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Judul Artikel Ilmiah : **Cadres Outreach Program to Mothers Improve Nutritional Status of Under Two Year Old Children**

Nama semua penulis : Martha Irene Kartasurya, Dina Rahayuning Pangestuti, **Aditya Kusumawati**, Resa Ana Dina, Julia Pertiwi, Doddy Izwardy, Anung Sugihantono

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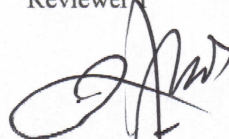
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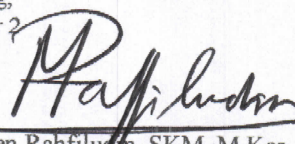
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b	Ruang lingkup & kedalaman pembahasan	Cadres Outreach Program to Mothers Improve Nutritional Status of Under Two Year Old Children ditulis dengan baik, dengan analisis dan pembahasan yang detail dan referensi yang cukup
c	Kecukupan dan kemutakhiran data/informasi dan metodologi	Analisis menggunakan data terbaru dan pembahasan yang relevan dengan optimalisasi peran kader dalam peningkatan gizi baduta. Informasi up to date sesuai dengan kebutuhan analisis
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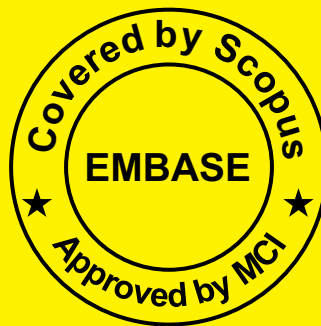
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# ***Ex vivo* Cytopathic Effect Study of Human *Acanthamoeba keratitis* and Use of *E. coli* in Parasitic Culture**

Mohenned A. Alsaadawi<sup>1</sup>, Naer Alkaabi<sup>2</sup>, Sura Alkhuzai<sup>3</sup>, Simon Kilvington<sup>4</sup>

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## **ABSTRACT**

*Acanthamoeba* is free living amoeba and can cause *Acanthamoeba keratitis*, a serious disease which affects the cornea. It is widely existing in fresh water and soil. *Acanthamoeba* has three phases during the life cycle; trophozoite and a resistant double walled cyst and protocysts. The pathogenesis starts when the trophozoites bind to the surface of cornea by expressing mannose-binding protein which can bind to mannose glycoproteins on the corneal surface. The contaminated contact lenses can increase the infection by increasing the binding ability of the trophozoites. This project aimed to study the cytopathic effect of different stages *Acanthamoeba keratitis*. Study strains of *Acanthamoeba castellanii* (ATCC 50370) was cultured and seeded in Hep2 cell lines. *E. coli* (strain M12) was used to isolate the trophozoites. The third stage, protocysts was made using Neff's medium. The cytopathic effect was checked trophozoites invasion to monolayer cells cultured in a small flask and in 24 well tissue culture plate. The time of destroying Hep2 cells by the trophozoites is less than that of other *Acanthamoeba* stages. The double ring-shaped cell wall of the cysts may increase the time-kill of Hep2 due to their resistant which was very slow to hatch. Reactivating the trophozoites from cysts then seeding in Hep2 destroyed the cells at less time compared fresh trophozoites as the virulence of the reactivated trophozoites being higher. The result could suggest that the infection of corneas with reactivated trophozoites may be more complex. Finally, the study found that the number of the trophozoites can limit the cytopathic effect of *Acanthamoeba*.

**Keywords:** *Acanthamoeba keratitis*, trophozoites, protocysts, cysts, cytopathic effect, *E. coli*, cornea

## **INTRODUCTION**

*Acanthamoeba keratitis* is a serious disease which affects the cornea and caused by a genus of free living amoeba called *Acanthamoeba*, widely existing in fresh water and soil<sup>1</sup>. *Acanthamoeba* has two phases during the life cycle: a vegetative infective stage (trophozoite) and a resistant double walled cyst<sup>1</sup> and recently an intermediate stage was discovered and known as protocysts<sup>2</sup>. *Acanthamoeba* is an aerobic protozoon. It can be cultured in axenic agar (Ac#6) which contains

yeast extract, peptone and glucose<sup>2,3,4</sup>. It could also grow and isolate in Non-Nutrient Agar (NNA) plates which are seeded with *Escherichia coli*<sup>5</sup>.

The pathogenesis of *Acanthamoeba keratitis* starts when the trophozoites binds to the epithelial tissues of cornea. *Acanthamoeba* trophozoites can express mannose-binding protein on their surfaces which can bind to mannose glycoproteins on the corneal surface<sup>6,7,8</sup>. Traumatic injuries can increase the adhesive ability of *Acanthamoeba* as the injuries could increase mannose glycoproteins expression<sup>6</sup>. The trophozoites could be transmitted to the cornea via the contaminated contact lenses which can increase the binding ability of the trophozoites to the corneal membrane<sup>9</sup>. In addition, the number of acanthopodia, tooth like structures come out from the amoeba surfaces, can play an important role in the pathogenesis of the parasite by increase the adhesive

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# Study of Hematological Changes in the Experimentally Infected Sheep with Ticks *Hyalomma spp.*

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## ABSTRACT

This study was aimed to find out the variables in some blood parameters. A series of experiments were conducted for evaluation the changes in some blood parameters of 16 of female's sheep that divided into two groups. First group included 8 animals that infected with *Hyalomma spp* ticks & the another group included 8 of non- infected animals that represent control group. The results of the total counts of red blood and the measurement of hemoglobin counts showed no significant differences between the two groups. Also, there is no signs of any type of anemia were observed in the experimental animals. In conclusion, no significant changes in blood parameters of tick-infected animals. The absence of any type of anemia in animals infected with ticks. We observed high percentages of Eosinophils and Basophils in tick-infected animals.

**Keywords:** Hematological Changes, Sheep, Ticks, *Hyalomma spp.*

## INTRODUCTION

Ticks are important external parasites that cause large economic losses in herds when they release the saliva in the infected body. This is because they contain immunosuppressive materials and then they absorb a quantity blood from the infected body<sup>1</sup>. *Hyalomma anatolicum* is a type of hard tick that affects some farm animals and transmit the pathogens that it may carry, such as parasitic protozoa, viruses, bacteria and Rectasia<sup>2,3,4,5</sup>. *Hyalomma anatolicum* is the dominant and most common of other species of *Hyalomma species* in Iraq<sup>6,7</sup> and it is the main carrier of the parasite *Theileria hirci*<sup>8</sup> which causes the Yellow fever in Iraq that affects humans and domestic animals<sup>9</sup>.

The researchers confirmed that tick-infected animals may be resistant to subsequent infection due to predisposition to certain antigens or previous predisposition to ticks<sup>10,11,12</sup>. The acquisition of infected ticks or resistance depends on several factors that may be due to the added immune factors<sup>13</sup>.

The increase in the cost of some anti-ticks and the development of tick resistance has made it difficult to control the ticks and diseases transmitted in the fields, prompting researchers and scientists to look for alternatives to control them. They also confirmed the possibility that protein extracts may play an active role in immunization and inducing body's resistance against some ticks<sup>14</sup>.

The current study aimed on studying and evaluating the changes in some blood indices in sheep infected with ticks.

## MATERIALS AND METHOD

**Experimental animals:** In the current study, two groups of female congenital sheep were selected with similar ages in the reconstruction. The first group included 8 animals belonging to one of the breeders and were infected with ticks (*Hyalomma spp*), which was diagnosed in laboratory and was filled with blood.

The second group also included 8 animals selected from one of the farmer fields in Karbala governorate and treated with insecticides, which did not notice any sign of tick injury and was selected as a control group to compare with the infected group above.

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# Inverted S Window Frame Perceived as Effective and Sustainable Mosquito/Malaria Control Device

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## ABSTRACT

**Background:** Control of mosquito-transmitted diseases had focused on bednet distribution for years without malaria eradication because it lacked positive perception as traditional window screen. The novel inverted s/o window frame (ISOWF) facilitates regular cleaning of nets but stakeholders must appraise it first.

**Method:** Hoisting/dehoisting of screens on ISOWF was demonstrated. Subjects were required to use a nine-item Likert scale and 10 willingness-to-pay units for assessment and choice between it and traditional wooden window frame (TWFF) with wooden batten attached nets.

**Results:** Of 44 respondents,  $\geq 90.9\%$  considered the channel novel, simple in design, user friendly, and effective sustainable mosquito/malaria control. Twenty one persons completely rejected the TWFF in favour of the ISOWF. The average willingness-to-pay units offered the TWFF was 1.82 units while the ISOWF had 8.18 units.

**Conclusion:** The ISOWF had attractive positive perception likely to attract its pervasive application to reduce malaria and impose behavioural changes on vectors.

**Keywords:** Window frame; screening; mosquito/malaria control; perception; environmental management; anti-mosquito device.

## INTRODUCTION

Parasites inconvenience hosts who suffer annoyance, injuries, irritations/diseases<sup>1</sup> or poverty.<sup>2</sup> In Sub-Sahara Africa, there is evidence of improved mosquito/malaria control following increased access to bednet.<sup>3-5</sup> However, malaria continues to persist. Recent malaria death was put at 445,000 of which 90% was from WHO African Region.<sup>6</sup> Persistence is attributed to the acquisition of resistance by vectors/parasites and poor implementation of environmental recommendations.<sup>7,8</sup> Galvin et al.<sup>9</sup> attributed low bednet usage to: family sleeping

arrangements, inconvenience, comfort, and safety. They further indicated that villagers considered nets as source of fire hazard, using them as curtains instead. Egrot et al.<sup>10</sup> provided further evidence of harm and disfigurement following fires from bednet. Its misuse/abuse appear to be alarming: as curtain/pillow/fishing tool.<sup>9,11</sup> However, Eisele et al.<sup>12</sup> contend some damaging misconceptions of bednets use in Africa are media hype. The way to go about mosquito/malaria mitigation is by recalling the rejected stone–window screen.

Walker<sup>13</sup> hoped house screening could become supported as bednets. The obstacle is their appearances. Net damages are caused by children and rodents.<sup>14</sup> They further entrap dust particles compounding the aversion. Screens must influence our community/cultural perception,<sup>9</sup> allowing the norm of cleanliness/aesthetics influence their care.<sup>14</sup> Ideal nets must not be aesthetically wanting. Researchers had risen to the challenge of vector control in house design<sup>15,16,17,18</sup> but their findings are yet to be regarded.<sup>19</sup> A recent development is the inverted s/o channel window frame (ISOWF)<sup>18</sup> which retains advantages of net removal/cleaning/replacements.<sup>15</sup>

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# Effectiveness of Video Assisted Teaching Programme on Toilet Training of Toddlers among Parents in a Selected Rural Area in Shimla, Himachal Pradesh, India

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## ABSTRACT

**Introduction:** The family is the central focus in the life of toddlers. A toddler in turn exerts considerable influence on all other family members, regardless of the size and form of the family unit. As the toddlers begin to interact with others outside the family, the parents help the child to conform to the expectations of the society. The most important societal demand made on the child during this period is the control of elimination<sup>5</sup>.

**Materials and Method:** In order to achieve the objectives of the study, a pre experimental study approach was adopted for the study. Purposive sampling technique was used to select the sample. The sample consisted of 40 parents of toddlers. The main study was conducted in the Anganwadi, situated in Shimla area. The data collected were systematically tabulated to facilitate the data analysis. The collected data analyzed by using descriptive and inferential statistics.

**Results:** The analysis of the demographic variables revealed that majority (40%) of the participants are in the age group of 26-30. The assessment of the knowledge among parents on toilet training revealed that majority (60%) of the parents had moderate knowledge, 35% had poor knowledge, and five percentages had good knowledge.

The overall mean knowledge score was  $14.03 \pm 2.665$ , with a mean percentage of 46.75. % revealing that the overall knowledge of the parents regarding toilet training is moderate. The assessment of the Effectiveness of video assisted teaching programme on toilet training revealed that the total mean knowledge score is increased by 25.83% with mean  $\pm$  SD of  $7.75 \pm 2.55$  after the administration of Video assisted teaching programme. The cumulative frequency distribution of pre-test and post test knowledge scores shown in the O gives shows significant difference between the pre-test and post test scores. The knowledge pre-test median was 13.50 where as the post test median score was 21.50. It shows a difference of 9 in knowledge. Association between pre-test knowledge with demographic variables revealed that there was significant association between the pre-existing knowledge with these demographic variables on toilet training

**Conclusion:** The experts suggests that it is easier to train a child on toileting skills when he/she is at least 18 months old, and for boys it is better to wait even longer since they usually lack the necessary language and fine motor skills. This time frame is much easier to use because of the child wanting to please his/her parents<sup>11</sup>

**Keywords:** Effectiveness, Video assisted programme, Toilet training, Toddler

## INTRODUCTION

Today's society is complex and ever changing. Growing up emotionally is complicated and difficult under any circumstances<sup>4</sup>. Children are blooming buds. They are important asset of nation. Children are expected to grow and learn to their fullest potential. Parents serve as advocates for children in order to meet needs of all

children for access to education and health care process<sup>4</sup>.

All the stages in human life are exposed to challenges, difficulties and success as a gain. One of such stages is the toddler period. Fundamental learning process develops in the child as the child begins to seek autonomy and explores the world. It learns how to tolerate, express desires and develop relationships<sup>7</sup>.