



**ATRANS**

**(Asian Transportation Research Society)**

**3<sup>rd</sup> ATRANS SYMPOSIUM  
STUDENT CHAPTER SESSION**

**The Impact of Street Vendors Activities  
on Pedestrian Behavior**

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# Outline

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Methodology

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Discussion &  
Conclusions

## The Impact of Street Vendors Activities on Pedestrian Behavior

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## Street Vendors:

- ✓ can be found in many developing cities such as Bangkok
- ✓ Increase rapidly after monetary crisis 1998
- ✓ Cause obstruction to pedestrian movement

## Objective:

- ✓ To investigate the impact of vendor's activities on pedestrian behavior based on their perceptions

# What is street vendors??

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- ✓ Older road users more concern in safety, comfort and convenience, and their reaction time become increase in anticipating traffic situation (Hine et al. 1996)
- ✓ Safety, comfort and convenience can be improved using proper design of pedestrian facilities, without significant side effect on vehicle traffic (Shriver, 1997., Carsten et al. 1998)
- ✓ Older pedestrians more cautious behavior to anticipate specific traffic situation than younger walker (Bernhoft et al. 2007)

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## Data collection:

- ✓ Questionnaire survey
- ✓ Bang Rak district
- ✓ November 3-4, 2009
- ✓ 10.00 – 18.00
- ✓ Sample: 334 respondents

## Group of respondents:

- ✓ Age: young, middle age, old
- ✓ Gender: male and female
- ✓ Familiarity with the sidewalk: familiar, unfamiliar

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## Six questions about pedestrian perception on sidewalk condition

- 1. I feel safe from vehicle traffic danger,*
- 2. I feel safe from trips, slips and falls,*
- 3. I think that the sidewalk flat enough to accommodate wheelchair users,*
- 4. I can move freely without obstruction from physically features,*
- 5. I have enough space to avoid the vendor's obstruction without decelerating my pace,*
- 6. I think that the total width of sidewalk is wide enough*

## Four agreement statements on pedestrian behavior regarding vendors activities

- 1. I intend to buy something from street vendors,*
- 2. I want to look around commodities sold by vendors,*
- 3. I will still walk on the roadway (pavement) even when the sidewalk is very crowded,*
- 4. I will walk along this sidewalk only for shopping*

# Data Analysis

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**Age Classification**

**Young**

**Middle age**

**Old**

**Gender**

**Male**

**Female**

**Familiarity**

**Familiar**

**Unfamiliar**

Statistically significant differences is tested using  
Chi-square test ( $p < 0.05$ )



# The Impact of Street Vendors Activities on Pedestrian Behavior

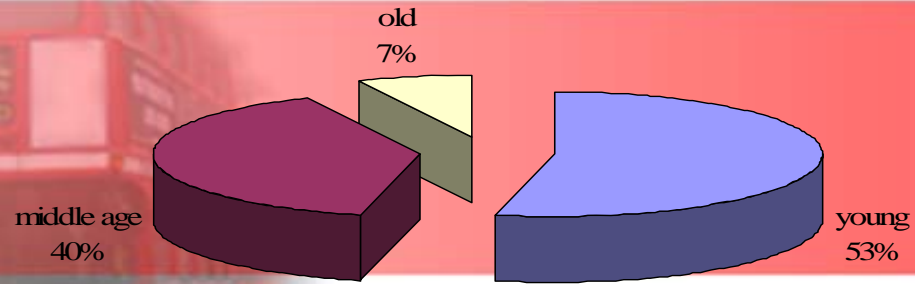
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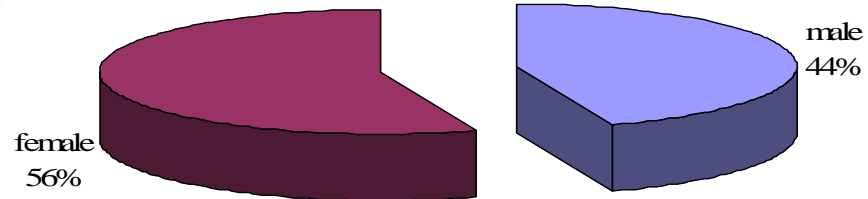
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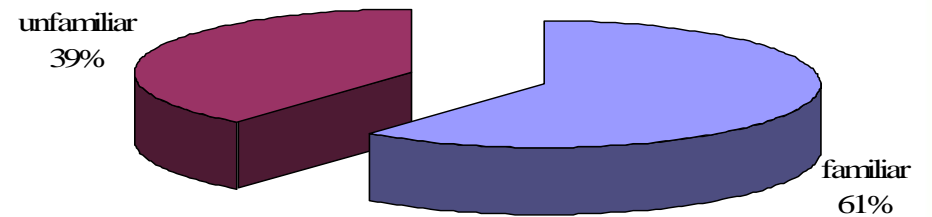
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Respondent's age



Respondent's gender



Respondent's familiarity

## Condition of importance for walking

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There are no significant age, gender, and familiarity differences in following sidewalks conditions:

1. Safe from vehicle traffic danger;
2. Sidewalk can accommodate wheelchair users;
3. No obstruction from physical features;
4. Sufficient space to avoid obstruction from the vendors; and
5. Sidewalk width is sufficient

Significantly difference of the female middle age that familiar with the sidewalk more appreciate with safety from trips, slips, and falls ( $\chi^2 = 4.76$ ,  $df = 1$ ,  $N = 77$ ,  $sig = 0.038$ )

## Behavior regarding vendor's activities

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**Significant familiarity differences can be found in two items.**

- ✓ Familiar old male pedestrian is significantly more likely than unfamiliar groups to want to look around commodities sold by vendors ( $\chi^2 = 7.543$ ,  $df = 1$ ,  $N = 11$ ,  $sig = 0.015$ ).
- ✓ Young female pedestrian who is familiar with the sidewalk is reported significantly always walk along at the sidewalk only for shopping ( $\chi^2 = 5.186$ ,  $df = 1$ ,  $N = 97$ ,  $sig = 0.031$ )

# Discussion

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- 1. No significant differences among pedestrians perception and behavior in the sidewalk.**
- 2. Only three items found to be significant difference**
  - 1. Female middle age who are familiar with the sidewalk are found to have more appreciation on safety from trips, slips, and falls than unfamiliar pedestrians.**
  - 2. Old male pedestrians who are familiar with the sidewalk are found to want to look around in commodities sold by vendors than unfamiliar pedestrians.**
  - 3. Regarding walking in the sidewalk for shopping only, the young female that familiar with the sidewalk is found to be significantly different with unfamiliar group.**

# Conclusions

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The results of this study :

1. contribute to a better understanding of the behavior of sidewalk users
2. should be considered when implementing physical countermeasures as well as campaigns and information for sidewalk users.
3. needs for infrastructure improvement in order to enhance the safety and comfort for the sidewalk users
4. Further research should be performed in some different locations to compare the kind of vendors activities and pedestrian behavior.



**Thank You**