

# Dog Owners Intention towards Rabies Vaccination Campaigns in Flores Island, Indonesia

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## Introduction

- Rabies has been endemic in Flores Island since 1997.
- Annual dog vaccination has been applied by the local government free of charge since 2000.
- Realized vaccination coverage ( $\leq 55\%$ ) is lower than the WHO recommended 70%.
- The decision of dog owners to adopt dog vaccination is influenced by socio-demographic factors<sup>1</sup> as well as socio-psychological factors.
- Insight in the influence of socio-psychological factors (like belief and perception) is lacking.

## Objectives

- To assess the intention of dog owners in Flores Island to participate in vaccination campaigns.
- To evaluate the extent to which the intention to adopt dog vaccination is influenced by psychological factors.



Figure 1. Study area

## Results

- Of the 450 dog owners, 96% had a positive intention to participate in the currently applied vaccination campaign which is free of charge.
- The intention decreased to 24% if dog owners were asked to pay for the vaccination costs (Rp 18,000=US\$1,5 per dose).
- Dog owners' attitude and perceived behavioural control were significantly associated with the intention (Table 1).

## Conclusions

- The intention of dog owners to participate in vaccination campaigns free of charge is high.
- Charging vaccination costs would lead to a serious decrease in the vaccination intention.
- Educational campaigns focusing on the benefit of vaccination (increasing Att) or on the technique to handle dogs (increasing PBC), or a proper scheduling of the vaccination campaigns to relax the perceived limited time availability (PBC) could improve the intention of dog owners to participate in future vaccination campaigns.

## References

1. Wera E, Mourits MCM, Hogeveen H (2015) Uptake of rabies control measures by dog owners in Flores Island, Indonesia. PLoS Neglected Tropical Diseases . Accepted.
2. Ajzen, I., 1991. The theory of planned behavior. Organizational Behavior and Human Decision Processes 50, 179 - 211.

Source of background picture: [http://www.huffingtonpost.com/sophia-yin/world-rabies-day-bali\\_b\\_982149.html](http://www.huffingtonpost.com/sophia-yin/world-rabies-day-bali_b_982149.html)

## Materials and methods

- Based on the Theory of Planned Behaviour<sup>2</sup> intention is determined by the psychological factors:
  - 1) attitude (Att), to reflect dog owners' belief in the benefit of vaccination,
  - 2) subjective norm (SN), to indicate the dog owners' perception towards social pressure or opinion to adopt vaccination, and
  - 3) perceived behavioural control (PBC), to indicate dog owners' belief about their ability to perform vaccination.
- In total, 450 dog owners in Sikka and Manggarai regencies (Figure 1) were interviewed regarding their intention to participate in dog vaccination campaigns and their intention related Att, SN, and PBC.
- Each variable was elicited by the use of statements using a five-point Likert scale (1=strongly not agree, to 5=strongly agree).
- Responses of  $\geq 4$  points indicated a positive intention or a high Att/SN/PBC level, while responses of  $< 4$  points indicated a negative intention or low factor level.
- The association between intention and the psychological factors was assessed using multivariable logistic regression analysis.

Table 1. Determinants of positive intention to participate in the dog vaccination campaign if government provides vaccine free of charge (n=450)

Variables	Univariable Model			Multivariable Model		
	OR	95% CI	P_value	OR	95% CI	P_value
I. Attitude*:						
Low	1.00			1.00		
High**	9.80	3.68-26.10	0.000	8.18	2.64-25.36	0.000
II. Subjective Norm***:						
Low	1.00					
High	2.07	0.76-5.68	0.157			
III. Perceived Behaviour Control:						
a. I do have time to vaccinate my dog;						
Strongly/not agree/neutral	1.00			1.00		
Agree/strongly agree	21.10	6.59-67.54	0.000	7.10	1.90-26.54	0.004
b. I do have ability/skill to confine dog;						
Strongly/not agree/neutral	1.00			1.00		
Agree/strongly agree	6.59	2.42-18.01	0.000	6.33	1.94-20.61	0.002
c. I do have time to Leash my dog;						
Strongly/not agree/neutral	1.00					
Agree/strongly agree	3.87	1.45-10.37	0.007			

\*Average of 4 item attitudes: (1) "Rabies is threat for human health"; (2) "Rabies is transmitted by dogs"; (3) "I support the current rabies control measures"; (4) "Vaccination of dogs will reduce rabies cases in humans"; Cronbach alpha was 0.78.

\*\*Average of the items equal or higher than 4.

\*\*\*Average of 8 item subjective norms: "How important of the opinion of the following people influences your intention to participate in rabies control measures: (1) Family living in the same house; (2) Neighbours; (3) Veterinarian; (4) Head of village; (5) Leader of religion, etc.; Cronbach alpha was 0.74.

