Seroprevalence and associated exposure factors of human brucellosis among abattoir workers in Uyo metropolis, Akwa Ibom State, Nigeria

P2-L17

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This study determined the seroprevalence of brucellosis among abattoir workers at the Central abattoir Uyo to be 42.9%. Marital status, ethnicity, and work-related factors such as slaughtering animals, accidental self-cutting by workers while slaughtering, and continuing to slaughter with wounds/cuts were significantly associated with brucellosis seropositivity. Additionally, 80% of the surveyed veterinarians working at the abattoir exhibited poor knowledge of the brucellosis surveillance system.

BACKGROUND

- Brucellosis, a globally impactful zoonotic and neglected tropical disease, significantly contributes to human morbidity and animal reproductive waste.Often misdiagnosed, brucellosis can lead to prolonged hospitalization and a diminished quality of life
- This study aimed to assess the seroprevalence of human brucellosis, related exposure factors, and knowledge of the brucellosis surveillance system among abattoir workers (veterinarians) in Uyo metropolis, Akwa Ibom State, Nigeria.

METHODS

- This descriptive cross-sectional study was conducted at the Central Abattoir, Uyo, among abattoir workers(n=98). Sociodemographic data, exposure factors, and brucellosis surveillance knowledge were gathered via questionnaires. ELISA was used for brucellosis screening, and data were analyzed using descriptive, bivariate, and multivariate methods at a 5% significance level.

RESULTS

- The overall brucellosis seroprevalence among the abattoir workers was 42.9%. Marital status, ethnicity, and work-related factors like slaughtering animals, self-cuts, and working with wounds were significantly associated with seropositivity. After adjustment, only sex and ethnicity remained significant. Additionally, 80% of veterinarians had poor knowledge of the brucellosis surveillance system.

Table 1. Seroprevalence of human Brucella immunoglobulins G and M in the sera of participants at the Central Abattoir, Uyo, Akwa Ibom State, Nigeria

Immunoglobulin	Number of tested sera	Number of positive sera	Percentage of positive sera (%)
G	98	11	11.2
M	98	38	38.8
G & M	98	42	42.9

RESULTS CONTINUED

Table 2: Logistic regression analysis of factors associated with overall seroprevalence of human Brucella among abattoir workers at Central Abattoir in Uyo Metropolis, Akwa Ibom State

Variables	UOR Odds ratio	P value	AOR Odds ratio	P value
Sex				
Male	1.82	0.177	3.70	0.050*
Female	RC		RC	
Ethnicity				
Others	0.28	0.040*	0.23	0.050*
Ibibio	RC		RC	
Occupation				
Butcher's assistant	0.42	0.21	0.74	0.71
Veterinarian	0.09	0.03*	0.72	0.84
Meat vendor	0.65	0.36	4.12	0.16
Butcher	RC		RC	
Marital Status				
Single	0.38	0.029*	0.36	0.069
Married	RC		RC	
Slaughter animals				
Yes	2.67	0.021*	3.19	0.22
No	RC		RC	
Accidental wound/cut				
Yes	2.75	0.035*	0.82	0.90
No	RC		RC	
Still slaughtering with wound				
Yes	2.55	0.035*	1.52	0.75
No	RC		RC	
Eat while working				
Yes	2.2	0.09*	1.04	0.94
No	RC		RC	

Knowledge category of Veterinarians on brucellosis surveillance system
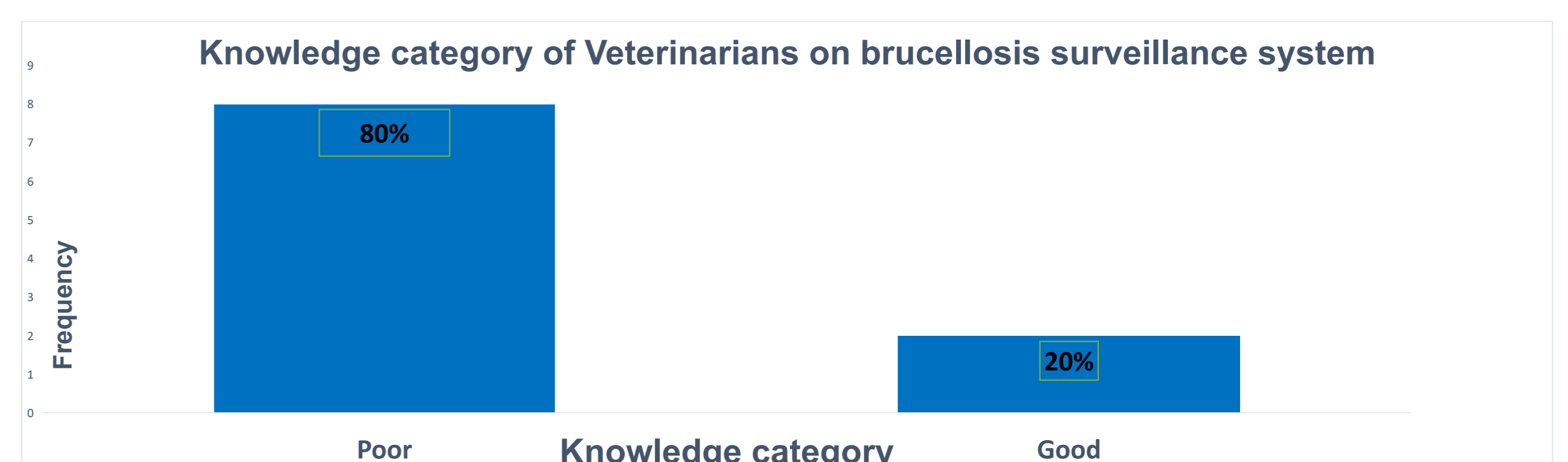
Figure 1 shows the knowledge categories of veterinarians on the brucellosis surveillance system.

CONCLUSIONS

- Overall Brucellosis seroprevalence among abattoir workers was high, and veterinarians showed poor knowledge of the brucellosis surveillance system. Human brucellosis remains a public health issue for livestock and abattoir workers. Routine screening, health education for workers, and continuous training for veterinarians are recommended to improve detection, prevention, and control.

ADDITIONAL KEY INFORMATION

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