

Adoption of rabies vaccination program by dog owners in Flores Island, Indonesia

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Introduction

- Rabies still poses a significant problem in Flores Island
- Period 2000 to 2011 :
 - ✓ 30.379 of dog bite cases
 - ✓ 26.083 people getting post-exposure treatment
 - ✓ 96 human rabies cases
 - ✓ Huge economic impact for Government and Community
- Dog vaccination programs have been applied to control
- Vaccination adoption has been low, $\leq 55\%$

Objective

- To study the impact of socio-demographic factors of dog owners in Flores Island on the adoption of vaccination and the motives to join/not to join the vaccination program

Materials and methods

- In total, 450 dog owners in Sikka and Manggarai regencies were interviewed regarding their socio-demographics and adoption of 2012 dog vaccination program
- The association between the level of adoption on the dog vaccination program and socio-demographics was assessed using multivariable logistic regression analysis

Results

- Of the 450 dog owners interviewed, 52% had at least one of their dogs vaccinated during the 2012 program
- Regency, having female dogs for production, economic value of dogs, income, and accessibility to the village were significantly associated with vaccination adoption (Table 1)

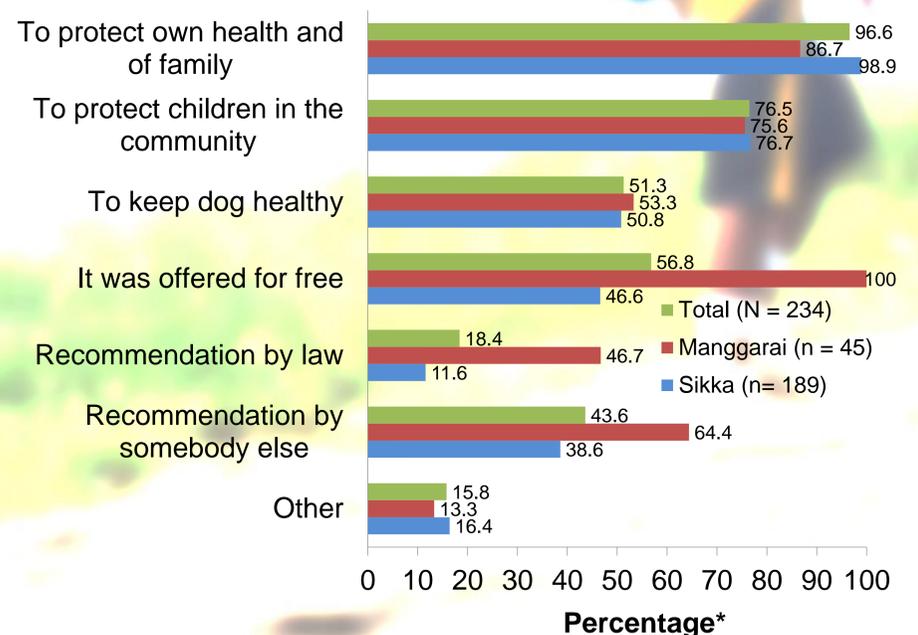
Table 1. Determinants of dog vaccination adoption by dog owners in 2012 in Flores Island

Variables	OR (95% CI)	P_value
Regency		
Manggarai	1.00	
Sikka	4.07 (2.30 – 7.20)	0.000
Having female dogs for production		
No	1.00	
Yes	2.07 (1.31 – 3.27)	0.002
Economic value of dogs ¹		
<Rp 250.000	1.00	
Rp 250.000 - Rp 500.000	2.38 (1.36 – 4.17)	0.002
>Rp 500.000	0.24 (0.03 – 2.04)	0.191
Income of dog owners ¹		
< Rp 500.000	1.00	
Rp 500.000 - Rp 1.000.000	0.81 (0.47 – 1.39)	0.434
> Rp 1.000.000	2.39 (1.10 – 5.20)	0.028
Geographical accessibility of the village:		
Poor	1.00	
Average	1.80 (1.09 – 2.97)	0.022
Good	3.84 (1.92 – 7.67)	0.000

¹The currency rate, 1 February 2013 :1US\$=Rp 9.651

The Hosmer-Lemeshow goodness-of-fit test p-value for this model was 0.85

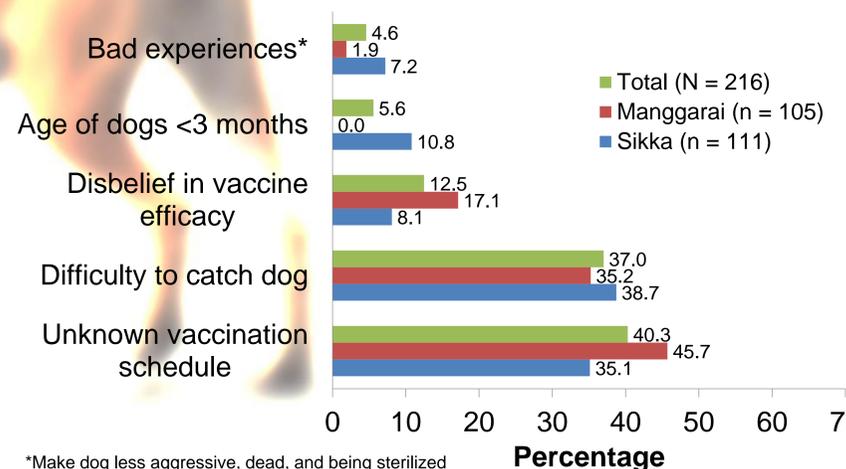
- The most common reasons for dog owners to vaccinate their dogs were to protect their own health, their family and the children in their community (Figure 1)



*Dog owners were allowed to provide more than one response therefore, percentages of reasons do not sum to 100%

Figure 1. Reasons for vaccinating dogs by the dog owners who joined the 2012 vaccination program

- The main reasons for dog owners not to join the vaccination program were lack of information about the vaccination program schedule and the difficulty to catch the dog during the campaign (Figure 2)



*Make dog less aggressive, dead, and being sterilized

Figure 2. Main reason of dog owners not joining the 2012 vaccination program

Conclusions

- The adoption level of 2012 vaccination program was low.
- Geographical accessibility is one of the important predictors of vaccination adoption among dog owners.
- Targeted interventions in villages with poor accessibility may increase the vaccination adoption in the future
- These interventions should focus on the provision of :
 - ✓ Information of vaccination schedule
 - ✓ Knowledge on technics to restrain dogs

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