

ORIGINAL ARTICLES

Who's prepared for advocacy? Another inverse law

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Abstract

Objectives—To examine the characteristics of parents responding to a petition calling for greater efforts to ensure the safety of children as pedestrians and to contrast factors predictive of advocacy with risk factors for child pedestrian injury.

Setting—The Auckland region of New Zealand.

Methods—Parents participating in the Auckland Child Pedestrian Injury Study, a community based case-control study, were invited to support a series of recommendations based on the study results, by signing and returning a petition that was to be delivered to the New Zealand Minister for Transport. Characteristics of petitioners were determined by linking their petition responses to the study questionnaires using a unique identifier. The characteristics of petitioners and non-petitioners were summarised using odds ratios.

Results—31% of parents signed and returned the petition; 19% were parents of cases and 36% were parents of controls. The sociodemographic groups whose children were at the lowest risk of pedestrian injury were the most likely to return the petition. Children in the most disadvantaged socioeconomic group and children of Pacific Island parents were at greatest risk of injury but the parents of these children were the least likely to respond to the petition.

Conclusions—The frequency with which parents advocate for child safety varies inversely with the need for it. Models of health promotion based on community ownership and empowerment alone are unlikely to address the steep socioeconomic gradients in childhood injury mortality.

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Keywords: pedestrian injury, health advocacy, health promotion.

Pedestrian injuries are a leading cause of death and disability in childhood.¹ Area wide traffic calming schemes are one of the few pedestrian injury prevention strategies for which there is documented evidence of efficacy.² Traffic calm-

ing schemes aim to reduce the speed of vehicles by using physical measures such as speed humps or the redesign of the street space.³ Preston reviewed 19 studies of traffic calming and found injury reductions ranging between 14% and 83%.⁴ Evaluation of the British Urban Safety Project demonstrated a 13% reduction in traffic injuries attributable to the scheme.⁵

In New Zealand, traffic calming is implemented after a request by local residents and is paid for out of local authority funds.⁶ Because funds are limited, and there are often a large number of competing requests for funding, a successful application for traffic calming usually follows an intense period of resident lobbying. Residents requesting traffic calming must apply to their local community boards, who normally require proof that the request is supported by the majority of residents in the street. This proof usually takes the form of a residents' petition. In this way, the willingness and ability of members of the community to advocate for child safety becomes an important determinant of the safety of the local environment.

In this paper, data from the Auckland Child Pedestrian Injury Study were used to examine the characteristics of parents responding to a petition calling for greater efforts to ensure the safety of their children as pedestrians. The characteristics of parents taking on this advocacy role are compared with the sociodemographic risk factors for child pedestrian injury.

Methods

The Auckland Child Pedestrian Injury Study was a community based case-control study, conducted in the Auckland region of New Zealand, between January 1992 and March 1994. The results of this study have been presented in detail elsewhere.⁷ After data analysis and preparation of scientific reports, all parents participating in the study were sent a two page report outlining the major study findings, their implications for prevention, and a summary of the recommendations arising from the study. Parents were invited to support these recommendations by signing and returning a petition to the New Zealand Minister for Transport. The report, recommendations, and petition are available from the author on request.

In the case-control study, each questionnaire was coded with a unique identifier after all

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identifying information had been removed. The stamped addressed return envelope for the petition was identified with the same unique identifier so that the characteristics of petitioners could be determined by linking the petition response to the study questionnaire. Parents who did not return the petition were classified as non-petitioners. The characteristics of petitioners and non-petitioners are summarised using odds ratios. The odds ratio for the petition response is the ratio of the odds of a parent in a given category responding to the petition compared with the baseline category. Both the main case-control study and the study reported in this paper were approved by the regional health authority ethics committee.

Results

Of the 737 parents invited to sign and return the petition, 258 were parents of cases and 479 were parents of controls. Twenty two invitations were returned by the post office because the parent had changed address. Of the 715 remaining parents, 220 returned a signed petition, a return rate of 31%. In 41 of the returned petitions, there was more than one signature, so that the total number of signatures was 289. Table 1 contrasts the sociodemographic risk factors for child pedestrian injury with the characteristics of petitioners. The sociodemographic groups whose children were at *lowest* risk were the most likely to return the petition. Children in the most disadvantaged socioeconomic group, and children of Pacific Island parents were at greatest risk of injury, yet parents in these groups were the least likely to respond to the petition. Nineteen per cent (48/258) of the parents of cases returned the petition compared with 36% (171/479) of parents of controls. Table 2 examines the characteristics of petition responders after excluding the parents of children who were cases in the study. These analyses were undertaken to determine whether the factors predictive of low petition response were simply the characteris-

Table 2 Petitioning odds ratio for sociodemographic variables with cases excluded

Variable	Petitioner		Response odds ratio (95% CI)
	Yes	No	
Socioeconomic position			
I, II, III	52	74	1.00
IV, V	88	137	0.91 (0.57 to 1.46)
VI and others	31	97	0.45 (0.26 to 0.81)
Ethnic group			
Maori	15	70	0.24 (0.13 to 0.46)
Pacific Island	11	74	0.17 (0.08 to 0.34)
Other	145	164	1.00
Sole parent			
Yes	22	73	0.48 (0.27 to 0.82)
No	149	235	1.00
Home owner			
No	29	111	0.36 (0.22 to 0.59)
Yes	142	197	1.00
Access to a car			
No	12	58	0.33 (0.16 to 0.65)
Yes	159	250	1.00
University educated mother			
No	76	176	0.59 (0.39 to 0.87)
Yes	93	126	1.00

tics of cases. The results are essentially the same, showing that irrespective of whether the respondent was a parent of a case, parents in the high risk groups were less likely to respond.

Discussion

In 1971 Julian Tudor Hart, a general practitioner in South Wales, coined 'the inverse care law', observing that 'the availability of good medical care tends to vary inversely with the need for it in the population served'.⁸ The data presented in this study point towards another inverse law — that the willingness or ability to advocate for child safety varies inversely with the need for it. Without exception, the characteristics of parents least likely to take on the advocacy role offered in this study were the same characteristics that identified groups most at risk of child pedestrian injury. These results may go some way towards explaining why in Auckland, and possibly elsewhere, traffic calming and other safety schemes predominate in the more affluent areas.

There are a number of possible explanations for these results. The parents of children at high risk for injury might have disagreed with the study recommendations. The recommendations were based on both the results of our case-control study and a review of the literature. In calling for improved public transport and strategies to reduce vehicle speeds, the recommendations might have been viewed as anti-car. However, the proportion of car owners who supported the study recommendations (34%) was more than twice the proportion of those who were not car owners (14%). Indeed, the groups in question are likely to have had the most to gain from the strategies suggested.

It is also possible that a higher percentage of parents in the high risk groups may have experienced language or literacy barriers. The report was aimed at a wide audience including key road safety organisations, child health advocacy groups and politicians, and attempted

Table 1 Pedestrian injury odds ratio and petitioning odds ratio for sociodemographic variables

Variable	Cases (n = 258)	Controls (n = 479)	Injury odds ratio (95% CI)	Petitioner		Response odds ratio (95% CI)
				Yes	No	
Socioeconomic position						
I, II, III	38	126	1.00	64	100	1.00
IV, V	111	225	1.64 (1.04 to 2.57)	110	226	0.76 (0.51 to 1.14)
VI and others	109	128	2.82 (1.77 to 4.51)	45	192	0.37 (0.23 to 0.59)
Ethnic group						
Maori	69	85	2.41 (1.61 to 3.62)	23	131	0.24 (0.14 to 0.40)
Pacific Island	85	85	2.97 (2.01 to 4.39)	21	149	0.19 (0.11 to 0.32)
Other	104	309	1.00	175	238	1.00
Sole parent						
Yes	73	96	1.57 (1.09 to 2.27)	34	136	0.52 (0.33 to 0.80)
No	185	383	1.00	136	382	1.00
Home owner						
No	139	140	2.83 (2.04 to 3.92)	45	234	0.31 (0.21 to 0.46)
Yes	119	339	1.00	174	284	1.00
Access to a car						
No	74	70	2.35 (1.60 to 3.46)	20	124	0.32 (0.19 to 0.54)
Yes	184	409	1.00	199	394	1.00
University educated mother						
No	183	252	2.27 (1.61 to 3.20)	107	328	0.54 (0.39 to 0.75)
Yes	70	219	1.00	109	180	1.00

CI = confidence interval.

to strike a balance between technical detail and readability. Nevertheless, the reading level of the report would have been a barrier for many parents (Flesch Kincaid grade level 12).

In addition, parents in the high risk groups, being disproportionately disadvantaged, undoubtedly had more pressing problems to deal with, in particular those surrounding the need to secure an income, and to feed, clothe, and house the family. There is also some suggestion that parents in the high risk groups are more suspicious of officialdom and were, therefore, reluctant to put their names to a petition to a government minister. According to the interviewers in the case-control study, on many occasions, reassurance that the interviewer was not an employee of the Department of Social Welfare checking on the benefit eligibility was pivotal in securing parental cooperation. These are all plausible explanations and represent considerations that would severely compromise the ability of parents in the high risk groups to advocate for child safety.

It also may be possible that the parents of children in the high risk groups thought it unlikely that a petition to a minister would have any tangible benefit at the level of their locality. Had we suggested petitioning the local community board the results might have been different. The rationale for petitioning the minister was that financially stretched community boards would be powerless to implement traffic calming unless funds were made available from central government. The British Traffic Calming Act of 1992 provides an example of how central government initiatives can facilitate local traffic calming schemes.⁹ Moreover, community boards would be unable to influence broader government policies such as those determining the provision of public transport.

Conclusion

Community development and empowerment are concepts that are gaining widespread appeal in the 'new' public health.¹⁰ The Ottawa Charter for Health Promotion equates community empowerment with a community's 'ownership and control of its own endeavours and destinies'.¹¹ In the present

political climate community empowerment has a strong political connotation. The concept justifies, in the name of health, curtailing state responsibilities in order to increase community control. In this study, it might be reasonable to infer that parents who supported the study recommendations, by signing the study petition, felt that doing so would have some effect. To the extent that they did, these parents felt 'empowered' to effect the change. The message behind these results is that while decentralisation of decision making will undoubtedly benefit some communities, the benefits are unlikely to be distributed equally throughout society. There are steep socioeconomic gradients in child pedestrian injury mortality. In Britain, children in social class V are over four times more likely to die in a pedestrian-motor vehicle collision than are children in social class I.¹² If the responsibility for implementing strategies for child pedestrian safety rests solely with parents these gradients are likely to persist, at least in part, because the ability to advocate for child safety varies inversely with the need for it.

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