

**FACTORS AFFECTING CHILDREN'S SCHOOL TRAVEL MODES IN
NEIGHBOURHOODS**

YONG SIEW CHEE

**A thesis submitted in fulfilment of the
requirements for the award of the degree of
Master of Science (URBAN DESIGN)**

**Faculty of Built Environment
Universiti Teknologi Malaysia**

DEC 2010

ACKNOWLEDGEMENT

I would like to extend my most sincere gratitude to those who has provided me with precious advice, guidance, understanding and support though out the whole development of the research. First and foremost, special thanks to my supervisor, Mr. Chau Loon Wai, who has provided countless effort and valuable knowledge in guiding me in whole process. Without his continue support and interest, this thesis would not have been the same as presented here. I also wish to express my sincere appreciation to Prof. Ismail Said for his encouragement and guidance.

Moreover, I would like to thank school principals and teachers of four selected school who assisted in data collection, and all parents and children for taking time to answer my questionnaires. I am thankful to my classmate, Michelle Goh, for her invaluable support and friendship.

Finally, this dissertation is dedicated to my parents and family, their lives and energy course through every single page. Special appreciation to my beloved husband, Jimmy Ng, for his warm encouragement and love in carrying me through challenging time during my study.

ABSTRACT

Walking and cycling to school are sustainable and environmentally friendly travel modes for children to increase their physical activity level and achieve healthy lifestyles compared with automobile travel in the present tendency. In the context of Malaysia, a rapidly developing, multi-ethnic country, the prevalence of walking and cycling to school among children has seen sharp decline in the past two decades. Yet, there have not been known studies that seek to identify the actual factors that restrict these active travel modes and clarify whether such factors vary across different cultural backgrounds and built environment. Furthermore, since parental control has been a key determinant factor of children's travel mode to school in Malaysia, children's point of view and preference with respect to walking/cycling to school have been unknown. This research therefore identifies parents' and children's perception in active travel modes and investigates influential factors that restrict children walk/cycle to school. A total of 1500 parent questionnaires and 1500 child questionnaires were distributed to 10-12 years old children in four primary schools, which comprise two national schools and two Chinese vernacular schools in a mixed-use neighbourhood and a mono-function-residential neighbourhood in Ampang, Selangor. A total of 1204 children questionnaires and 800 parent questionnaires were collected and analysed. The results reveal that motorised travel has been the predominant mode for children, with only 18% children walking/cycling to school and approximately 70% children feeling insecure/unsafe in the street. Moreover, children frequently mention problems associated with fast moving cars, followed by many strangers in the street whereas parents frequently report distance to school, followed by violence or crime as the predominant factors restricting children's school active travel. There are also observable differences in the travel behaviour between parents and children of different cultural background and characteristic of the built environment: national school parents and children perceive the road environment more positively and less hazardous than Chinese vernacular school parents and children. Moreover, in contrast with the general view that mixed-use neighbourhoods are more walkable than mono-function ones, most national school children in mono-function-residential neighbourhood (62.33%) prefer an active travel mode, higher than their peers living in the urban neighbourhoods. The research concludes that cultural and built environment differences have an influence on children's travel behaviour and need to be taken into account towards encouraging children to walk or cycle to school.

ABSTRAK

Berjalan dan berbasikal ke sekolah merupakan cara yang berterusan bagi meningkatkan tahap fizikal aktiviti dan mencapai gaya hidup sihat bagi kanak-kanak berbanding dengan penggunaan kenderaan pada zaman moden ini. Di Malaysia, negara yang sedang berkembang dan pelbagai etnik, aktiviti ini di kalangan kanak-kanak semakin menurun dalam dua dekad terakhir. Namun, tidak ada penyelidikan yang diketahui untuk mengenal pasti faktor-faktor yang menyekat aktiviti perjalanan aktif dan mengklarifikasikan sama ada faktor-faktor tersebut adalah berbeza dari segi kebudayaan dan persekitaran. Pengawasan daripada ibu bapa merupakan salah satu faktor penentu utama bagi kanak-kanak berjalan/berbasikal ke sekolah. Hal ini demikian, faktor-faktor penentuan ini masih tidak dapat dikenalpastikan. Oleh itu, objektif penyelidikan ini adalah untuk mengenalpasti persepsi ibubapa dan kanak-kanak terhadap aktiviti perjalanan aktif dan menyiasat faktor-faktor yang menyekat kanak-kanak berjalan/berbasikal ke sekolah. Sebanyak 1500 sampel soal selidik ibu bapa dan 1500 sampel soal selidik kanak-kanak telah diserahkan kepada kanak-kanak yang berusia 10-12 tahun di empat sekolah rendah yang terdiri daripada dua sekolah kebangsaan dan dua sekolah vernakular Cina di persekitaran bercampur dan mono-fungsi-perumahan di Ampang, Selangor. Sebanyak 1204 sampel soal selidik kanak-kanak dan 800 sampel soal selidik ibu bapa telah dikumpulkan dan dianalisis. Keputusan kajian menunjukkan bahawa penggunaan motor adalah mode dominan bagi kanak-kanak, dengan hanya 18% kanak-kanak berjalan/berbasikal ke sekolah, sebanyak 70% kanak-kanak berasa tidak aman/selamat di jalan raya. Selain itu, kanak-kanak yang sering menyebutkan masalah yang berkait dengan kereta-kerata bergerak cepat, diikuti terdapat banyak orang asing di jalanraya sedangkan ibu bapa sering melaporkan jarak ke sekolah, diikuti oleh kegiatan jenayah atau kejahatan yang merupakan faktor dominan menyekat anak-anak berjalan/berbasikal ke sekolah. Persepsi terhadap persekitaran bagi ibu bapa dan kanak-kanak di sekolah kebangsaan adalah lebih positif dan kurang bahaya berbanding dengan ibu bapa dan kanak-kanak di sekolah vernakular Cina. Selain itu, berbeza dengan pandangan umum bahawa persekitaran bercampur lebih 'walkable' daripada mono-fungsi, kebanyakan kanak-kanak sekolah kebangsaan di mono-fungsi-perumahan (62.33%) lebih cenderung berjalan/berbasikal ke sekolah daripada rakan-rakan mereka di persekitaran bercampur. Penyelidikan ini menyimpulkan bahawa perbezaan kebudayaan dan persekitaran mempengaruhi aktiviti perjalanan anak-anak dan ia perlu dipertimbangkan untuk mendorong kanak-kanak berjalan/berbasikal ke sekolah.