

Background: Despite being a signatory country of the WHO Framework Convention on Tobacco Control (FCTC) since 2004, Japan has not yet implemented effective measures to protect people against second-hand smoke (SHS). Meanwhile, municipal regulations to restrict outdoor smoking on streets are increasingly common. More than 100 cities have implemented street smoking ban ordinances; however, the ordinances were introduced mostly for the purpose of preventing littering and brush-by burns, without addressing health concerns. Kobe city is one of the cities that introduced such ordinance. **The objective of this study was to assess the compliance of the municipal street smoking ban ordinance in Kobe city.**

Methods: The survey was conducted for 26 days during August and September 2012. Two areas were chosen to compare between banned streets (signaled in red on the map in picture 1) and non-banned streets.



Pic. 1: Map of Non smoking Area in Kobe City

Observations were made on:

- 1) Number of smokers
- 2) Number of cigarette butts on the streets in Banned/Non-Banned Areas

Results: Smoking prevalence on the non-banned streets was 4 times higher than in banned streets (Fig.1). The number of cigarette butts collected in non-banned streets was also 4 times higher than in banned streets (Fig.2). Smokers were more frequently observed in the afternoon (Fig.3), the majority were male who appeared to be in their 20-30s both in non-banned and banned streets (Fig4) and most of them were smoking alone (Fig5). The percentage of the smokers who are standing still and walking were different in non-banned and banned streets (Fig.6).

Fig. 1 – Smoking prevalence*

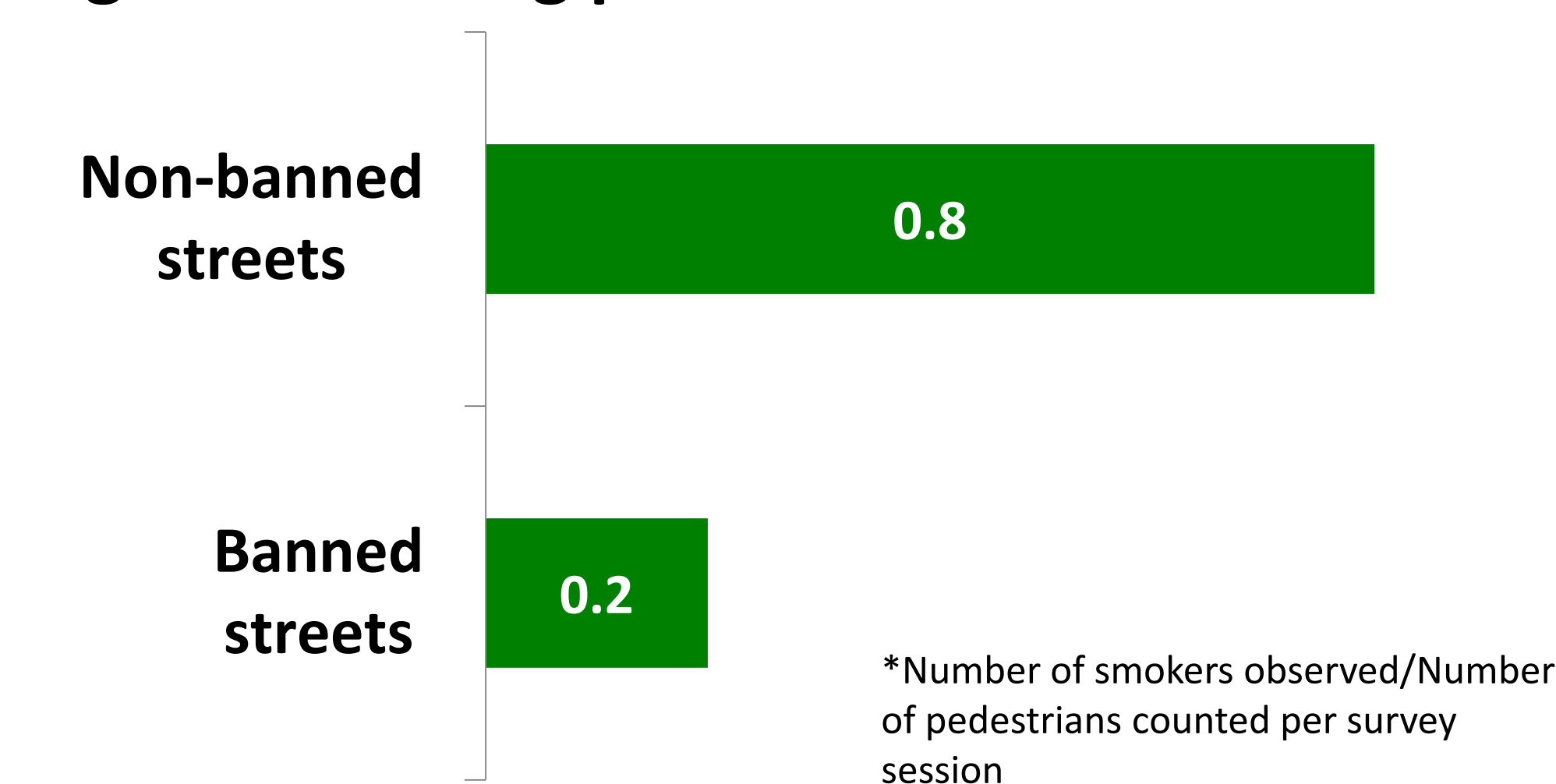


Fig. 2 – Cigarette butts littering*

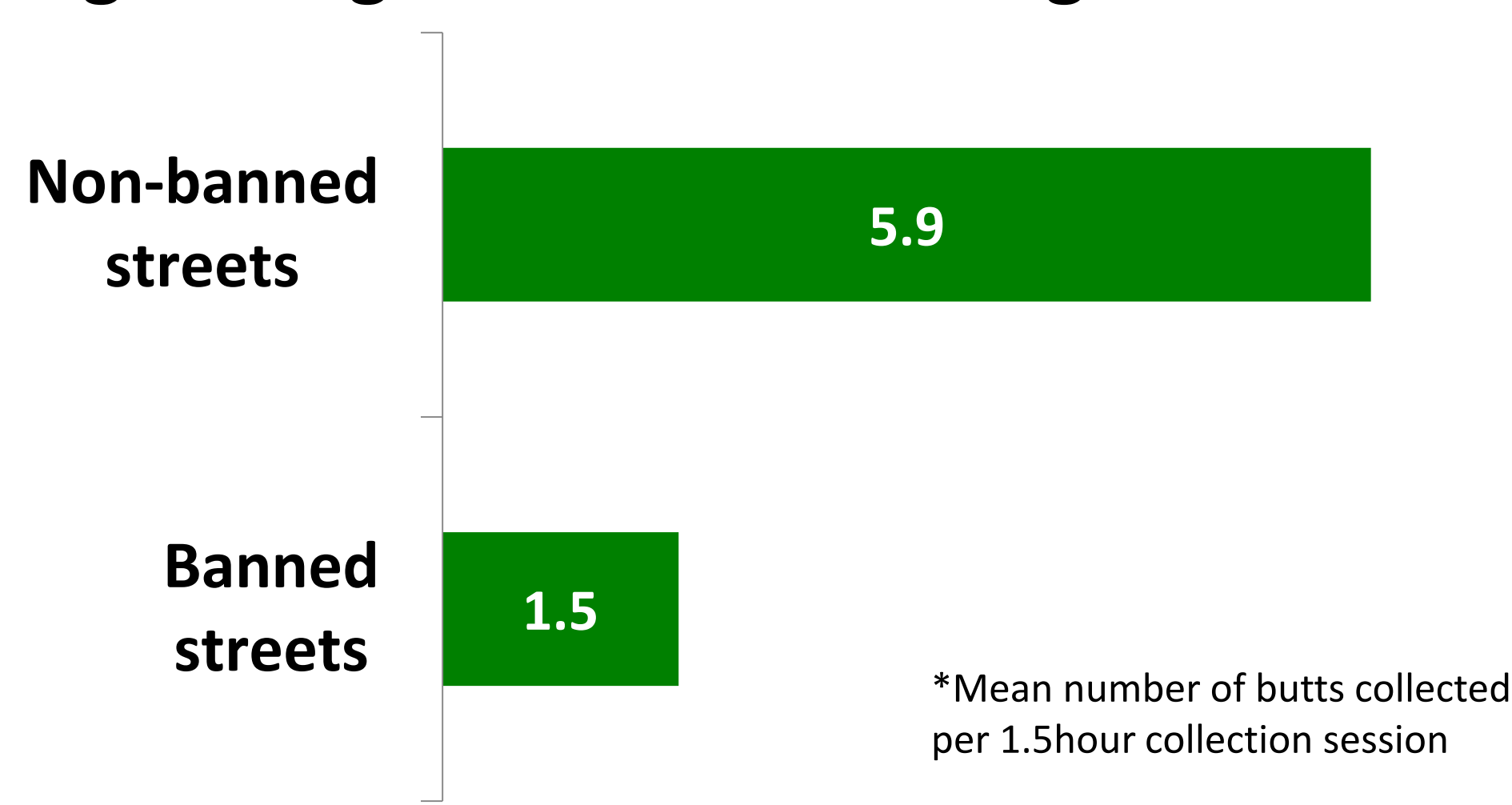


Fig. 3 – Smoking time

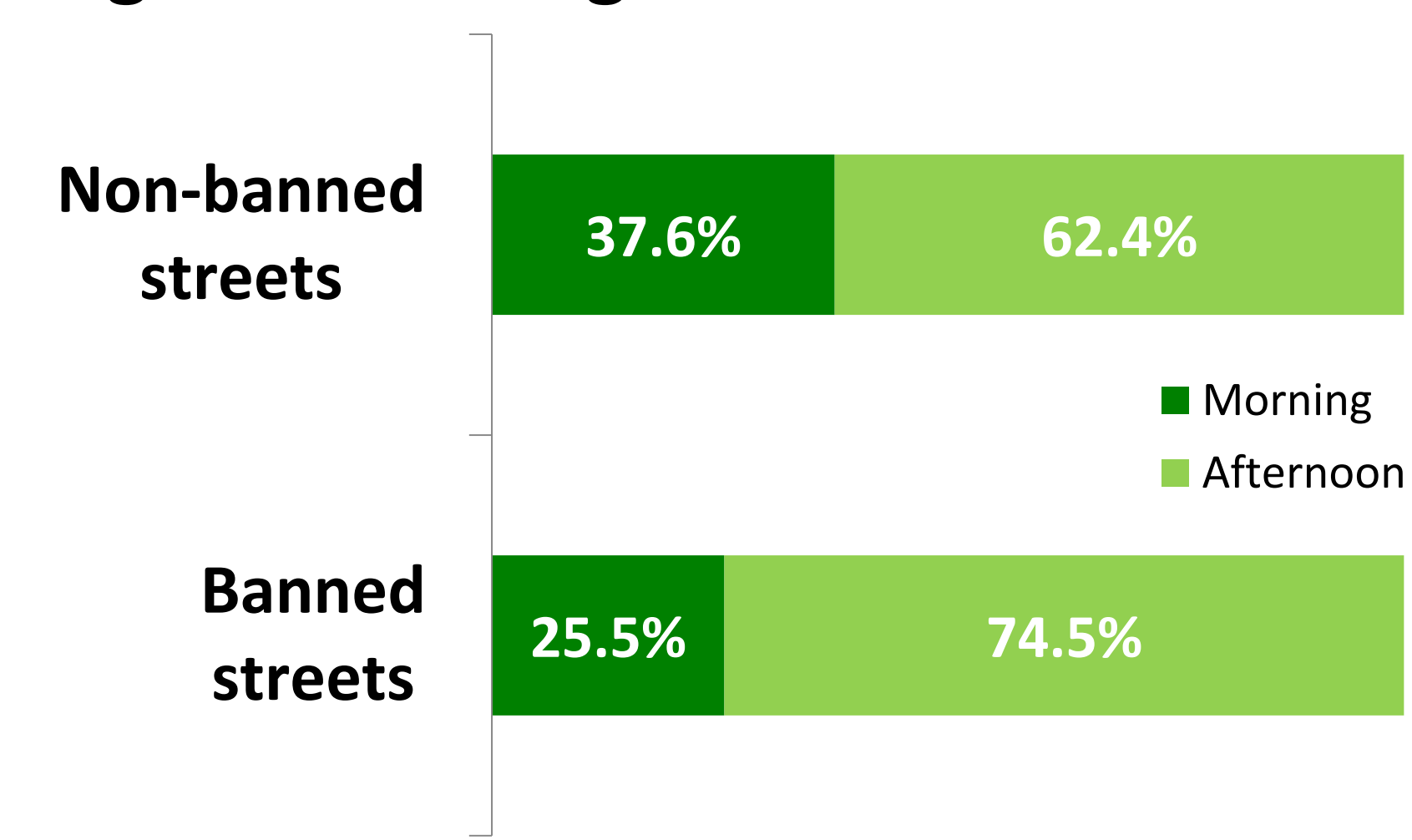


Fig. 4 – Smokers' gender

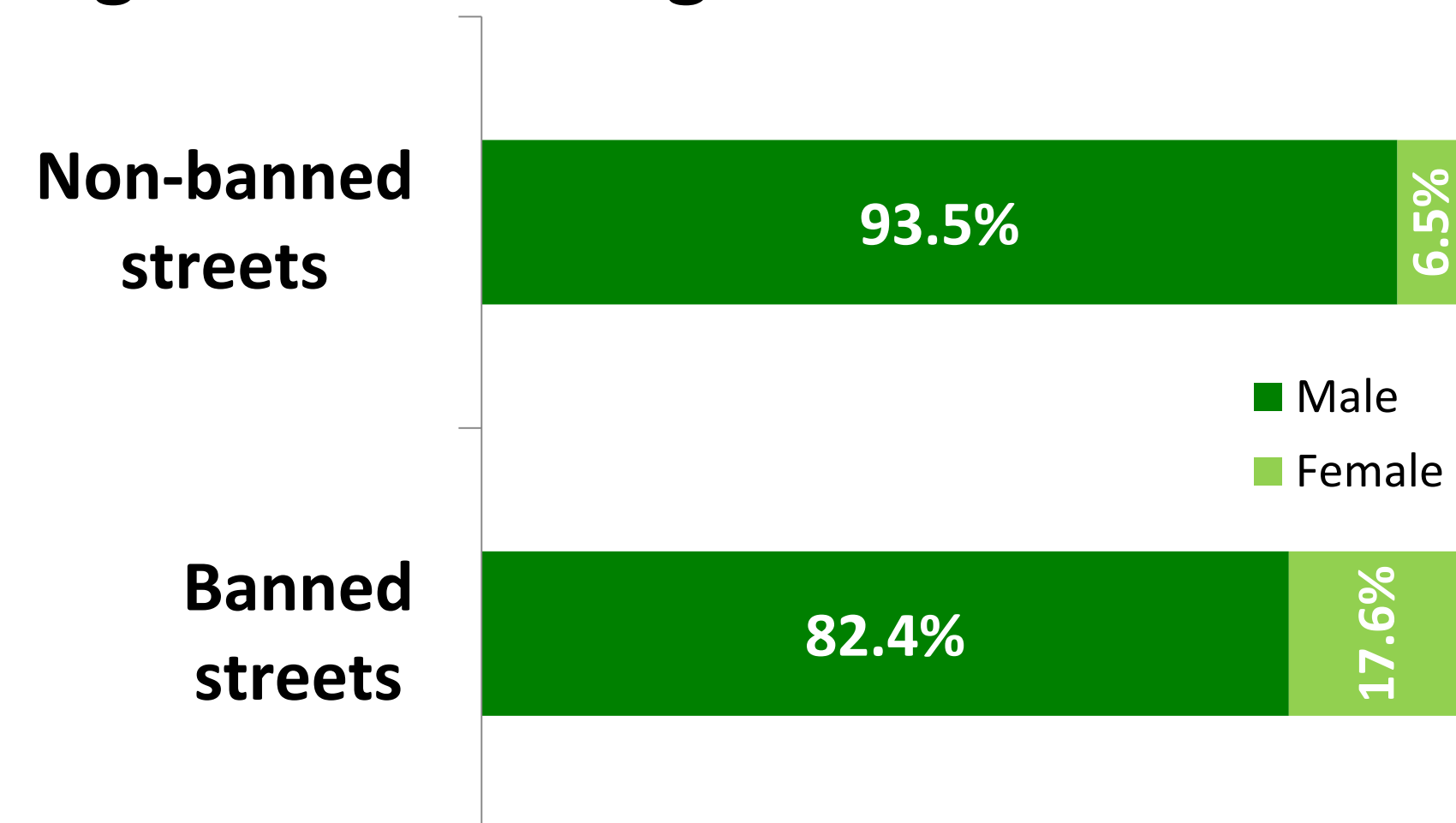


Fig. 5 – Smokers' social behavior

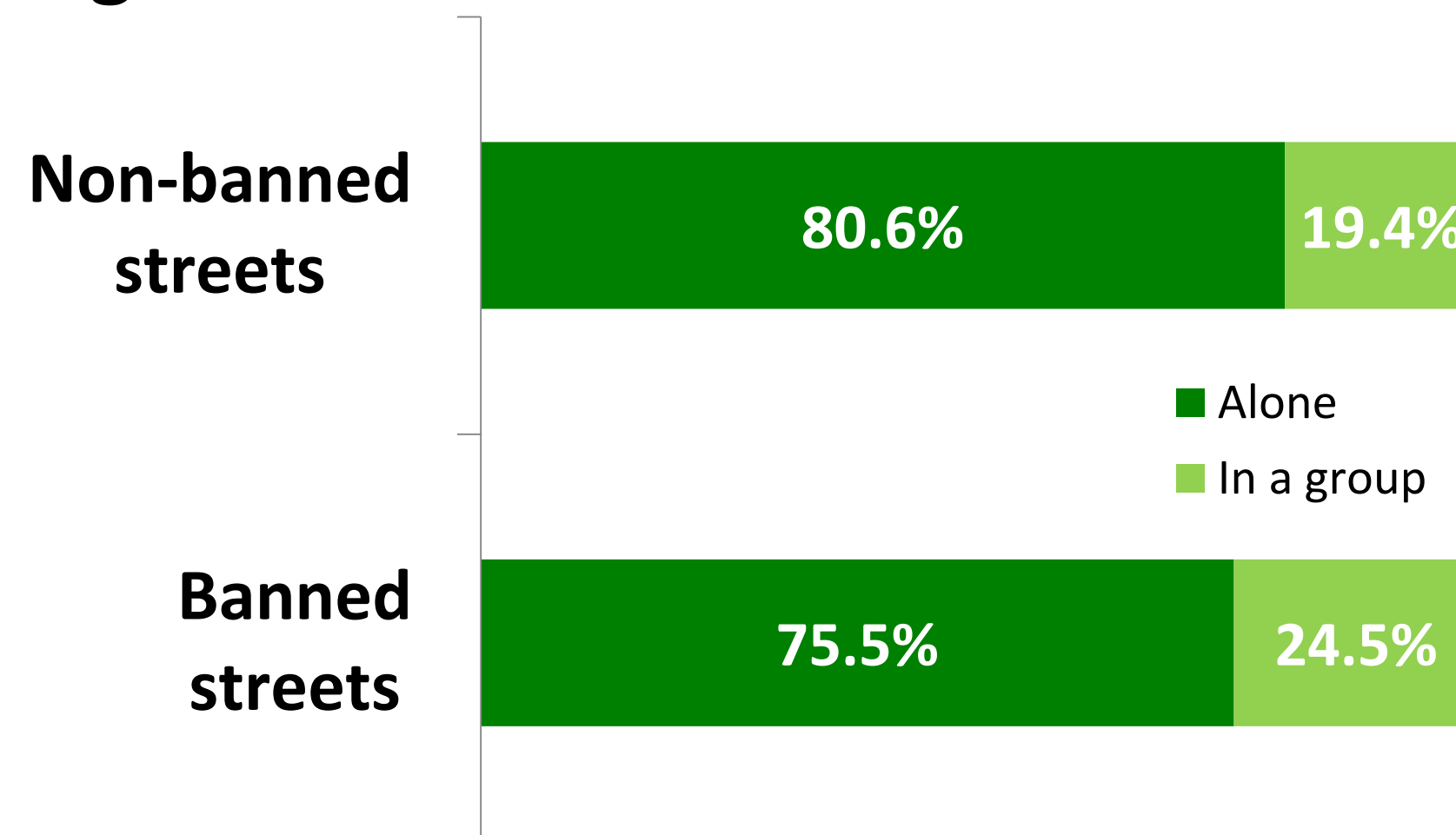
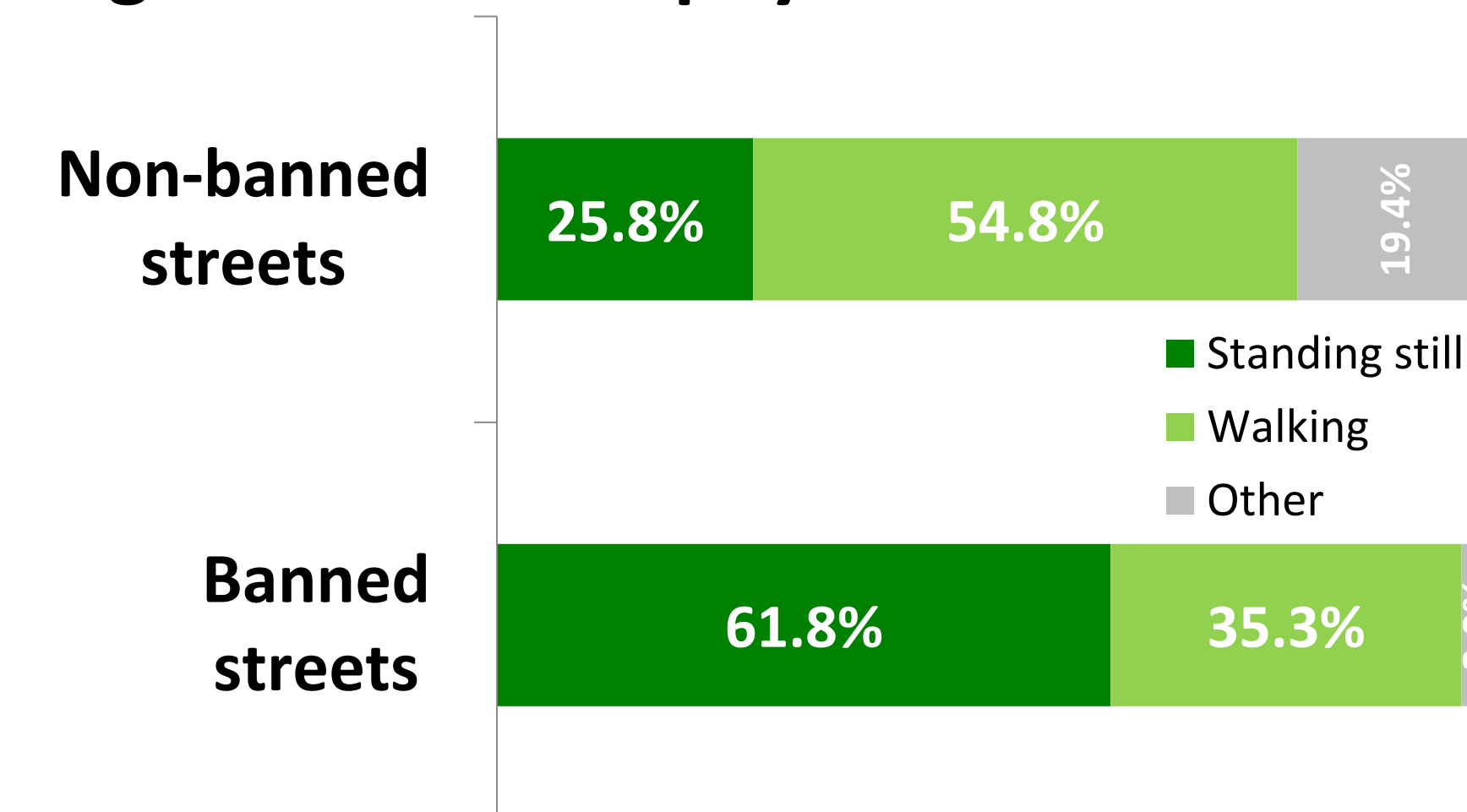


Fig. 6 – Smokers' physical behavior



Pic.2: Smoker in the Non Smoking Street

Conclusions: Significant differences between smoking prevalence in banned and non-banned streets, correlated by the number of cigarettes butts collected, show encouraging compliance to the Kobe Ordinance. However, continuous enforcement and monitoring are suggested (see picture 2).

Smoking prevalence among pedestrians and number of cigarette butts found in the banned area would be advisable indicators for the city's periodic monitoring of the smoking ban.

Taking advantage of the relatively high compliance, expansion of the banned area and education campaigns, specially targeting male smokers in their 20s – 30s, are recommended.

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Assessing the compliance of the ordinance banning smoking on selected streets in Kobe city, Hyogo, Japan