

Turning Research into Results: Characterizing the Dog Meat Trade in Bali to Help End the Trade

Maria Maliga Vernandes Sasadara¹, Ni Putu Vidia Tiara Timur¹, I Ketut Puja², Nyoman Sadra Dharmawan², Jennifer Hood³

¹ Students of Magister Program Faculty of Veterinary Medicine, Udayana University, Bali, Indonesia

² Senior Lecturer (Professor), Faculty of Veterinary Medicine Udayana, University, Bali, Indonesia

³ Adjunct Senior Lecturer, School of Veterinary and Life Sciences, College of Veterinary Medicine, Murdoch University, Western Australia, Australia ; Veterinary Director Animals International, Animals Australia, Victoria, Australia

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INTRODUCTION

The dog meat trade (DMT) in Bali is a black-market trade that threatens international tourism on both animal welfare and human health grounds. Outlets selling dog meat often advertise this by displaying 'RW' signs as this abbreviation stands for '*rintek wuuk*' (soft fur) in Manadonese. The DMT is notoriously cruel and uses inhumane methods to catch, transport, and slaughter dogs, many of which are believed to be stolen.

Dog meat is not a food under Indonesian law and as such is not subject to food safety or zoonotic disease regulation. In particular, the DMT is believed to contribute to the transmission of rabies, which is endemic in Bali.

Despite this, there was little factual information about the DMT in Bali, and this was hindering Government efforts to close the trade. We believe our study is the first to characterize the DMT in Bali and provides insights as to how and why the trade exists, and what actions are needed to end it.

MATERIALS & METHODS

This research is a cross sectional study using a personally delivered survey method. The data were collected by questionnaire that consisted of two parts : (1) semi structured questions relating to socio-demographic and DMT business data, and exploratory questions regarding how and why dog meat traders were involved in the trade, and (2) semi structured questions relating to knowledge and behaviour, including the use of the Likert Scale to investigate traders' attitudes to a range of DMT issues, including animal welfare. The surveys were deployed in 2018 in 3 districts (Badung, Gianyar, Tabanan) and 1 city (Denpasar), with suspected DMT outlets identified by Government and complaints by the public. Purposive sampling was used to select only those DMT outlets that used an RW sign to advertise their business (n=28). The collected data were analyzed using the statistical program SPSS 23.0, including

chi square tests to determine possible correlations between dependent and independent variables.

RESULTS & DISCUSSION

We found 54% of the dog meat traders surveyed at the 28 DMT outlets with RW signs in Badung, Gianyar, Tabanan and Denpasar were ethnic Balinese and 46% were non-Balinese. While this difference was not statistically significant there were statistically significant differences when we compared ethnic Balinese (n=15) and the individual ethnic non-Balinese (n=13) groups identified in our survey (Manadonese n=4, Floresian n=6, Javanese n=1, and Batakese n=2) ($p < 0.05$) to DMT activity . Of ethnic Balinese dog meat traders, 60% are Hindu and 40% are Christian, while 15% of ethnic non-Balinese are Hindu and 85% are Christian. Overall, 60% of all dog meat traders in Bali are Christian and 40% are Hindu but this difference is not statistically significant. From this we can say that in 3 districts and 1 city, both ethnic and non-ethnic Balinese are involved in the DMT and all were Hindu or Christian.

Anecdotally, the DMT came to Bali in the 1920s with Christian missionaries from East Indonesia, where there was a culture of consuming dog meat (pers.com, Father Widastra, SVD, 2018). Our finding that some Hindus were also involved in the DMT today was somewhat surprising as dogs have an important role in Hindu philosophy and religion, and are not permitted to be consumed. Balinese dogs are described as loyal companions of their masters and referred to as *cicing borosan* or hunting dogs in the *Carcan Asu* (sacred Hindu manuscript). However, when you consider 83.5% of Bali's population is Hindu and only 2.5% is Christian (BPS, 2018), it appears Christians are over-represented in the DMT. Interestingly, 64.3% of the traders agreed that consuming dog meat is not part of the tradition and culture of Bali, and 71.4% recognized that dogs have an important role in the life of Balinese people. Our preliminary

results indicate the need for further study into the influence of ethnicity and religion on the DMT in Bali.

Importantly, 96.4% of dog meat traders said the main reason for selling dog meat was financial as it was easy to get customers. This may mean that the DMT services a niche market. While we did not survey customers, 67.9% of traders believed dog meat has health benefits and cures disease. This misapprehension needs to be addressed through education as there is no basis to believe dog meat has any special properties and in fact is a health risk.

Other socio-demographic factors showed 64% of traders are male and 36% are female; 93% are married (with both partners involved in the business) and 7% are widowed; 82% are older than 40 years; 36% have education under senior high school level, 50% have been to senior high school, and 14% proudly said they had attended university. Of interest, 89.3% of DMT outlets with RW signs were found in Badung (n=12) and Denpasar (n=13), with only 2 in Gianyar and one in Tabanan. While there is no significant correlation between location and DMT activity, it is possible that Denpasar and Badung have socio-demographic features that contribute to this finding. As the capital of Bali, Denpasar has a higher percentage of migrants (53%) than Balinese (BPS, 2018), at least some of whom are from parts of Indonesia where dog meat eating is common. Likewise, Badung also traditionally has had a high percentage of migrants (BPS, 2011), which is not surprising given it is a major tourist area that attracts workers from other parts of Indonesia. The role of migration and acculturation as drivers of the DMT in Bali should be studied further.

Our survey also showed that 57.2% of dog meat traders started their businesses in the last 5 years, supporting anecdotal reports that the DMT is increasing in Bali. At the other end of the scale, 14.3 % of outlets had been operating for more than 20 years, suggesting they had been able to operate openly and become established as 'normal'. These findings indicate the need for urgent intervention to stem this growth.

Our results also show that 53.6% of surveyed DMT operators sell cooked dog meat only and say they are not involved in the capture, transport and killing of dogs. Some 21.4 % of operators said they received frozen or raw carcasses, which suggests that the trade is more organized than previously thought. Most DMT operators (71.4%) said they obtained dogs from within their district or city. Of concern, 8 traders (28.6%) admitted they moved dogs across districts, which is contrary to Bali Provincial Regulation No. 15/2009 about rabies control (rabies perda).

While our socio-demographic data

showed most dog meat traders we surveyed had attended high school, and some had even been to university, there is still a pressing need for focused education as the vast majority did not know their activities could have violated animal welfare laws (89.3%) or the rabies perda (96.4%). This was despite the fact most said they knew about rabies (96.4%) and the risk of being infected with rabies as a result of catching and killing dogs (71.4%). However, 75% did not know that some other diseases can be transmitted through dog meat. This lack of knowledge may be contributing to the transmission of rabies and other zoonotic and food safety diseases in Bali and should be addressed.

Education and enforcement of existing regulations and laws are urgently required to change the attitude of people involved in the DMT (both as sellers and consumers who support the trade).

Likewise the DMT poses food safety risks as 60.7% and 64.3% of traders, respectively, did not know that dogs are not livestock or considered food under Indonesian law (and as such are not subject to food safety or zoonotic disease regulation). The public health risk of consuming dog meat was also demonstrated by the fact 14.3% of traders admitted they do not wash the meat hygienically when preparing it.

While 50% of dog meat traders showed a positive attitude to dogs by recognizing their status as 'man's best friend', and importance to Balinese life (71.4%), this did not stop their involvement in the DMT. This supports research that showed attitudes expressed by a person cannot always predict their behaviour (Wawan and Dewi, 2010).

All dog meat traders interviewed stated the dogs used in the trade were unwanted and purchased, and none were poisoned. The cruelty of the trade was demonstrated by the 78.6% of dog meat traders who said the cruelty of catching, transporting, and killing dogs was a natural thing to do in the DMT. They stated they killed dogs by binding the muzzle and legs with rope, then cutting the neck with a sharp knife or beating their heads with large clubs; by hanging, or by using an air rifle. If humans are cruel to animals, they are also more likely to be cruel to people (including being involved in criminal activities, terrorism and violence (Inu, 2011). This cruelty is antithetical to the Hindu concept of *Tri Hita Karana*, which is an integral part of the Balinese traditions that draw tourists to the island. If Bali is associated with animal cruelty this has the real potential to adversely affect tourism and economy.

CONCLUSION

While our study of the DMT in 3 districts and 1 city in Bali is preliminary and is part of a Bali-wide study, we believe it is the first to characterize the trade in Bali, Indonesia, and possibly

elsewhere. The aim of the study was to characterize the DMT as a means to ending it using targeted education and enforcement measures.

We can now say that in Badung, Denpasar, Gianyar and Tabanan, both ethnic and non-ethnic Balinese are involved in the DMT and all were Hindu or Christian. The involvement of Hindus was unexpected as dogs have an important role in Hindu philosophy and religion, and are not permitted to be consumed. Our results indicate the need for further study into the influence of ethnicity and religion on the DMT in Bali, and what this means for traditional Bali culture, as well as the roles of migration and acculturation as drivers of the DMT in Bali.

Our survey also showed that more than half the dog meat traders started their businesses in the last 5 years, supporting anecdotal reports that the DMT is increasing in Bali. The established nature of the trade and profitability of some DMT outlets was demonstrated by the fact more than 10% had been operating for more than 20 years. It also shows the DMT has been able to operate openly and become established as 'normal' in Bali. These findings indicate the need for urgent intervention to close the trade, which is antithetical to traditional Balinese culture and values. These are not only important in their own right but are considered a major reason for Bali's important tourism industry.

Our results also highlight the food safety and zoonotic risks, especially of rabies, that are inherent in the DMT. Importantly, this study found evidence from the traders themselves of the cruelty that is normal practice in this black market trade. This is not only unacceptable to the animals, but also has damaging and potentially dangerous effects on the Balinese way of life.

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