uncontrolled mating, and accident among others. It was also observed from this study that many of the farmers used low-

cost housing and built a small shed for the animals showing that they care for the animals. This is similar to studies in rural areas where most goat pens are made from bamboo with sandy soils as flooring with the pens protected from heavy rains and strong wind (Kaylan et al., 2013).

Most of the goat owners obtained their goats through purchase with few obtaining their goats from inheritance. In addition, they feed these goats with crop residue and purchased feed. This indicates that the goat owners in the study area are relatively investing into the production of these animals which is worthy of notice. Governmental attention can be turned to such an area to support their bid to increase goat production.

The study also showed majority of the people keep goats because they are hardy and have high demand. This finding disagrees with the findings of Oyewole et al. (2020) where festivity, ease of keeping the animals, and high demand was the reason why most of the farmers were keeping goats in Nigeria. Indeed, goats are hardy animals and have a well-established ability to withstand high-heat environments and also produce high-quality products with lesser-quality vegetation (Salem & Smith, 2008). The high mortality of goats reported by farmers with the major cause of goat mortality in this study being a result of diseases (64.5%), suggests that proper animal care and satisfactory veterinary services are lacking within the study areas. Peeling and Holden (2004) have previously indicated that failure to provide veterinary health services to livestock farmers or inadequate or poor veterinary support affects ruminant production negatively.

In this study, goat owners were less affected emotionally by the goat deaths than they were financially and socially. For

obvious financial reasons, many people keep goats as a source of income, thus the loss of even a single goat may have a significant effect on their finances. The mortality of goats also has economic and social consequences for their owners, making it harder for them to meet their social responsibilities in areas like meeting basic family requirements, sending children to school, and making other monetary contributions to society. Though all of the farmers in this study felt angry for not taking care of their goats, majority of them easily got over the death of their goats. These findings indicate to some extent that goats are not considered pets in the study area and as such goat owners don't attach a lot of emotions to them when rearing them. In view of this, their deaths have a relatively lower psychological impact on the goat owners.

CONCLUSION

In addition to the emotional toll, the loss of goats had a measurable impact on the owners' ability to meet their social commitments, such as meeting their children's educational costs and making other monetary contributions to society. If more young people became involved in goat farming, it may help bring down the country's high unemployment rate. People who are interested in entering the goat production sector should be helped financially by the government and other relevant parties. Policies that target women specifically and inspire them to enter the goat farming industry are strongly supported. In view of this it is recommended that research should focus on determination and prevention of the causes of high rate of goat mortality in the study area.

Conflicts Of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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