



Research Paper

## Perceptions, Knowledge of Farmers about Tsetse Indigineous and Modern Technologies Control Method in Veterinary Clinic Bajoga District, Funakaye L.G.A, Gombe State, Nigeria

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### ABSTRACT

This study assessed the Perception, knowledge about tsetse indigenous and modern technologies control method in veterinary clinic Bajoga, a total of 91farmers were questioned all from the study area. The questionnaires were administered by the researcher and veterinary officers. The questionnaires were administered by the investigator and veterinary officers. Earlier the start of the interview, all the objectives of the study was vividly fully elucidated to each respondents and consent of the candidate was succeeded. Results: 54(59.3%) and11(12.1%) of the respondents were male and female respectably. About 73 (82.4%) had satisfactory knowledge about indigenoustsetse fly control, however, 65(71.4%), 70(76.9%) and 71(78%)(BOCD, MOCF and GT) respectably, respondentshad a knowledge of naming the indigenous control of tsetse fly in the study area. 55 (60.4%) of the respondents had awareness on (ISOC), 35(38.5%) practiced and realized on (AAGS) and only 15 (16.5) had perception of (TTS). The respondents mentioned some symptoms of tsetse flies effects on cattle 54 (59.3%), 47 (41.6%) and 25 (27.5%), (LMP, CLS and LRR) respectably. Conclusions of this surveyextremely enumerate that knowledge and practice building of the farmers on control of cattle tsetse and trypanosomosis planned and assimilated control method including society of research area should be supported.

**KEYWORDS:** Perception, Knowledge, tsetse, control, indigenous, modern, technplogies

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### I. INTRODUCTION

Tsetse flies (Diptera: Glossinidae) infest, 9 million km of sub-Saharan Africa where they communicate trypanosomes which produce Humanoid African Trypanosomiasis (HAT; also acknowledged as sleeping sickness) and African Animal Trypanosomiasis (AAT; also it is also known as Nagana). This compound of infections has an imperative control on health and efficiency in sub-Saharan Africa ([13] and [9]). Human African trypanosomosis (HAT), also known as sleeping sickness, is the human method of the disease, it is instigated by two sub-species of *T. brucei*, which are as *T. brucei gambiense* and *T. brucei rhodesiense*. The earlier happens in western and central Africa, and the later final in eastern and southern Africa [3]. These human- virulentpests can also disturb animals, both cattle and biota, which can operate as artificial lake s for HAT [17]. Means of tackling Human African trypanosomosis (HAT) and African Animal Trypanosomiasis (AAT) vary basically. Control of African Animal Trypanosomiasis (AAT)communicated by riverine flies is supported and applied mostly by livestock attendants [10] who give their livestock with trypanocides and insecticides andorganize odour drawn traps or aims to mechanism tsetse. Control of HAT. Outside energies to control the tsetse trajectory, and straight control of African Animal Trypanosomiasis (AAT) in Nigeria trusts on infection analysis. However, a numeral of tasks overcome African Animal Trypanosomiasis (AAT) stoppage and control. Human African Trypanosomiasis (HAT) is a severe municipal health problematicinitiating sleeping sickness in humid Africa in accumulation to serious significances penalties in humans and animals especially cattle.Thecomprehensive existence of this sickness in people and their cattlepostures a great limitation to agronomic and economic improvement on the region. The main economic control of African trypanosomiasis is in injured of cattle and the fatherlandsmainly disturbed are those with the least numeral of veterinarians [2].

### **1.1: Human Sleeping Sickness**

Human trypanosomosis is a main threat to human health in Africa. Approximately 35-55 million in 36 African countries are at risk but only about 3 million of them are under surveillance [16]. The Two kind species of salivarian trypanosomes produces contagion in humans. All of them causes sleeping sickness through attack of the central nervous system. *T.rhodesiense* habitually happens with serious syndromes (patterns, diseases) while *T.gambiense* contagion may be primarily asymptomatic, while at a future step it disturbs the central nervous system [14].

### **1.2: Trypanosomosis**

African animal trypanosomosis (AAT) is a kind of disease composite affected by tsetse fly communicating *T.congolense*, *T.vivax* or *T.brucei* or instantaneous contagion with one or additional of these organisms. African animal trypanosomosis (AAT) is most essential in cattle but can cause thoughtfulnesses in camels, sheep and goats. Trypanosomes infects a comprehensive variety of crowds including wild and inherent animals which signifies tanks for the organism. Infection outcomes in sub-acute, critical or chronic disease categorized by intermittent fever, anemia, occasional diarrhea and rapid loss of condition and often terminates in death. In southern Africa the disease is generally known as “Nagana” which is derived from a zulu term meaning to be in low or miserable souls. Trypanosomes duplicate in the tsetse fly and are communicated over tsetse saliva when the fly feeds on an animal and sometime on human.

### **1.3: Tsetse and Trypanosomiasis Control**

Control techniques can either be focused beside the vector, the tsetse fly, or beside the parasite itself, the trypanosome. Vector-control techniques comprise ground and aerial spraying of insecticides, the Sterile Insect Technique (SIT), traps and targets and the use of deltamethrin acaricide treatment for cattle. Parasite control methods include trypanocidal drug care and the use of trypanotolerant livestock. Prevention of the parts infested also establishes a ways of dealing with the disease, as does the damage of the natural habitation of the fly when land-living is blank for settlement in reply to rising human population pressure [1]

### **1.4: Direct destruction of tsetse flies**

Direct destruction of tsetse flies by net assembly and stuck baits has not been very hopeful in the past, except in Princi Island where *G. palpalis* was almost eradicated. Destruction by trapping (Harris traps) has been successful in controlling *G. pallidipes* in a restricted breeding area of Zululand, South Africa, but results have not been very satisfactory in other areas. Some authors, like Morris, (1960-1961) stress that traps give the best way for catching representative samples of flies, whereas others, resembling Abed., (1963), consider traps as useless [3]

### **1.5: Bush and Game Clearance.**

Initial tsetse control comprised general bush clearance (planned to eradicate the covered places where tsetse rest and sets their larvae and pupae) and general shelling of wild game animals (planned to eradicate the wild blood causes used by the tsetse). This kind of methods can no longer be recommended [1]

### **1.6: Ground spraying**

Experiments with insecticides beside tsetse started in 1945, when DDT and BHC (HCH) were the only synthetic compounds accessible. The relevance of remaining deposits of determined insecticides to tsetse relaxing sites was very broadly used, but is now depressed due to concerns about special effects on non-target organisms.

## II. METHOD

### 2.1: Study Area



**Plate 1: Google map of the study area**

### 2.2: Analysis of Data

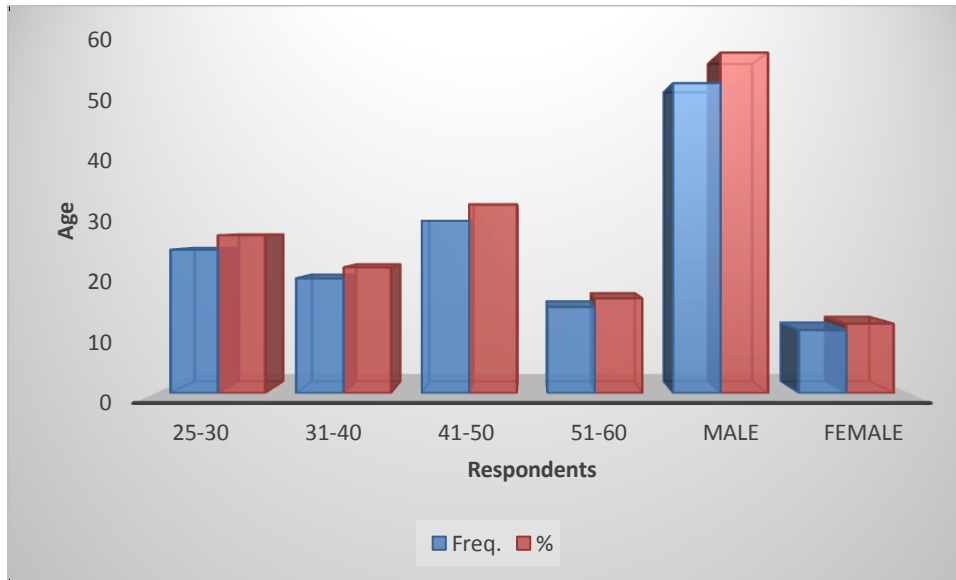
All data collected through the structural questionnaire were surveyed using line graphs to describe continuous data in this investigation [7].

### 2.3: Research design and statistics collection:

A structural questionnaire was administered full of 91 chance the farmers. The preferred farmers which include (Male and Females in the study area), classified based on their ages. The structural questionnaire single-minded mainly on farmer's knowledge, attitude and view on the livestock management, actuality of cattle trypanosomosis, disease transmission, periodically, control methods. The questionnaires were administered by the investigator and veterinary officers. Earlier the start of the interview, all the objectives of the study was vividly fully elucidated to each respondents and consent of the candidate was succeeded [7].

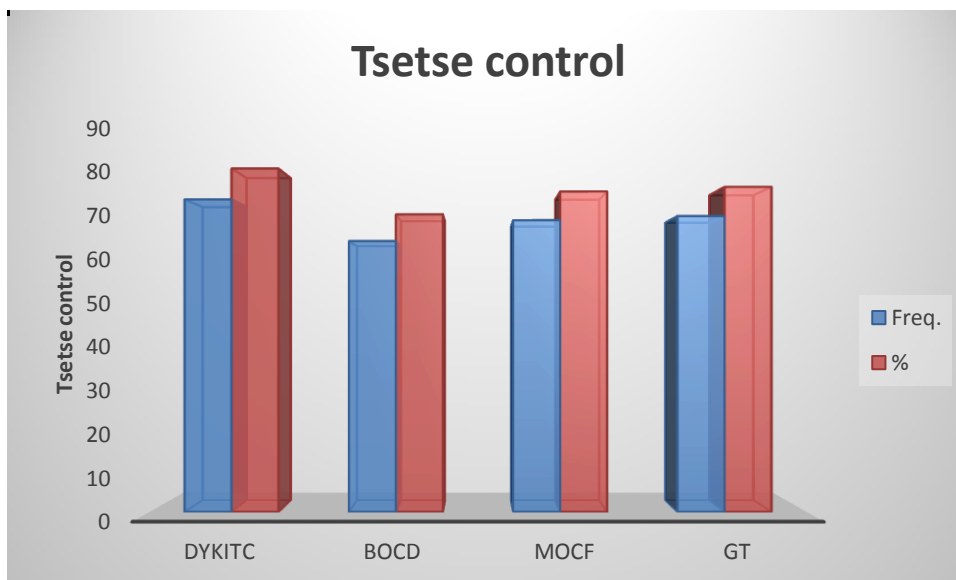
### III. RESULTS AND DISCUSSIONS

#### 3.1: Results



**Fig. 1: Profile of Respondent**

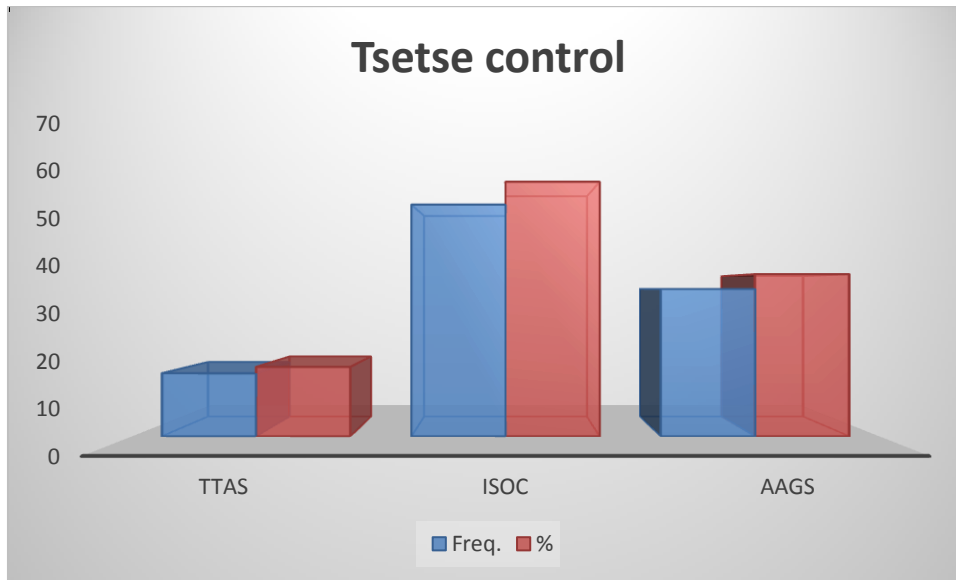
Fig. 1 shows that mainstream (59.3%) of the sampled respondents were males, the major percentage (32.9%) belonged to 41–50 years of age class, and (12.1%) respondents were female which are married almost, and their concern were involved in livestock retaining and crop production as their principal profession.



**Fig. 2: Knowledge of Indigenous Tsetse Control**

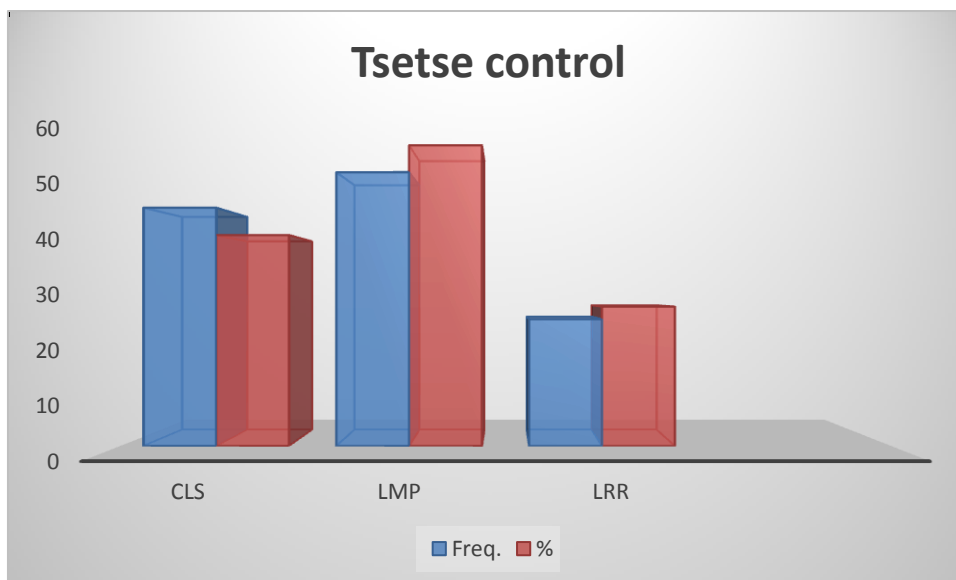
(DYKITC=Do you know indigenous tsetse control; BOCD=Burning of cow dung; MOCF=Making camp fire; GT=Grazing time)

In Fig. 2 shows the assessment results indicated that most respondents (82.4%) had knowledge about indigenous tsetse flies control (DYKITC) while (71.4%, 76.9% and 78%) respectively were able to mention three ways of controlling tsetse flies using indigenous method (BOCD, MOCF and GT). All participants (men and women) practiced the indigenous control of tsetse flies in the area of study.



**Fig. 3: Knowledge of modern technologies Tsetse Control**

Fig. 3 shows that, the majority of respondents (60.4%) indicated a positive approach towards mechanism of modern control of tsetse flies, the study indicate that some part of the participants (38.5%) used (AAGS) control methods against tsetse. Also, the respondents (38.5%) stated the use of modern control methods of tsetse, and only (16.5%) had knowledge about (ISOC) control of tsetse on cattle.



**Fig. 4: Symptoms of tsetse described by respondents**

(CLS=Cow looking slim; LMP=Low milk production; Low reproduction rate)

In Fig. 4, The results shows that, the respondents mentioned three most usually symptoms comprise the cows looking slim (CLS) (41.6%), followed by low milk production (LMP) (59.3%), and the last, low reproduction rate LRR (27.5%). Additional symptoms were only mentioned by small amounts of the defendants.

### 3.2: Discussions

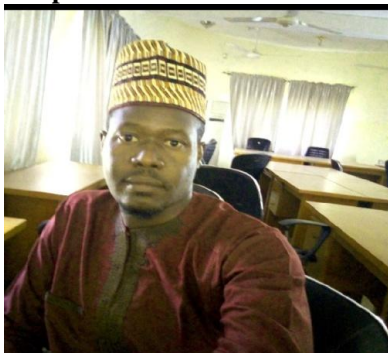
Really, the domiciliary assessment outcomes indicated that despite the fact that most public members showed to have had knowledge of tsetse, this is also been reported in other studies of ([7];[11]). From the results in Fig. 1 expressed that mainstream (59.3%) of the sampled respondents were males this correspond with the study examined by [7], and the major percentage (32.9%) belonged to 41–50 years of age class, which indicated that, the respondents of this class are in their energetic age, similar study were determined by [6] and (12.1%) respondents were female which are married almost, and their concern were involved in livestock retaining and crop production as their principal profession ([6];[7]). In Fig. 2 The results showed that most respondents (82.4%) had knowledge about indigenous tsetse flies control (DYKITC), this found in similar study of [4] in

Tanzania, while (71.4%, 76.9% and 78%) respectably were able to mention three ways of controlling tsetse flies using indigenous method (BOCD, MOCF and GT). All participants (men and women) practiced the indigenous control of tsetse flies in the area of study, exactly were found in previous studies by ([6];[12]) and the outcome from this study is related to that of [15] that determined that indigenous control methods were well recognized and applied and developed by the respondents. The Fig. 3 of this research expressed that, the majority of respondents (60.4%) indicated a confident attitude towards mechanism of modern control of tsetse flies, the study indicate that some part of the contributors (38.5%) used (AAGS) control methods against tsetse, [4]. Also, the respondents (38.5%) stated the use of modern control methods of tsetse, and only (16.5%) had knowledge about (ISOC) control of tsetse on cattle. In Fig. 4. The results shows that, the respondents were able to mentioned three most usually symptoms on cattles which comprises, cows looking (CLS) (41.6%), shadowed by low milk production (LMP) (59.3%), and lastly, low reproduction rate LRR (27.5%). This is observed in the study determined by [4] in Tanzania.

#### **IV. CONCLUSION**

The current study was assessed the perceptions, knowledge of farmers' about indigenous and modern control of the cattle trypanosomosis and its vectors in Veterinary clinic Bajoga district. The study shown that trypanosomosis is the most significant disease constraint of livestock, restrictive the overall farming activity and livestock health in the study area. Thus, enabling local community members to have clear knowledge of tsetse flies is an important starting point in mobilizing them into taking appropriate control measures against them. Also, district authorities need to take an active role in monitoring the performance of indigenous and modern tsetse control facilities in the district and quality control method enabling preventing cattle and human from disease by tsetse flies in the study area.

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