

Perception of Farmers regarding Brucellosis at Kalyobia Governorate

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ABSTRACT

Brucellosis is an important zoonotic disease caused by gram-negative bacteria that is pathogenic for a wide variety of animals and human. **The aim:** of this study was to assess perception of farmers regarding Brucellosis at Kalyobia Governorate. **Research design:** A descriptive research design was used in carrying out this study. **Setting:** The study was conducted in sixteen (16) veterinary health units at Kalyobia Governorate. **The sample:** A simple random sample technique was used to select 320 farmers in direct contact with animals from total (3200). **Tools:** A structured interviewing questionnaires to assess the socio-demographic characteristics of studied sample, family history of Brucellosis infection, their knowledge and attitude regarding Brucellosis and observational checklist to assess practices and home environment of studied sample regarding Brucellosis. **Results:** 79.4% of studied sample were males, 43.4% aged from 30 to less than 40, and 31.6 % of them were illiterate. 77.2% of studied sample had poor knowledge, 69.4% of them had indifferent attitude while 51.2% of them had unsatisfactory practices regarding Brucellosis. **Conclusion:** Slightly more than three quarters of studied sample had poor knowledge and more than two third had indifferent attitude regarding Brucellosis while slightly more than half of studied sample had unsatisfactory practice regarding Brucellosis. There were a highly statistically significant correlation between total knowledge and both total practices and total attitudes of the studied sample related to Brucellosis. **Recommendations:** Health education program should be given for farmers about Brucellosis, its causes, mode of transmission, signs and symptoms, and methods of prevention at veterinary units.

Key words: Brucellosis, Zoonotic, Farmers, Knowledge, Practice & Attitude, Nurse

INTRODUCTION

Brucellosis is one of the most common zoonotic infections globally, which is also known Mediterranean fever, Malta fever, Bang's disease and undulant fever (*WHO, 2014*). Brucellosis caused by small gram-negative coccobacilli of the genus brucella. Four species are known to cause human disease, each having their own specific animal host: *Brucella.melitensis* (goat, sheep and camel), *B. suis* (pig), *B. abortus* (cattle) and *B. canis* (dog). Currently *B. melitensis* remains the principal cause of human Brucellosis worldwide (*Mohammed, 2014*).

Humans are commonly infected through ingestion of raw milk, cheese, meat, or through direct contact with infected animals, products of conception or animal discharges (e.g., among shepherds, farmers and veterinarians), and through inhalation of infectious aerosols (e.g., by workers in abattoirs and microbiology laboratories) (*El-Koumi et al., 2014*).

Human Brucellosis can be an acute or a chronic febrile illness and presents with a variety of manifestations after an incubation period, which can vary from 1 to 6 weeks or several months. Brucellosis may be difficult

to distinguish clinically from a number of other infections such as typhoid fever, tuberculosis, infective endocarditis, and acute rheumatic fever. The symptoms of acute illness are fever, chills, headache, muscle and joint pains, malaise, nausea, night sweats and loss of appetite persisting 3 to 6 weeks. Brucellosis shows multisystem involvement (Roushan et al., 2014).

In animals, the disease is mainly characterized by abortion, still birth or weak calves and show decrease in milk yield. Death may occur as a result of acute metritis, followed by retained fetal membranes. In males, Brucellosis may manifested as unilateral or bilateral orchitis and sterility, while in all age groups, hygromata involving one or more leg joints may be observed (Abd El-Fatah, 2014).

Brucella infection causes major economic losses in livestock and serious impact on public health. The disease causes great economic losses for livestock breeders through interference with the breeding programmes and decrease in milk yield. More than 70% of Egypt's total livestock population is owned by farmers, who keep a few cows and buffalo in their household as a source of milk and dairy products for home consumption or to sell, often unpasteurized in local markets (Nassar, 2013).

The control of this disease in animals, and thus prevention of the disease in humans, depends mainly upon the use of efficient diagnostic procedures. These measures include pasteurization or boiling of milk for human consumption, cooking all food stuffs derived from animal sources, vaccination of cattle against Brucellosis, isolation and slaughtering of seropositive reactors for Brucellosis and providing protective clothing for humans dealing with infected cattle (El-Ashmawy, 2013).

Community health nurse has important role in preventing and control of Brucellosis through providing health education about the disease its causes, mode of transmission, signs and symptoms, and methods to control of infection (Lundy et al., 2009). However health is a difficult and extremely complex task. It can't be regarded as effective if specific considerations referring to the community aren't taken into account. These include: culture, beliefs, traditions, educational level, social status, occupation, age, etc. Hence, health education programmes should be aimed at targeted social group as farmers who may not be fully aware of the problem. They should be directed not only at specific measures but should also emphasize the responsibility of individuals for safe guarding and improving their own health and that of the community (Nassar, 2013).

Significance of the study:

Worldwide, Brucellosis remains a major source of disease in humans and domestic animals. It is more prevalent in western parts of Asia, India, Middle Eastern, southern European and Latin American countries. Human Brucellosis is found to have significant presence in rural/ nomadic communities where people live in close association with animals. Worldwide reported incidence of human Brucellosis in endemic areas varies widely from less than 0.01 to greater than 200 per 100,000 populations. It has been estimated that the true incidence may be 25 times higher than the reported incidence, due to misdiagnosis and underreporting (Parthasarathy, 2013).

In Egypt, Brucellosis is still remaining one of the major disease problems that affect animal industry as well as human health and is still an endemic serious disease among domestic animals and humans in spite of attempts that were implemented to control

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the disease through bilateral projects with some agencies or international organization. It has been recorded in Egypt since 1939, and the estimated annual economic losses due to Brucellosis were about 60 million Egyptian pounds yearly (Kaoud *et al.*, 2010).

Aim of the study:

This study aims to assess perception of farmers regarding Brucellosis at kalyobia governorate through:

- Assessing farmers' knowledge regarding Brucellosis.
- Assessing farmers' attitude regarding Brucellosis.
- Assessing farmers' practices regarding Brucellosis.

Research Questions:

To achieve the aim of this study the following research questions were formulated:

- 1- What is the farmers' knowledge level about Brucellosis?
- 2- Is there a relationship between socio demographic characteristics of farmers and Brucellosis?
- 3- Is there relation between farmers' knowledge, attitude and their practices toward Brucellosis?

Subjects and method:

Research design:

A descriptive research design was utilized to conduct this study.

Setting:

The study was conducted in sixteen (16) veterinary health unites (Tahanob, Senhera, Ramada, Nawa, Sandabeis, Kalyobe, Meet Halva, Tanan, Bahteim, El Shemot, Meet Radii, Kafr Tasfa, Marsafa, Kafr Shoker, Kaha, El Hesa). The previous settings were selected by simple random sample and it was represent 25% from total 64 veterinary health units at kalyobia governorate. Then home visit was used to assess studied group practice.

Sampling:

A simple random sample was used in this study. The total numbers of farmers attending at the selected veterinary health unites last year was 3200, 10% were chosen randomly. The total sample were included (320) farmers who are in direct contact with animals and attending at the selected veterinary health unites.

Tools for Data Collection: Three tools were used for data collection.

Tool I: A structured interviewing questionnaire: It was developed by investigator, based on reviewing related literatures, and written in Arabic language: It comprised of two parts to assess the following:

First part: - Socio-demographic characteristics of the studied sample. This part included two items:

A- Socio-demographic characteristics of farmers. It consisted of eight questions related to age, gender, educational level, occupation, marital status, family size, income; type of animals the farmer raise.

B- Family history of Brucellosis infection. It consisted of three questions such

