

Road Safety Research Report 102

**Child–Parent Interaction in
Relation to Road Safety
Education: Part 2 – Main Report**

Jackie Green, Rebecca Ayrton, James Woodall, Jenny Woodward,
Caroline Newell, Mima Cattam and Ruth Cross
The Centre for Health Promotion Research,
Faculty of Health,
Leeds Metropolitan University

December 2008

Department for Transport: London

Although this report was commissioned by the Department for Transport (DfT), the findings and recommendations are those of the authors and do not necessarily represent the views of the DfT. While the DfT has made every effort to ensure the information in this document is accurate, DfT does not guarantee the accuracy, completeness or usefulness of that information; and it cannot accept liability for any loss or damages of any kind resulting from reliance on the information or guidance this document contains.

Department for Transport
Great Minster House
76 Marsham Street
London SW1P 4DR
Telephone 020 7944 8300
Web site www.dft.gov.uk/pgr/roadsafety/research/rsrr

© Queen's Printer and Controller of Her Majesty's Stationery Office, 2008, except where otherwise stated
Copyright in the typographical arrangement rests with the Crown.

This publication, excluding logos, may be reproduced free of charge in any format or medium for non-commercial research, private study or for internal circulation within an organisation. This is subject to it being reproduced accurately and not used in a misleading context. The copyright source of the material must be acknowledged and the title of the publication specified.


For any other use of this material, apply for a Click-Use Licence at www.opsi.gov.uk/click-use/index.htm, or by writing to the Information Policy Team, Office of Public Sector Information, Kew, Richmond, Surrey TW9 4DU or e-mail licensing@opsi.gov.uk.

This is a value added publication which falls outside the scope of the Public Sector Information Click-Use Licence.

To order further copies contact:
DfT Publications
Tel: 0300 123 1102
E-mail: dftinf@capita.co.uk

ISBN 978 1 906581 54 1

If you would like to be informed in advance of forthcoming Department for Transport priced publications, or would like to arrange a standing order, call 020 7944 4673.

 **recycle** Printed in Great Britain on paper containing at least 75% recycled fibre.

CONTENTS

EXECUTIVE SUMMARY	10
1 INTRODUCTION	26
1.1 A note on terminology	27
1.2 Background	28
1.2.1 Accident statistics and the epidemiology of child road traffic accidents	28
1.2.2 Previous research	31
1.3 Conceptual framework	33
1.3.1 Project overview	38
1.3.1.1 Systematic review	38
1.3.1.2 Empirical study	38
1.3.1.2.1 Children’s and young people’s perspective	38
1.3.1.2.2 Parent’s perspective	38
2 METHODOLOGY	39
2.1 Project outline	39
2.2 Location of the study	40
2.3 Observation of roadside interactions between parents and children	41
2.3.1 Site selection	42
2.3.2 Development of the observation recording schedules	43
2.3.2.1 Child–parent pedestrian schedule	43
2.3.2.2 Car and bus use schedule	44
2.3.2.3 Cycling schedule	44
2.3.2.4 Reliability	44
2.3.2.5 Researcher familiarisation with the observation schedule	45
2.3.3 Conduct of the observation	45
2.3.3.1 Timing	45
2.3.3.2 The sample	45
2.3.3.3 Ethical considerations and safety	46

2.3.3.4	Process	46
2.3.4	Analysis	47
2.4	Children’s and young people’s perspective	48
2.4.1	Recruiting the sample	48
2.4.2	Ethical considerations	50
2.4.3	Follow-up	50
2.4.4	Draw and write	51
2.4.4.1	Conduct of the draw and write exercise	51
2.4.5	Focus group discussions	52
2.4.5.1	Conduct of the focus group discussions	53
2.4.6	Drama workshops	53
2.4.6.1	Conduct of the workshops	54
2.4.7	Analysis	55
2.5	Parent’s perspectives	55
2.5.1	Focus group discussions: first round	56
2.5.1.1	Development of the focus group interview schedule	56
2.5.1.2	Recruitment of the sample	57
2.5.2	Focus group discussions: second round	58
2.5.2.1	Development of the focus groups interview schedule	59
2.5.2.2	Recruitment of the sample	59
2.5.2.3	Conduct of the focus group discussions	60
2.5.2.4	Ethical considerations	60
2.5.2.5	Analysis	60
2.5.3	Survey	60
2.5.3.1	Development of the questionnaire	61
2.5.3.2	Sampling	62
2.5.3.3	Conduct of the survey	62
2.5.3.4	Analysis	63
2.6	Reflections on the research process	63

3	FINDINGS	65
3.1	Observation of road safety interactions between parents and children	65
3.1.1	Pedestrian activity	66
3.1.1.1	Control	66
3.1.1.2	Patterns of control	72
3.1.1.3	Levels of parent–child interaction	74
3.1.1.4	The effect of the environment on control and specific interaction	75
3.1.2	Modelling	79
3.1.3	Other methods of learning	81
3.1.3.1	Gender	84
3.1.3.2	Ethnicity	85
3.1.4	Scooters, tricycles, bicycles, cars and buses	85
3.1.4.1	Use of scooters	85
3.1.4.2	Cycling	85
3.1.4.3	Car behaviour	87
3.1.4.4	Bus behaviour	88
3.1.5	General findings	89
3.2	Children’s and young people’s perspectives	91
3.2.1	Draw and write	91
3.2.1.1	The sample	91
3.2.1.2	General comments	92
3.2.1.3	Key Stage 1: key themes	93
3.2.1.4	Key Stage 2: key themes	96
3.2.1.5	Comparison of areas	106
3.2.1.6	Summary of progression	108
3.2.1.7	Summary	110
3.2.2	Focus group discussions	110
3.2.2.1	Participants	111
3.2.2.2	Young people’s perceptions of risks on the roads	111
3.2.2.3	Influence of others on young people’s road safety behaviour	114

3.2.2.4	Responsibility for road safety	116
3.2.2.5	Use of safety equipment	116
3.2.2.6	Methods parents use	117
3.2.2.7	Effective methods for parents teaching young people about road safety	119
3.2.2.8	Other methods for teaching young people about road safety	121
3.2.2.9	What does not work?	121
3.2.2.10	What have young people not been prepared for?	122
3.2.2.11	Summary	123
3.2.3	Drama workshops	124
3.2.3.1	The participants	124
3.2.3.2	General comments	125
3.2.3.3	Workshops with primary school aged children	125
3.2.3.4	Secondary school workshops	130
3.2.3.5	Cycling	133
3.2.3.6	Car use	133
3.2.3.7	Least effective methods used by parents to influence road safety education – all age groups	134
3.2.3.8	Comparisons of areas	134
3.2.3.9	Comparison of gender	135
3.2.3.10	Summary of progression	135
3.2.3.11	Suggested support for parents	136
3.2.3.12	Non-parental road safety education provision	137
3.2.3.13	What was not there?	137
3.2.3.14	Summary	138
3.3	Parent’s perspective	139
3.3.1	Parent’s focus group discussions	139
3.3.1.1	Participants	139
3.3.1.2	Parents’ perceptions of risks on the roads for their children	139
3.3.1.3	Strategies used by parents to influence child road safety behaviour	144

3.3.1.4	Preparing children to be independent road users	149
3.3.1.5	Cycling behaviour	152
3.3.1.6	Car behaviour and seat-belt use	153
3.3.1.7	Parents as providers of road safety education	154
3.3.1.8	Comparison of children's and parents' perceptions of effectiveness	156
3.3.1.9	Additional support required by parents	158
3.3.1.10	What was not said by parents?	160
3.3.1.11	Summary	161
3.3.2	Survey	162
3.3.2.1	Respondent profile	162
3.3.2.2	The children's profile	165
3.3.2.3	When parents start and stop teaching their children about road safety	167
3.3.2.4	How parents teach their children about road safety	169
3.3.2.5	Letting children out on their own	181
3.3.2.6	Going out on a bike	186
3.3.2.7	How parents try to keep their children safe when going out on a bike	187
3.3.2.8	Driving children in a car	189
3.3.2.9	Teaching children about road safety while driving in a car	190
3.3.2.10	Perceived effectiveness of different methods of teaching road safety	192
3.3.2.11	Challenges for parents in teaching their children about road safety	197
3.3.2.12	Summary	201
4	SYNTHESIS AND DISCUSSION	203
4.1	Perception of risk	203
4.1.1	Children/young people	203
4.1.2	Parents	204

4.2	How parents enable children to cope with risk	205
4.2.1	Pedestrian	205
4.2.2	Car passenger	207
4.2.3	Cyclist	207
4.3	Effectiveness	207
4.3.1	Children’s and young people’s views	207
4.3.2	Parents’ views	209
4.4	Responsibility for providing road safety education	209
4.5	Scope for improvement	210
4.6	Specific issues	211
4.6.1	Urban/rural	211
4.6.2	Car ownership	212
4.6.3	Gender	212
4.6.4	Ethnicity	212
4.7	Support for parents	213
5	CONCLUSIONS AND RECOMMENDATIONS	215
5.1	Implications for policy and practice	215
5.2	Recommendations for further research	217
6	ACKNOWLEDGEMENTS	218
7	REFERENCES	220
APPENDIX 1:	Characteristics of the main study areas	226
APPENDIX 2:	Details of the 30 observation sites	228
APPENDIX 3:	Child–parent pedestrian (and car use) observation recording schedule	231
APPENDIX 4:	Child–parent pedestrian (and bus use) observation recording schedule	234
APPENDIX 5:	Child–parent cycling observation recording schedule	237

APPENDIX 6: Summary of the observation fieldwork	240
APPENDIX 7: Focus group discussions with young people – interview schedule	243
APPENDIX 8: Focus group discussions with parents, round 1 – interview schedule	245
APPENDIX 9: Focus group discussions with parents, round 2 – interview schedule	247
APPENDIX 10: Survey of parents – questionnaire	249

EXECUTIVE SUMMARY

Introduction

- Children and young people are particularly vulnerable road users.
- Child pedestrian injury rates are poor compared with the rest of Europe.
- The factors that impact on children's road safety and their capability in traffic are numerous, multi-faceted and complex.
- The systematic review conducted by Cattan *et al.* (2008) as the initial phase of this study shows that:
 - parents see themselves as being responsible for developing their children's road safety awareness and skills;
 - holding hands is the most common road-crossing interaction between parents and children;
 - adults rarely make use of road-crossing events to give oral instructions;
 - few parents and children are consistent in their road-crossing behaviour;
 - roadside training by volunteer parents for groups of children can lead to significant improvements in children's road safety behaviour;
 - belief in fate seems to influence the likelihood of parents using restraints, such as seat belts or car seats, with their children; and
 - parents' understanding of the child's perspective in carrying out road safety tasks and their motivation to actively involve their child in making decisions at the roadside can be improved through training.
- Social Cognitive Theory (Bandura, 1986) suggests that the modelling role of parents can make a significant contribution to children's learning about road use and their development of traffic competence whether or not parents are aware of this.
- The main aim of this study was to explore the way parents influence children and young people aged 0–16 years to be safer road users.
- This study included children and young people aged 5–16 and parents of children aged 0–16 years old.

Methodology

In order to explore child–parent interaction in relation to road safety education, multiple research methods were used:

- The research took a three-pronged approach focusing on:
 - observation of roadside interactions between parents and children;
 - the parent's perspective; and
 - children's and young people's perspective.

- The research was largely qualitative in approach, but included a quantitative survey building on the findings of the qualitative component.
- The research was carried out in five areas in England selected to represent a range of socio-economic and population profiles, as well as different urban, suburban and rural areas.
- Ethical approval for the research was gained from the Leeds Metropolitan University Faculty of Health Ethics Committee.
- The data collection took place from June 2005 to December 2006.

Observation of roadside interactions between parents and children

- The observation phase focused on how parents influenced their children's road use when out on the roads.
- The observation took place at six sites within the five selected areas and recorded 410 child and parent units either as pedestrians (78.8%), car users (13.2%), bus users (3.9%), scooter users (non-motorised) (1.2%) and cyclists (2.9%).
- Two researchers observed the interaction between children and parents from a static roadside observation point. An observation schedule was devised to record the observations based on how parents controlled and influenced their children while using the roads, and the role model they presented.

Children's and young people's perspective

- The work with children and young people focused on two main areas of interest, and was carried out in two phases.
- The first phase was to explore young people's perceptions about the way parents keep them safe and influence their road use. Two methods, draw and write and focus group discussions, were used to suit their age and stage of development.
- The draw and write technique was used with 10 groups of primary school aged children, with a total of 262 children taking part. Focus group discussions were held with young people of secondary school age and nine groups took place with a total of 146 young people participating.
- The second phase explored children's and young people's perceptions about what methods work well to encourage children to be safe road users and those methods that do not work so well.
- Workshops using drama methods were held with primary and secondary school aged children and young people. In all, 15 workshops took place with primary

school aged children with a total of 330 participants, and eight workshops took place with young people of secondary school age with a total of 177 pupils participating.

Parents' perspective

- The parents' perspective was explored using two rounds of focus group discussions and a survey.
- The first round of focus groups examined strategies that parents use to encourage their children to be safer road users, as well as the rationale underpinning their approach and how they make judgements about levels of accompaniment and control.
- A total of 14 focus group discussions took place with 140 participants, including four groups of parents of pre-school aged children, six groups of parents of primary school aged children and four groups of parents of secondary school aged children.
- The second round of focus group discussions examined parents' perceptions about what methods used to encourage children to be safe road users work well, and those that do not work so well. The purpose of this was to compare parent's views on effectiveness with those of the children. The groups also looked at ways in which parents could become more effective and the types of support that would be beneficial.
- In all, seven focus group discussions took place with a total of 68 participants, including three groups of parents of primary school aged children and four groups of parents of secondary school aged children.
- The quantitative survey was designed to assess the generalisability of the issues emerging from the qualitative phases of the study.
- The survey was conducted through researcher-completed questionnaires using a non-probability convenience sample recruited in a variety of public places across England.
- Completed questionnaires were obtained from 1,016 parents. Almost three-quarters of respondents were female and a quarter male. The ethnic composition of the sample closely matched that of the UK population as a whole. About one in seven respondents had only one adult in their household and a fifth had no access to a car or van.

Findings

Observation of roadside interactions between parents and children

The main findings from analysis of the observation were as follows:

- Parents influenced their children's road use behaviour by the way they exercised control, the role model they presented and other types of behaviour to increase skill development, understanding, motivation and a positive attitude to road safety.
- Control was the most prominent influence used and included physical, verbal, non-verbal and quasi no-control methods.
- Physical control, particularly hand holding, was used primarily with very young children and was then gradually replaced with verbal control and then looser accompaniment as children age and mature.
- The level of control was also associated with the level of risk perceived and levels of control used, regardless of the child's age.
- Parents rarely presented a consistent role model, instead their behaviour was often specifically adapted to the individual road situation with regard to where, when and how to cross the road.
- Other influences, such as time constraints, the weather and distracting factors, also affected road use behaviour.
- Parents did not regularly communicate the rationale for their road-crossing decisions to their children and without this their behaviour may send out mixed messages.
- Efforts to increase understanding and skill development through explanation and involving children in road-crossing decisions were seen infrequently. Similarly, there were few attempts to motivate children or develop positive attitudes to road safety.
- Where attempts were made to teach children to cross roads safely, these tended to occur at simple or designated crossings rather than at more complex ones.
- At busy, complex or high-risk crossings, parents focused on coping with the road situation. They communicated less with their children and exercised more physical control.
- Those parents and children who appeared to communicate a lot with each other were also more likely to communicate specifically with one another about road use.

- Children using scooters, tricycles and bicycles were less likely than child pedestrians to interact with their parents due to the attention paid to mastering the vehicle.
- Most parents and children observed in cars were seen using seat belts or child restraints.
- The door used for children to get in or out of cars at the kerbside or roadside was often largely dependent on the position of car seats and/or the position the car was parked. Parents mainly responded to high levels of risk by assisting, or closely supervising, and shielding the child from traffic during the transfer from car to pavement.
- Parents were particularly attentive to children when boarding or alighting buses.
- There were no obvious differences between how parents interacted with male children compared with female children.
- There were no obvious differences between how different ethnic groups interacted with their children.

Children’s and young people’s perspective

How parents keep them safe and enable them to learn how to use roads safely

Primary school age – draw and write

The main findings emerging from the analysis of the draw and write exercise were as follows:

- For very young primary school aged children, responsibility for keeping safe was seen to rest with others – parents, being in a car, road-crossing patrols and occasionally fantasy figures.
- For older children there were signs of them joining in with their parent in looking for traffic. However, responsibility still remained with the parent and, in some instances, children just passively complied. There were few signs of parents actively involving children in decisions about crossing when accompanying them.
- Physical control, such as handholding, emerged as the main way parents keep younger children safe and was maintained with older-age groups in very busy urban environments. Looser forms of accompaniment were used with older children.
- When parents stop holding hands, verbal communication tended to focus on control in relation to the child’s position on the pavement, stopping at junctions and giving simple road-crossing instructions. It also included more general messages such as ‘not running’ or ‘not being silly’.

- As children mature, parents gave more detailed instruction about crossing. However, the emphasis tended to be on knowledge rather than skill development.
- Guidance, advice and road safety education given by parents was often not comprehensive and was frequently expressed as some variation of current recommended practice. In some instances it involved specific advice on crossing, but could also just be a vague admonition to 'be careful'.
- Parents of some older children referred to consequences, but this was not common. Similarly, it was unusual for children to depict parents offering explanations or enabling them to understand traffic flow and traffic behaviour.
- Preparing children to cope with specific hazards in the locality was rare. Neither was there any attention to coping with cars parked dangerously or there being no gaps in the traffic.
- Repetition of road use and road-crossing behaviour emerges as one of the ways children learn.
- From the age of five years old children had good awareness of the road environment. Older primary children were becoming more aware of the role of driver behaviour, whereas younger children just saw traffic generally as dangerous. For rural children, traffic appeared to be unpredictable and they may also have to cope with the absence of pavements. In contrast for urban children, traffic appeared more regulated, with a clear demarcation between the road and pavement.
- Older siblings had an important role, both in keeping children safe and helping them learn about road safety.
- Fewer than half of the children always used a seat belt and those as young as five years old have considerable insight into when they think it is permissible not to. Reasons for not using a seat belt included: parents not enforcing their use; seat belts being uncomfortable, not working or absent; overcrowded cars; and cars having airbags making seat belts unnecessary. Short or bumpy journeys and areas unlikely to have a police presence were also given as reasons.
- Urban inner-city children (but not those living in inner-city London) appeared to be allowed out unaccompanied earliest, followed by rural and suburban children, who then seem to have a greater amount of freedom. Children in London appeared to be accompanied until they are older than those in other areas.
- Rural and suburban children were more likely to cycle than those living in other areas.
- Parents' advice about cycling focused on being careful, wearing a helmet and suitable clothing, avoiding busy traffic and taking a mobile phone. Little attention was given to coping with traffic.

Secondary school age – focus group discussions

The main findings emerging from the analysis of the focus group discussions were as follows:

- Young people recognised a number of risks within the road environment. The high volume and speed of traffic, coupled with the dangerous and unpredictable behaviour of other road users (especially drivers), were perceived as creating the most risky situations.
- There was acknowledgement that some aspects of their own behaviour and that of their peers could put them at risk. This ranged from non-intentional risky behaviour, including being distracted by equipment such as mobile phones, acting irresponsibly when walking in groups and failing to use designated road crossings, to intentionally risky sensation-seeking behaviours such as ‘playing chicken’.
- Overall, young people felt confident in their ability to cross roads safely. However, they acknowledge that they often fail to give due attention to road safety rules, frequently being influenced by other factors such as peer pressure and convenience.
- Thinking back, some of the older teenagers recognised that they had lacked skills in judging safe gaps in traffic when they first started to go out on their own, causing them to be either overcautious or to take risks.
- As well as recognising that road safety is not a priority for many young people, some participants spoke of a tendency among themselves and peers to rebel against what parents had taught.
- Young people recognised that their road behaviour was influenced by who they are with. Having responsibility for younger siblings and being accompanied by parents was generally noted as having a positive effect on behaviour.
- Conversely, being among friends and peers was largely described as having a negative influence, making them more inclined to act irresponsibly and pay less attention to road safety. However, some participants stressed that they did not behave less safely with friends. For some groups, friends had a positive influence on each other’s road use behaviour as well as watching out for each other’s safety.
- Young people commonly felt that all road users have a shared responsibility for road safety. While many regarded themselves as responsible for their own safety, others felt that parents continue to have some responsibility when out together. Some participants placed responsibility fully on drivers.
- Young people remembered their parents teaching them about road safety as young children, principally through verbal and practical instruction by the roadside. Parents’ acting as positive role models was also perceived as important.

- Now they were at secondary school, the young people noted changes in the behaviour of their parents in relation to road safety education. In addition to no longer being shown what to do, parents were more likely to simply give vague reminders, such as ‘take care’ and ‘don’t mess about’. There was a sense that parents had relinquished responsibility for road safety to the young people.
- Some examples of parental advice relevant to this age group included warning against listening to music through headphones or earphones when crossing.
- Young people described how, in many cases, the road safety behaviour of their parents had got worse since they were younger. They paid less attention to road safety rules, both in terms of their own behaviour and the behaviour of their children. In some cases, young people had noted a ‘role reversal’, with the young people having to instruct their parents on how to cross the road safely.
- Parents often failed to enforce the use of seat belts and cycle helmets, and many young people admitted to not consistently wearing seat belts and never wearing cycle helmets.
- Reasons given for not wearing cycle helmets tended to be linked to appearance and ranged from them not being perceived as ‘cool’, being laughed at by friends when wearing one, and issues such as them ‘messing up hair’.
- Many young cyclists also did not feel the need to wear cycle helmets for safety reasons, stating reasons such as ‘no-one ever falls off’. However, some had been influenced to wear a helmet through personal knowledge of injury.
- When travelling in a car, the reasons for not wearing a seat belt included trusting the driver, travelling only short distances and overcrowded cars.
- With regard to teaching young people about road safety, a range of methods were considered to be effective. These included verbal and practical instruction, reminders about rules and reinforcement of relevant road safety messages. Parents providing a positive role model and leading by example was also regarded as important.
- Young people felt that parents should start to teach children about road safety from a young age. Encouraging the involvement of children in road-crossing decisions and gradually giving them independence and freedom of movement were considered effective in influencing children to be safe road users.
- Methods that were considered ineffective included attempting to accompany children as they get older, and ‘shouting’ and ‘nagging’ without giving meaningful explanations.

What is effective when teaching children and young people to use roads safely?

The issues of effectiveness were explored more fully in the drama workshops. The main findings emerging from the analysis of the drama workshops were as follows:

- Road safety education was seen by children and young people of all ages as an issue predominantly for primary school aged children.
- Parents were perceived to use a combination of physical and verbal control as well as basic instruction to teach road safety rules with young (pre-school and younger primary school aged) children.
- With older (primary school age) children, parents reduced physical control and increased roadside instruction and explanation about how to use roads safely.
- The amount of road safety education parents provide was seen to decrease considerably as children start to travel independently. It becomes mainly general personal safety advice.
- Young people saw ‘real-life’ experience as key to further learning once they become independent road users. For the younger teens this often included experiences of ‘near-misses’ or other road incidents.
- Children and young people recognised that parents do not always demonstrate best practice or deliver consistent road safety messages.
- The most effective way for parents to teach children to be safe on the roads was thought to be by being consistent and adapting the methods used to suit the child’s age.
- It was thought that these methods should start with physical control and basic verbal instruction, rolling out to more specific instruction, explanation and involvement of children in road-crossing decisions, in a variety of different road situations.
- Children and young people felt that parents should also provide a positive role model at all times when using the roads.
- In order to effectively prepare young people for independent road use it was felt that individuals should be accompanied by an adult until they can prove they can manage roads safely.
- Young people of secondary school age felt that parents should recognise their increasing level of maturity and not treat them like children with regard to road safety. However, they could still play a role in the reinforcement of safe practice through the use of specific and relevant real-life examples of the consequences of unsafe behaviour.
- All participating groups of children and young people perceived that being shouted at (except in response to imminent danger), being nagged at and being

threatened with punishments that could not be enforced were the least effective methods that parents could use to influence safe road use.

- Children and young people felt that, when travelling by car, parents should insist children wear seat belts, check that they are being used and wear one consistently themselves.
- Parents were seen to have greater input in teaching their children to master riding a bicycle rather than safe cycling on the roads. Apart from providing and encouraging the use of safety equipment and some more general safety messages coming from parents, children and young people often referred to external cycle ‘proficiency’ training as a way of learning to ride a bicycle safely on the roads.

Parents’ perspective

Focus group discussions

The main findings emerging from the analysis of the parent’s focus group discussions were as follows:

- Parents were aware of the risks on the road for their children. Complex road systems, increasing traffic volumes and irresponsible drivers were all seen to affect the safety of children.
- A number of parents felt that, as children themselves, they had been comparatively safer on the roads and able to travel more independently due to lower volumes of traffic and the reduced risk of injury or threat to personal safety.
- Parents consciously used a number of strategies to influence their child’s road safety behaviour. Accompaniment was a way of ensuring children were safe, as were physical and verbal forms of control.
- The levels of physical control used were influenced by a range of factors including familiarity with the road, time pressures, and the age and personality of the child. Gender was not an issue that parents felt influenced levels of control.
- Verbal approaches to keeping children safe varied in response to imminent danger and coping with risky situations.
- Parents also claimed to provide general roadside instruction and education during normal road use. Repeating the ‘rules’ of road safety to pre-school and younger primary aged children was frequently mentioned. The way parents articulated these ‘rules’ often reflected what they themselves had learned as children.
- Parents of older children approaching driving age commented on using car journeys to reinforce road safety education.

- On the whole, parents claimed to be good roadside role models for their children but acknowledged their inconsistencies in certain situations – especially when restricted by time.
- Despite parents suggesting that providing practical roadside training was an effective way to improve children’s safe road use, few parents claimed to specifically attempt to develop their children’s skills by giving them the opportunity to practise while still supervised. Those parents who did use this approach with their children practised principally on quiet roads which posed few risks.
- Parents agreed that it was essential to start road safety education from a young age yet, in general, parents had not fully considered how to prepare their children to be independent road users.
- For secondary school aged children, highlighting the consequences of poor road safety behaviour, as well as using ‘shock tactics’, were felt to maintain their awareness of how dangerous and risky roads can be.
- Parents generally felt very confident about teaching their children about road safety, but felt other organisations, such as schools and nurseries, should play a contributory role.
- Mothers were perceived to be the primary deliverers of road safety education through their daily contact with children on school journeys.
- Parents found it more difficult to engage with their children once they reached secondary school age. Many older children were not interested in road safety or claimed to know how to use roads safely already.
- In general, parents in urban areas discouraged their children from cycling on the roads. Cycle use was more common in rural areas and parents encouraged the use of cycle paths.
- Parents of older primary and secondary school aged children found it difficult to enforce cycle helmet use. Many parents accepted that their older children were not going to wear cycle helmets.
- The majority of parents claimed to insist that their children wear a seat belt while travelling in a car. However, some parents did not always check that their children had put the belt on.
- Parents felt that they needed additional support to enable their children to be safe on the roads. Making cycle helmets compulsory was one recommendation, as was increasing the number of crossings and using the media more effectively for road safety education.

Survey

The main findings from the quantitative analysis of the survey data were as follows:

- The mean age at which children started being taught about road safety by parents was 2.6 years.
- In relation to stopping teaching children about road safety, most (58.8%) indicated that they never intended to stop teaching their children. Approximately 1 in 10 intended to stop when their children reached 12–14.
- The method parents claimed to use most commonly for teaching their children about road safety was explaining why it was unsafe if they saw their child doing something risky, followed by setting a good example themselves.
- The methods used least were: the use of threats or punishment and telling their child about others getting injured or near-misses.
- As the age of the children increased, parents were more likely to teach them at home, tell them about others getting injured or near-misses, point out unsafe behaviour by others and involve them in decisions about where it is safe to cross. They were less likely to teach children when out, explain why they should behave safely, praise or reward them or use threats or punishment.
- There was no significant difference in parents' approach to teaching boys and girls about road safety other than boys were being taught at home significantly more often than girls.
- Mothers provided road safety education of some form significantly more often than fathers.
- There was no significant relationship between ethnicity and the teaching methods parents used other than White British parents involved children in decisions about where it was safe to cross the road significantly more often than other ethnic groups combined. However, it is important to recognise the wide diversity among those who categorise themselves as anything other than White British.
- There was an association between living in urban areas and not having access to a car or van. Parents who did not have a car or van taught their children about road safety more often than parents who did have access to one.
- In the case of children 10 years old and younger, fathers allowed their child to go out alone significantly more often than mothers. Similarly, boys were allowed out alone significantly more than girls.
- As the child's age increased, parents were significantly less likely to watch to check behaviour, tell their child to be careful or remind them of road safety rules when they went out on their own.
- Boys were significantly more likely than girls to be allowed out on a bike.

- The most common method used by parents for keeping their children safe while out on a bicycle was to encourage pavement cycling, followed by ensuring helmet use.
- Older children were made to wear a helmet, encouraged to cycle on a pavement or accompanied significantly less often than younger ones.
- A significant association was found between being driven in a car and (a) living in a rural area and (b) living in a household with two or more adults. Children were also significantly more likely to be driven in a car by their fathers than their mothers.
- Almost all respondents claimed to always ensure that their child wore a seat belt while in the car. Nearly two-thirds of parents always tried to set a good example as a safe and careful driver.
- Older children were more likely than younger children to have unsafe behaviour pointed out to them when travelling by car.
- Mothers reported setting a good example as a safe/careful driver and pointing out unsafe behaviours by others significantly more often than fathers.
- Parents felt that the most effective methods for teaching their child about road safety were setting a good example, followed by giving explanations and teaching rules. The use of threats and punishments was perceived to be the least effective method. Using others as examples was also considered to be of limited effectiveness.
- For younger children, the more effective methods were thought to be: teaching rules, giving explanations, praise/reward, involving the child in decisions and making them use safety equipment. For older children, pointing out people who are behaving unsafely and telling the child about others getting injured or near-misses were perceived to be more effective.
- Mothers had significantly greater faith than fathers in the effectiveness of all methods of road safety education, with the exception of the use of threats or punishment and safety equipment, which were rated quite low by both.
- There were a few significant differences between ethnic groups in how effective they thought some methods to be. White British respondents rated the effectiveness of setting a good example, involving children in decisions and pointing out unsafe behaviour more highly than other groups. Conversely, the other ethnic groups combined rated the effectiveness of teaching rules more highly.
- The different approaches to road safety education were felt to be equally effective for girls and boys except for ‘setting a good example’, which was rated significantly more effective for girls, and ‘threats/punishment’, which were more effective for boys.

- The biggest perceived challenge in teaching children about road safety was getting them interested, followed by environmental factors such as roads being complicated and busy. Various issues were perceived to be a greater challenge for parents of younger children, such as having suitable materials and knowing what to tell young children and also the complexity and density of traffic. However, experience also plays a part as these were less of a problem for second-born and subsequent children.
- Fathers found getting their child interested in road safety and not having time or being too busy significantly more of a challenge than mothers.

Discussion and synthesis

- All children and young people involved in the study from the age of five upwards were aware of risks on the road but their perceptions differed with age.
- Parents were also aware of risks on the road for their children and perceived that the level of risk to be different to when they were young. Parents often linked personal safety issues with road safety.
- Parents claimed to use a range of methods to enable their children to cope with risk, including: protection through control and accompaniment, particularly with younger children; repetition of behaviour patterns; teaching rules; using explanation; and setting a good example to encourage safe road use.
- However, there is conflict between parents' concern to protect children and giving them practical experience of using roads.
- This study found that parents were inconsistent role models and the general road safety messages they gave to their children were often outdated and based on what they were taught as children.
- Parents' road use behaviour was often highly adapted to suit specific traffic situations, but their rationale was rarely explained, making it difficult for children to understand.
- Children and young people felt that the most effective ways for parents to teach road safety was to: start young; use physical control initially; teach road safety rules with explanation; set a good example; and give opportunities to practise skill development at the roadside with a gradual increase of independence. Parents need to keep road safety messages 'relevant' to reinforce safe behaviour for young people.
- The parents' views of effective ways to teach children to be safe road users reflected those of the children and young people, with an emphasis on being a good role model, using explanation, teaching rules and encouraging independent decision-making.

- There were few differences between the ways parents approach road safety education between boys and girls. The individual personality and age of the child were seen to be the main factors for consideration.
- Parents saw themselves as primarily responsible for teaching their children to be safe road users. They were aware of the input of other agencies but were not always clear about the type of road safety education their children received from these other providers.
- In order to improve the way parents influence their children’s safe road use, their knowledge of road safety messages needs to be updated. Parents also need to be made aware of the importance of providing a consistent role model and giving children appropriate opportunities to develop road safety knowledge, skills and attitude.
- Parents of children who cycle should give more attention to teaching them to cope with traffic over and above simply learning to ride a bike.
- Parents felt that reducing the risk children are exposed to would make teaching road safety easier. Other supporting factors included improved communication with schools regarding child road safety education provision and specific targeted multi-media input.

Conclusions and recommendations

- Parents are aware of the risks on the road and protecting their children is a major priority.
- Most parents do not have a deliberate strategy for teaching children to be safe on the roads. Explicit efforts to teach their children focus on cognitive aspects, rather than enabling children to develop practical road skills and a positive attitude to road safety. Further, messages are often out of date.
- Parents are not fully aware of the effect of the role model they present and tend to provide an inconsistent role model in relation to their behaviour on the roads.
- Parents should be supported in the important role they play in the road safety education of their children by appropriately targeted interventions beginning at the ante-natal stage. To facilitate this, parents need targeted support starting at ante-natal care right through to the end of secondary school education.
- Parents should be encouraged to be actively involved in local road safety initiatives to reinforce messages and to keep them updated with current good practice.

- Recommendations for further research include: exploration of the influence of peers on young people's road use behaviour; the role of siblings in road safety education; further examination of the ways young people identify and respond to risk and perceptions of road safety; and the relevance of road safety education for schools and particularly secondary schools.

1 INTRODUCTION

Road safety is of major concern to everyone, and children are particularly vulnerable road users. According to Towner *et al.* (2001) road traffic accidents account for the largest number of fatalities in children, with motor vehicle accidents representing almost half of all accidental injury fatalities in this age group. In addition, research suggests that there are significant differences in the level and types of accident between specific groups of children. This has been recognised and given high priority by the Government in a number of documents, such as *Tomorrow's Roads – Safer for Everyone* (DETR, 2000), *Preventing Accidental Injury: Priorities for Action* (Accidental Injury Task Force, 2002) and the *National Service Framework for Children, Young People and Maternity Services* (Department of Health, 2004). The Department for Transport set a target for 2010 of a 50% reduction in the number of children killed or seriously injured compared with the average for 1994–98, and the Department of Health (2002; p. 9) identified as one of its core objectives: 'To reduce the number of accidental deaths and serious non-fatal casualties resulting from pedestrian injuries to children aged 0–15 years.'

Parents see themselves as the main road safety educators of their children, and we know through research that educational measures, pedestrian skills training and skills training for parents can improve children's road-user skills (Millward *et al.*, 2003; Wood *et al.*, 2003; Miller *et al.*, 2004; OECD, 2004). However, studies suggest that, although parents see it as their role to provide road safety education and children may have the knowledge of what to do in a given situation, it is less clear what actually happens in the interaction between the parent and the child. It would also seem that, despite having the knowledge of 'pedestrian tasks', young children may be unable to link the task with an understanding of 'why'. Several reports have recommended that research, which would include interviews with parents and children and observation in the traffic environment, should be conducted to explore the interaction between parent and child and the link with injury reduction (Zeedyk and Wallace, 2003; ODS Ltd with Market Research UK Ltd, 2004; OECD, 2004).

The purpose of this research was to identify:

- ways in which parents influence children and young people (aged 0–16) to be safer road-users; and
- how this mechanism for the delivery of road safety education can be most effectively supported and encouraged.

The primary emphasis of the research is on pedestrian safety. However, because of the integral relationship between pedestrian behaviour and other types of road use, cycle safety, safety when using public transport and car safety have also been included.

The specific objectives were to:

- identify the variety of formal and informal interactions regarding road safety between children and parents in real situations, including consideration of factors influencing risk and parents' perception of risk and factors affecting parents' ability to provide road safety education;
- assess, with reasons, the most effective interactions for different age and road-user groups;
- assess the relative importance of teaching by parents and the example they set;
- understand how the attitudes and behaviours of parents towards their children's road safety are formed and what affects decisions about their child's ability, independent travel and level of accompaniment, and what influences the way they teach their children about road safety;
- identify how the road safety skills of parents can be strengthened to help them become better role models, be motivated to train their children to be safer road users, and reinforce road safety messages children receive at school and elsewhere; and
- make recommendations about the content and format of child–parent interaction and the provision of support to encourage positive and effective child–parent interaction and the development of partnerships between parents and schools.

1.1 A note on terminology

The age range associated with the terms 'children', 'young people' and 'early adolescents' is conventionally up to the age of 16 years. However, there is variation – some studies focus on the 0–14 age whereas others extend the age range up to 18 and these have been included. This study included children and young people aged 0–16, although the systematic review that preceded the field work included young people up to the age of 18.

As a large part of the work with children and young people took place in schools, the terminology used to describe groups or individual children and young people are those used within the English education system, including: primary and secondary school age, Key Stage and year group. These terms can be applied to specific ages as shown below:

Primary school

- Key Stage 1: 5–7 years old
 - Year 1: 5–6 years old
 - Year 2: 6–7 years old

- Key Stage 2: 7–11 years old
 - Year 3: 7–8 years old
 - Year 4: 8–9 years old
 - Year 5: 9–10 years old
 - Year 6: 10–11 years old

Secondary school

- Key Stage 3: 11–14 years old
 - Year 7: 11–12 years old
 - Year 8: 12–13 years old
 - Year 9: 13–14 years old
- Key Stage 4: 14–16 years old
 - Year 10: 14–15 years old
 - Year 11: 15–16 years old

Although the term ‘parent’ is used throughout, it is taken to include all adults with care and control of children.

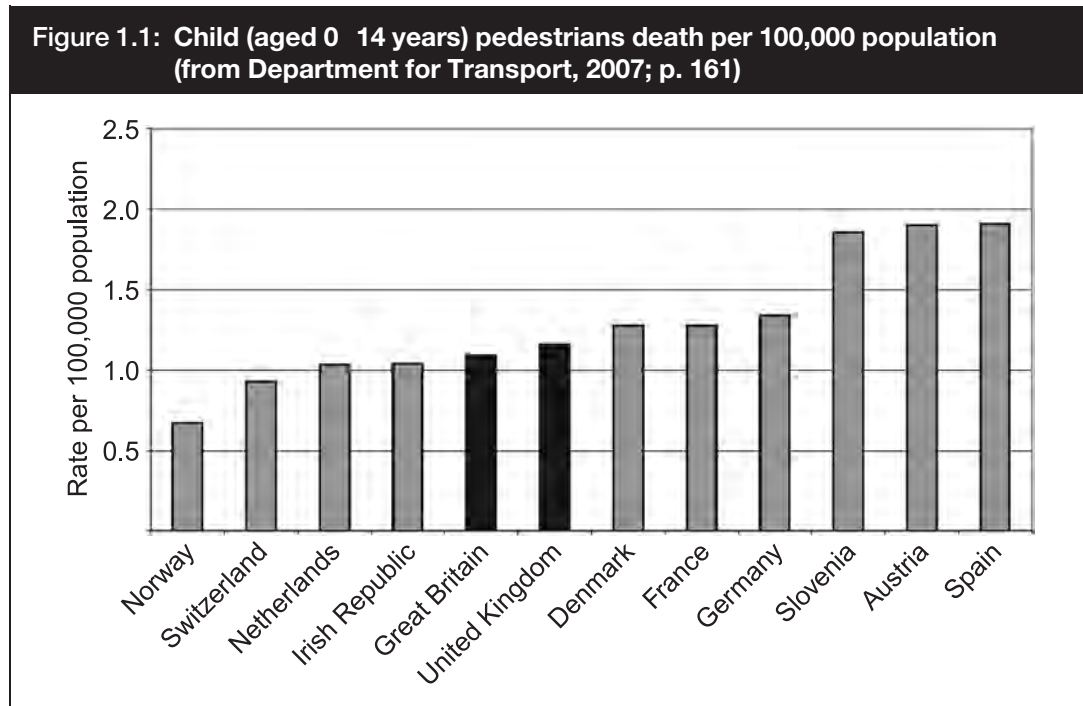
This section provides the background to the empirical study. It begins with a brief overview of road traffic accident statistics for children and young people in the UK, followed by a discussion of potential factors impacting on children’s road safety and their capabilities in traffic, and concludes with an overview of research on potential interventions to support effective child–parent interaction in the traffic environment. The conceptual framework for the study is then set out, followed by an outline of the project.

1.2 Background

1.2.1 *Accident statistics and the epidemiology of child road traffic accidents*

Fatality rates for children in the UK are relatively low compared with other European countries and show a consistent downward trend over the last 20 years. The Department for Transport (2007) reported a 52% reduction in 2005 from the 1994–98 average baseline in rates for fatal and serious injury in children. For the different types of road user this meant a reduction of 51% for pedestrians, 55% for pedal cyclists and 54% for child passengers. However, unintentional injury remains the major cause of death and disability in children, with 3,294 children killed or seriously injured in road traffic accidents in 2006 (Department for Transport, 2007). The Department for Transport also notes that, although the overall record for child safety is good, child pedestrian injury rates are poor in comparison with other European countries, with the United Kingdom having the seventh highest child pedestrian casualty rates behind Denmark, France, Germany, Slovenia, Austria and Spain as shown in Figure 1.1 (Department for Transport, 2007). This figure is

particularly alarming, as a number of reports suggest that the main reason for pedestrian casualty figures dropping is not because of improved road safety or safety education but because of a reduction in the number of children walking and an increase in the number of children travelling by car (Sonkin *et al.*, 2006). Similar trends are seen in other countries (DiGuseppi *et al.*, 1997).



Several recent studies have identified a number of key differences in casualty patterns in relation to cause, age, gender and socio-economic group. Sonkin *et al.* (2006) found that, while injury death rates for children aged 0–14 years declined for all modes of travel between 1985 and 2003, pedestrian rates remained higher (0.55/100,000) than either those for car occupants (0.34/100,000) or for pedal cyclists (0.16/100,000). However, when these figures were adjusted for average miles travelled, there were 0.55 pedal cyclist deaths, 0.27 child pedestrian deaths, but only 0.01 child car-occupant deaths per 100,000.

Boys tend to be more at risk than girls of being seriously injured or killed in road traffic accidents. Three out of five child pedestrians killed or seriously injured in 2006 were boys, and nearly six times as many male child pedal cyclists were killed or seriously injured than female (Table 1.1) (Department for Transport, 2007).

Data also show that there is a peak in the number of killed and seriously injured, particularly pedestrians and pedal cyclists, in the ‘transitional’ age group (aged 12–15) when children transfer from primary to secondary school (Platt *et al.*, 2003). In this age group there were 921 pedestrians, 290 cyclists and 284 car passengers killed or seriously injured in Great Britain in 2006. If all severities are included, the equivalent figures for 2006 were 4,504 pedestrians, 2,154 pedal cyclists and 3,587

Table 1.1: Male and female casualties aged 0–19 years, killed or seriously injured, by road user type, in Great Britain, 2005 (total numbers) (adapted from Department for Transport, 2007; pp. 101–102)

Age (years)	Male	Female
Pedestrians		
0–4	158	81
5–7	207	101
8–11	357	200
12–15	553	368
16–19	385	227
Pedal cyclists		
1–4	6	0
5–7	38	10
8–11	119	40
12–15	262	28
16–19	163	24

car passengers, confirming that road casualties in this age group are a major public health issue.

It is well known that unintentional injury rates are higher among children from lower socio-economic groups (Towner *et al.*, 2005). Sonkin *et al.* (2006) noted that children from households without access to a motor vehicle walked twice as far as children from households with two or more vehicles. They concluded that children from lower socio-economic groups were therefore at greater risk of pedestrian road traffic injury.

The factors that impact on children’s road safety and their capability in traffic are clearly numerous, multi-faceted and complex. On one hand the home and road environment and the socio-economic circumstances impact on the child’s level of exposure to risk and of experiencing a road traffic accident. On the other hand, age and gender play a role in the patterns of injury. While recognising the importance of external and biological factors, children’s capacity to manage risk is influenced by their ability to identify and respond appropriately to risk so that they can become safe independent road users. This ability develops as children get older. Towner *et al.*’s (2005) review found a number of factors associated with the increased risk of injury. These included developmental factors, such as physical development, motor co-ordination, perceptual development, and cognitive and intellectual development. Increasing levels of independence and freedom, exposure to different environments and lower levels of supervision, as well as immature behaviour and risk taking, also contributed to higher risk of injury. In relation to gender, Towner *et al.* (2005) identified other variables which could be linked to differences in socialisation, such as differences in risk taking and peer pressure, different types of play and exposure to different environments, different levels of supervision and different levels of independence and freedom.

It is widely known that parental concern for safety places restrictions on children's independent use of the external environment. The Department for Transport (2005a) identifies concerns about traffic danger as parents' main reason for accompanying children aged 7–10 to school, followed by fear of assault or molestation. Ironically, among a large proportion of parents, these concerns seem to have been translated into transporting their children to school by car rather than accompanying them on foot, thereby exacerbating the traffic dangers.

The DETR (2000) makes the point that children are more likely to be injured if they go out without adults before they have developed good road sense. Therefore, it would seem that parents need to provide not only road safety education for their children, but also make fine judgements about the level of risk and their child's capacity to cope consistently.

A study of parental attitudes to road safety education (ODS Ltd with Market Research UK Ltd, 2004) found that parents saw themselves as being responsible for developing their children's road safety awareness and skills. However, they had high levels of confidence regarding their children's capability in the road environment, although they were also aware that road safety awareness and skills deteriorated when children were with friends and as they reached their teens. Parents were more likely to reinforce road safety messages with younger children rather than teenagers, and claimed to improve their own behaviour when using the roads with their children. However, the report found that 20% of parents would not be able to give correct advice about particularly risky situations. The study concluded that there is a need for more research about child–parent interaction in real-life road- and travel-related situations. Clearly, to be effective educators, parents require understanding of their children's needs and the ability to use appropriate methods. They also need to achieve consistency and balance between educating by example and more explicit forms of education (Cattan *et al.*, 2008).

1.2.2 *Previous research*

The first phase of this study involved a systematic review of the literature to identify and summarise the research to date relating to child–parent interaction in the road environment. It also informed the development of the methodology for the empirical component of the study.

The purpose of the review was:

- to identify and provide a critical review of the research and literature concerned with parent–child interaction in relation to road safety education; and
- to consider the published evidence for the effect of strategies that parents use in training their children to be safer road-users and to consider ways of engaging parents in road safety education.

The review, which is published in full elsewhere (Cattan *et al.*, 2008), found that, although a number of earlier systematic reviews had been conducted which touched on child–parent interaction, none of them had specifically focused on the subject. Therefore the evidence with regard to the effectiveness of parent–child interventions on the basis of systematic reviews was fragmented and unclear. In the literature search that followed, 27 studies were identified and grouped as: pedestrian safety (12 studies); walking buses (three studies); traffic clubs (one study); cycling safety (five studies); parent–child interaction in the car (five studies); and teen-driver safety (one large-scale study consisting of five different elements of teen driving). The review did not solely focus on intervention studies, but also included observational studies and surveys.

Several significant findings were identified through the review which had a bearing on how the tools for this research were developed. Observational studies of pedestrian behaviour found that holding hands was the most common road-crossing interaction between parents and children. However, while children accompanied by adults tended to rely on the parent for safety, children who were unaccompanied were more likely to do safety checks at the kerb. Importantly, although parents generally set a good example in road-crossing behaviour, adults rarely made use of road-crossing events to give oral instructions and frequently did not stop their child from running across the road despite not necessarily being able to judge whether or not the child had checked the road first. A particularly important observation for this study was that few parents and children demonstrated consistency in their road-crossing behaviour. Older children and boys were less likely to stop at the kerb. Interviews with children showed that children held a substantial knowledge of pedestrian road safety issues. However, while holding hands was considered safe behaviour, children frequently associated the absence of cars in the road as being ‘okay to cross the road’, rather than making a judgement of safe distance. This, again, suggests that parents are not making consistent use of the road-crossing event to provide verbal guidance on safe crossing, despite reporting to do so. Of the three intervention studies that considered pedestrian behaviour, only one had relevance for this study (Thomson *et al.*, 1998). It demonstrated that roadside training by volunteer parents for groups of children led to significant improvements in children’s road safety behaviour. Interestingly, there was a significant main effect of gender due to boys constructing more safe routes than girls. No explanation was given for this difference between boys and girls.

Traffic clubs have been evaluated extensively. Although not directly relevant for the methodology of this study, the evaluations have shown that they appear to increase the extent to which parents attempt to teach their children about road safety. The traffic club did appear to reduce the incidence of running on ahead and to increase the number of children stopping at the pavement when called, but did not seem to have an effect on children running into the road or crossing the road by themselves (West *et al.*, 1993).

All studies investigating cycle safety were concerned with cycle-helmet use and enforcement. None of the studies identified evaluated the effect of parents as educators or as role models. Importantly, for our research, mothers who believed that their children had a high level of experience with cycling allowed them greater risk-taking even when not wearing safety gear, and that wearing a cycle helmet resulted in substantial increases in permissible risk taking (Morrongiello and Major, 2002). However, a Swedish study (Johansson and Drott, 2001) showed that, for parents, the local traffic environment was an important factor in determining the purpose for, and level of, their children's bicycle use, which is similar to parents' perceptions of pedestrian safety.

Two further important findings emerged from studies researching parents' and children's behaviours in the car. Firstly, belief in fate seemed to influence the likelihood of parents using restraints, such as seat belts or car seats, with their children. Likewise teenagers who believed in fate were less likely to use seat belts than those who did not. Secondly, although parents were highly influential in whether or not children wore seat belts, teenage passengers with teenage drivers were less likely to use seat belts than with adult drivers. However, teenage passengers were more likely to be belted if the driver was using a seat belt, regardless of whether the driver was a teenager or an adult.

In summary, several important factors were identified for the development of the methodology for this study, such as the significance of parental guidance in children's road safety behaviour, the inconsistency of parental road-crossing behaviour, parents' lack of understanding of their children's level of experience and level of risk, and the gender differences both in terms of behaviour and in terms of parental control. In addition, the review identified a lack of good-quality research that considered both the physical interaction (such as holding hands) and the verbal interaction (instructing and encouraging problem-solving in the traffic environment).

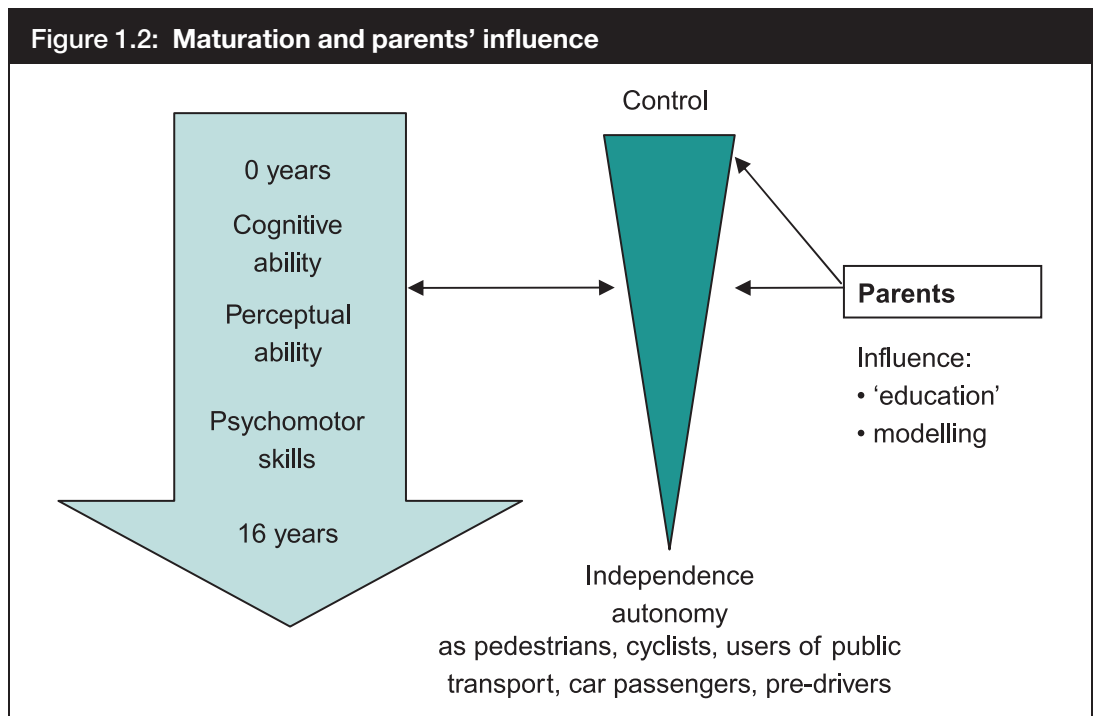
1.3 Conceptual framework

The primary aim of this study was to explore the way parents influence children and young people aged 0–16 years to be safer road users. As noted above, some young people are at greater risk. Twice as many boys are killed or seriously injured on the roads as girls, and death rates among children in lower socio-economic groups for pedestrian road accidents are five times those in the highest social class. There is also higher risk among some ethnic groups than majority-culture peers living in the same area (Department for Transport, 2002). This study will need to address how, and the extent to which, parents prepare these groups of children to deal with the particular risks they face.

The age range 0–16 is characterised by the development of cognitive and perceptual ability and psycho-motor skills. It is also the period in which there is a gradual

transition from parental control to independent road use, accompanied by an increase in casualty rates with increasing age. Platt *et al.* (2003) noted parents’ awareness of the dangers children face in their local environment. They also found that parents accepted the need for greater independence following the move to secondary school, and tried to achieve a balance between protecting their children and encouraging independence. Two broad strands of enquiry therefore emerge, as shown in Figure 1.2:

- the ways in which parents exercise control and make decisions about the level of control needed in relation to their perceptions of risk; and
- how parents teach their children to be independent and safe road users.



Parents may consciously attempt to educate their children to be safer road-users and the systematic literature review (Cattan *et al.*, 2008) notes that all parents report that they teach their children how to cross the road. However, the different approaches they use, in relation to both content and method, will meet with varying levels of success. Furthermore, parents and children may well have different interpretations of what success is. It is essential, therefore, to explore both children’s and parents’ perspective.

In addition to the impact of explicit attempts to ‘educate’, children’s learning also takes place through less formal channels. Reference to Social Learning Theory and its subsequent extension as Social Cognitive Theory (Bandura, 1986) indicates that people gain experience and understanding by observation and that this is a major factor in shaping behaviour. The modelling role of parents can make a significant contribution to children’s learning about road use and their development of traffic

competence whether or not parents are aware of this. Furthermore, this observational learning can be vicariously reinforced if people carrying out certain behaviours are seen to be ‘rewarded’ or ‘punished’ in ways ranging from approval or disapproval through to experiencing injury. Other important influences include perceived self-efficacy, which is concerned with judgments about how well one can carry out the actions needed to cope within specific situations. A further element of the theory is self-regulation, which is particularly relevant to the substitution of external controls by internal controls. Observational learning can contribute to development in relation to these latter two constructs, especially if the ‘learner’ identifies with, or has strong emotional attachment to, the role model. However, practical experience in real situations is also of central importance and particularly in relation to skill development. Additional lines of enquiry therefore addressed:

- the role-modelling influence of parents – both explicit and implicit; and
- efforts to teach children about road safety and develop traffic competence.

The report *Child Development and the Aims of Road Safety Education (No. 01)* (Department for Transport, 2000) identifies a number of issues relevant to children’s learning needs. The emphasis in national schemes for road safety education tends to be on developing conceptual understanding and appropriate attitudes to road safety, based on the assumption that these will be applied across the range of real-life traffic situations. Furthermore, the focus of much road safety education is on the acquisition of knowledge rather than practical skills development. The capacity of strategies such as the ‘Green Cross Code’ to deal fully with complex traffic situations has been brought into question. Rigidly applying rules may not always be feasible in busy traffic situations – a point also recognised by parents of children making the transition from primary to secondary schools (Platt *et al.*, 2003). Children need to learn to make a series of judgements. These include deciding which variables they should focus on, making fine visual judgements about safe gaps in traffic, and distinguishing between safe and unsafe places for crossing roads. It appears that children’s learning in this regard often takes place on their own by ‘experimenting’ in real-life situations. The view that many road safety skills cannot be improved until a particular stage of development has been reached has also been challenged by this report. It draws on empirical evidence to assert that appropriate training can enhance skill development in children beyond that which would be expected at their developmental age.

The importance of practical training in ‘real’ traffic situations has been recognised. The *Step Forward Guidelines* (Department for Transport, undated) define practical child pedestrian training as ‘supervised roadside training’. It should be child-centred and avoid assumptions, and build on what children actually know and are able to do. It is about discovery and learning rather than telling children what to do. Programmes such as ‘Kerbcraft’ (Thomson, 2002) are based on these principles and have achieved success. However, Wood *et al.* (2003) argue that such programmes, which use volunteer trainers, are very time-intensive. They see parents as the

primary educators for road safety through their role accompanying children, modelling and making decisions about road use. They demonstrate that parents' understanding of the child's perspective in carrying out road safety tasks and their motivation to actively involve their child in making decisions at the roadside could be improved using a booklet. As a result, children's traffic skills and hazard awareness improved significantly.

Over and above any other road safety education they offer, parents are well placed to provide guided roadside learning on an ongoing basis. However, key questions concern:

- whether parents have a clear view of what they are trying to achieve in relation to road safety education (i.e. their objectives and the level of precision with which they are framed);
- the balance parents adopt between practical and more abstract learning;
- the extent to which parents make use of opportunities afforded by everyday road use to carry out guided roadside learning and the strategies they use; and
- the balance between supervision and control, increasing exposure to road situations and providing opportunities to learn.

Reference to the systematic literature review conducted as the first phase of this study (Cattan *et al.*, 2008) also identifies a number of key variables which are listed in Box 1.1.

In order to address the complex interplay of factors outlined in Box 1.1, multiple methods were felt to be required with an emphasis on qualitative methodology. An overview of the project is provided below. A fuller rationale for each component is provided in Section 2, Methodology.

Box 1.1: Key issues to emerge from the systematic literature review (Cattan *et al.*, 2008)

- Gender, ethnicity and socio-economic status.
- Child impulsiveness and recklessness.
- Decrease in children's independent travel due to more children being driven to school.
- Parents' perception of risk in traffic situations.
- The level and type of supervision and control exercised by parents.
- Distinction between the supervisory and the educational role of parents.
- Opportunities for guided exposure to traffic situations.
- The quality of the modelling role exhibited by parents.
- The factors affecting parents' road use (and modelling influence), including perception of risk in different road situations.
- The types of road safety education that parents use.
- Achieving a balance between modelling, control and education.
- The extent to which parents understand the needs and capabilities of children in relation to road use.
- The need to develop complex road-use skills including focusing on relevant variables, visual timing, assessing risk and identifying safe routes.
- The extent to which strategies parents adopt conform with current evidence of effectiveness.
- The contribution of training to develop parents' road safety education skills.
- Low levels of awareness among parents of teenagers' involvement in high-risk driving and drink-driving.
- The association between parental involvement and children's attitudes.
- Parents allowing greater risk-taking when children use protective equipment (such as cycle helmets) or have a high level of experience.

1.3.1 *Project overview*

1.3.1.1 **Systematic review**

This is published separately.

1.3.1.2 **Empirical study**

Observation of roadside interactions between parents and children.

1.3.1.2.1 **Children’s and young people’s perspective**

- **Round 1** – to explore perceptions of risk, how they manage risk and the ways their parents have attempted to influence their behaviour and what works well. Methods used:
 - draw and write with primary school age children; and
 - focus group discussion with secondary school age children.
- **Round 2** – to further explore young people’s perceptions about the most effective ways of enabling them to use roads safely. Method used:
 - drama workshops with primary and secondary school aged children.

1.3.1.2.2 **Parents’ perspective**

- **Round 1** – to explore perceptions of risk, the strategies parents use to keep children safe and their role in relation to road safety education. Method used:
 - focus group discussion.
- **Round 2** – to feed back the findings from the work with young people and further explore parents’ views about what is effective, how they might improve their approach to road safety education, their relationship with other providers of road safety education and any support that would be useful. Method used:
 - focus group discussion.
- **Survey** – to assess the generalisability of the findings emerging from the qualitative study, specifically how parents enable their children to use roads safely and what is most effective.

2 METHODOLOGY

2.1 Project outline

The primary purpose of the study was to explore the ways in which parents enable their children to use roads safely and how this might be improved. Our approach was informed by the following considerations:

- the need to incorporate the perspective of both children and parents;
- the distinction between deliberate attempts to educate children about road safety and the effects of parents' own behaviour as role models;
- the effects of parents' perceptions of risk on their approach;
- the effect of deprivation and parent characteristics, including car ownership and ethnicity on their approach;
- the need to ensure that the findings relate to real-life situations; and
- geographic spread and the inclusion of urban, suburban and rural environments.

A number of different methods were used to ensure these issues were addressed along with the detailed objectives set out at the start of Section 1, Introduction. The combination of qualitative and quantitative methodologies allowed in-depth investigation of the nature of interactions between parents and children and the complex factors influencing these, as well as exploration of the extent to which the issues emerging applied to the population more generally. While some authors (Guba and Lincoln, 1989) argue that these approaches derive from different and irreconcilable epistemological positions, there is a general support within health promotion for methodological pluralism (McQueen, 1986; Tilford and Delaney, 1992; Milburn *et al.*, 1995). Not only do multiple methodologies and methods give complementary insights, they also provide the opportunity for triangulation to enhance internal validity. Triangulation can take a number of different forms (Denzin, 1970). In addition to methodological triangulation, this study provided the opportunity for both data and investigator triangulation.

In order to ground the study in the real-life experiences of parents and children and the contexts in which they live, the first phase of the study involved roadside observation of parents with children. The findings provided insight into parents' roadside behaviours and interaction with their children. Both parents' and children's perspectives were explored more fully using focus group discussions with parents and secondary school children, and draw and write exercises with primary school children. Children's views about how parents can most effectively enable them to be safe road-users were subsequently elicited using drama workshops. A second round of focus groups with parents addressed their effectiveness with regard to teaching their children to use roads safely. It drew on the findings of the earlier phases and

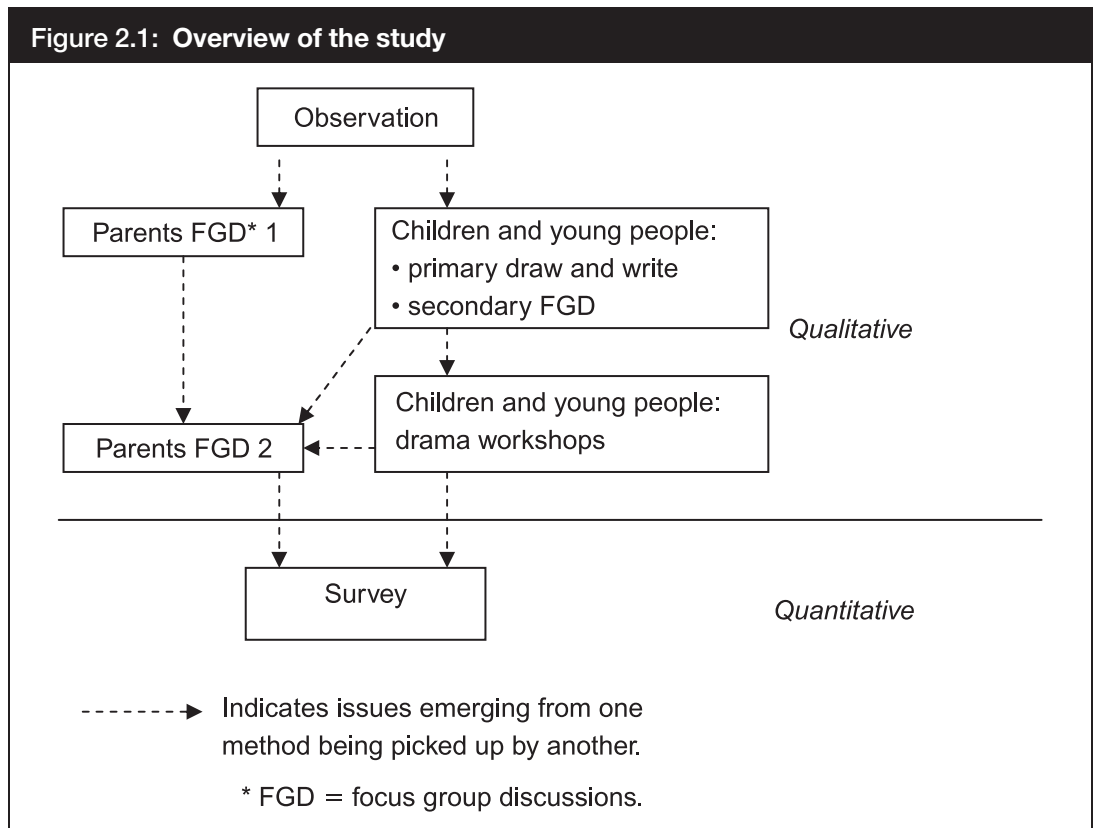
also incorporated the views of young people. The final quantitative component involved a survey of parents about what they do to help their children learn to use roads safely and their views about effectiveness. Again it drew on the findings of the earlier qualitative component. The relationship between the various phases of the study is summarised in Figure 2.1. Full details of each phase of the study are provided below.

2.2 Location of the study

Selection of areas for the conduct of the study was based on consideration of geographic spread, and the need to include a range of different population densities, ethnic mix, levels of deprivation, urban, suburban and rural environments, and child pedestrian casualty rates. The following five areas were selected:

- London – City of Westminster inner-city (urban);
- West Yorkshire – Leeds inner-city (urban) and Leeds outskirts (suburban);
- Midlands – Warwick and Leamington Spa towns (urban); and
- North Yorkshire – areas of Scarborough and Selby district (rural).

Detailed characteristics of these areas are included in Appendix 1.



2.3 Observation of roadside interactions between parents and children

It is well recognised that there may be a mismatch between what people say they do and what they actually do, due to either a lack of awareness or reluctance to acknowledge or divulge information. Studies referred to in the systematic literature review (Cattan *et al.*, 2008) identified inconsistencies between parents claiming to be safe road-users and their actual road-use practice. The advantage of observation as a method is that it can overcome this difficulty (Mays and Pope, 1995). Furthermore, it allows behaviours to be studied within context.

The focus of the observational phase of the study was on the ways in which parents influence their children's road use in real roadside situations. This included control and modelling as well as provision of roadside education – ranging from didactic instruction through to more guided learning. As well as identifying aspects of their behaviour which parents may be aware of, it will also reveal those of which they may not be conscious. Specific objectives for this phase were to explore:

- levels and style of supervision and control used by parents accompanying children in a variety of roadside situations;
- the modelling role of parents and the quality of the road-use behaviour that they model;
- attempts to educate children about road use – instructional or guided roadside learning;
- any variation in the types of interaction in relation to different broad age-bands, gender and ethnic groups; and
- the influence of environmental factors on parents' behaviour.

The earlier systematic literature review (Cattan *et al.*, 2008) identified a number of challenges for observational research which were addressed in the development of the observational methodology. These include:

- the physical environment and selecting an appropriate position for observation to avoid any obstruction to the researchers' view;
- coping with situations where parents may be accompanying more than one child;
- the limited capacity of observers to capture the full range of relevant variables; and
- difficulty of assessing whether observations are repeated on the same individual or family in successive observations.

2.3.1 Site selection

In order to fully ‘capture’ the variety of different interactions across the range of traffic situations and environments, it was essential that appropriate observation sites were selected. Six observation sites were identified within each area based on the information listed in Box 2.1.

Box 2.1: Information used for observation site selection

- Data on population and area characteristics obtained from:
 - census data from the Office of National Statistics (ONS);
 - rural urban classifications from ONS;
 - Indices of Deprivation data from the Office of the Deputy Prime Minister (ODPM); and
 - local authority information, such as location of regeneration areas, Sure Start areas, cycling routes and leisure facilities.
- Local public transport services and network information.
- Ofsted reports of local schools and nurseries that include pupil numbers and other indicators, such as eligibility for free school meals.
- Local maps identifying routes that children and parents may travel, such as residential areas to school, shopping and leisure facilities, and other amenities.
- Consultation with the local authority road safety team from each area.
- Visits from the researchers to identify other places of interest, assess the road environment and locate safe observation points.

The six sites within each of the five study areas contained at least one of the following road-crossing opportunities (where feasible):

- uncontrolled road crossing;
- zebra crossing;
- light-controlled crossing – pelican/puffin/toucan;
- uncontrolled junction – T/Y/staggered and crossroad junctions;
- light-controlled junction – T/Y/staggered and crossroad junctions; and
- other – for example, pedestrian refuge, level crossing and roundabout.

A selection of different road types (A, B and unclassified roads, single and multiple lanes, one- and two-way traffic), and levels of traffic densities were also considered where possible.

From the collated information six sites were chosen in each of the five areas, giving a total of 30 observation sites. These were revisited to ensure suitability. Details of all sites are provided in Appendix 2, although exact locations have been made anonymous.

2.3.2 *Development of the observation recording schedules*

In order to capture the complexity of parent–child interaction and any relationship with contextual factors, it was felt that a qualitative approach to observation was most appropriate. However, identifying and recording relevant variables objectively and accurately is challenging. Denscombe (1998) notes that observers can be selective in relation to both recall and perception. The use of checklists or a recording schedule can minimise these difficulties. A balance therefore had to be struck between remaining open to the range of possible roadside interactions, including unanticipated events, and, at the same time, having a structured observation schedule to assist in identifying and recording all relevant variables.

The development of the recording schedule was guided by reference to the objectives of this phase of the study, the findings of the systematic literature review (Cattan *et al.*, 2008), preliminary unstructured roadside observations and videos of road safety interventions. Further considerations included openness to unanticipated events and ease of use in the field. While it was anticipated that most observations would be of pedestrian behaviour, it was essential that the schedule could accommodate the different types of road user. Cycling, car and bus use were therefore also included. Although observation is limited in its capacity to discriminate finely between demographic details, broader demographic information was recorded such as gender, ethnicity and broad age-bands for children. Three recording schedules were developed as outlined below (and shown in Appendix 3, 4 and 5).

2.3.2.1 **Child–parent pedestrian schedule**

The pedestrian recording schedule identified a number of variables. However, it is important to note that these were not viewed in isolation, but rather as a means of recording key aspects of often complex behaviour, and that they were supplemented by more extensive field notes. The main variables included:

- the relative positions of parent and child (including use of pushchairs, whether parents had a free hand, use of scooters, roller skates, etc., by children);
- pace of walking and factors affecting mobility;
- level of concentration of both parents and children on traffic and the road environment (including any distractions);
- road-crossing behaviour assessed against the Kerbcraft model (Thomson, 2002);

- reactions to specific hazards within the area including any unexpected hazards;
- parents' behaviour as role models;
- the amount of attention parents and children were giving each other (their levels of engagement);
- levels and type of physical and verbal control used by the parent; and
- communication and parents' attempts to educate children about road safety (from verbal prompts to guided roadside learning).

2.3.2.2 Car and bus use schedule

The basic pedestrian recording schedule was adapted to also record getting into or out of cars and onto or off buses.

2.3.2.3 Cycling schedule

Again this was based on the pedestrian schedule. As well as children actually riding bikes accompanied by parents, this included provision for parents transporting children on a bike using either specially adapted child seats (where the child sits in a seat attached to the bike), a trailer (a covered seat on wheels pulled from the back of the adult bike), a 'trailer bike' (which consists of half a bicycle (back wheel only) that is attached to the back of the parent's bike allowing the child to be towed), and a tow bar (which connects the adult bike to the child's normal bicycle – both wheels in situ) (Why Cycle, 2005). Cycling behaviour was assessed against the guidance provided in three key resources:

- *Arrive Alive – Cycling – Keeping Safe* webpage (Department for Transport, 2005b);
- *THINK! Advice – Cyclists* webpage (Department for Transport, 2003); and
- Royal Society for the Prevention of Accidents (RoSPA) *Road Safety Information – Carrying Children on Bicycles* (RoSPA, 2005).

2.3.2.4 Reliability

The observation schedule was piloted at five different sites in the Leeds suburban area. Two researchers observed the same child–parent interactions at the first three sites and then compared notes to check inter-rater reliability. By the third site few variations were seen between the observations of the two recorders. On sites four and five the researchers carried out independent observations, but, as both researchers often witnessed all the activity, it was still possible to check the observation schedule for accuracy and interpretation. All the observation schedules were then reviewed at the close of each session. During formal data collection the observers checked inter-rater reliability on the first observation at each session.

2.3.2.5 Researcher familiarisation with the observation schedule

Before any data collection took place all researchers who were involved in doing the observation underwent a period of training using the schedule. A video of four ‘child–parent’ interactions was made in-house to allow the researchers to deconstruct the complexities of child–parent road-crossing behaviour and practice using the schedule in a controlled environment.

2.3.3 *Conduct of the observation*

2.3.3.1 Timing

Peak travel times on weekdays are between 8am and 9am and 3pm and 4pm which coincide with children’s travel to and from school. (Department for Transport, 2005a). Child casualty rates also peak in the same time period (Department for Transport, 2005c). The evening peak for car drivers is between 5pm and 6pm.

Clearly these peak travel times were optimal for observing children with their parents on major routes to and from school. Informal observation of school routes showed that, during these times, accompanied children were predominantly primary school age and there was under-representation of pre-school and older children.

With the exception of taking children to nurseries or playgroups, travel with pre-school children is more likely to be dispersed throughout the day. To ensure this age group were included in the data collection, it was important to identify some observation sites that were near local services that parents may use in the day time (such as post offices, banks, food shops as well as located near to child day-care). For the older groups, many of whom travel to school independently (Department for Transport, 2005c), weekends and holiday time in leisure and shopping areas were felt to provide the best opportunity for observing older children travelling with their parents. At weekends, travel is highest around midday, but is more evenly spread throughout the day (Department for Transport, 2005c). The observation fieldwork was adapted to take this into account.

The time of year was also considered. Most of the observations were carried out during the summer term and the summer holidays, however the beginning of the school year was also included by the observations conducted in September. Further observations were also carried out in November to include different light conditions. Observations were also carried out in a range of weather conditions.

2.3.3.2 The sample

The sample was effectively all children who were accompanied by at least one adult passing through the designated site during the period of observation. It is acknowledged that not all accompanying adults will be parents and may include, for example, other relatives, carers and childminders. However, for the purposes of the

observation such adults were included as they were acting in *loco parentis*. During busy periods when it was not possible to observe everyone, some selection was inevitable. Once an individual observation had been completed, the next accompanied child to enter the observation site was selected.

2.3.3.3 Ethical considerations and safety

It was important that the observation took place under naturalistic conditions and that the process of data collection did not change behaviour. This clearly raises ethical issues in relation to privacy and informed consent. Oliver (2003) argues that obtaining informed consent can compromise the ecological validity of studies. He also suggests that the key consideration is whether it is possible to identify participants from the data collected. Data collection did not involve any photography but relied on taking detailed field notes guided by the observation schedule. In order to protect the identity of individuals being observed, no specific identifying features were recorded and the specific location of observation sites is not disclosed. Furthermore, the behaviours observed took place in a public, rather than a private, setting. Homan (1991) refers to the possibility of waiving the obligation to obtain informed consent in these circumstances because there is no claim to privacy in public places or when the observed unit is a group.

The observation was overt in the sense that the researchers made no attempt to conceal themselves. In contrast they wore high visibility vests labelled with the name of Leeds Metropolitan University, consistent with their role of surveying road use behaviour generally. The researchers also carried photo identification. Although members of the public were not made aware of the purpose of the research to avoid influencing their behaviour (the so-called Hawthorne effect), the researchers had an information leaflet including contact details which could be given out to anyone who questioned what they were doing. Each observation point was carefully selected to respect privacy and to check the researchers were not on any private land, or directly outside homes, schools, nurseries, etc. Consideration was also given to safety, ensuring that the researchers were in a safe position and clearly visible, yet not causing an obstruction on the pavements or a distraction to the local traffic. The local authority road safety units and the police were informed in advance of the research activity and exact dates, times, and locations of data collection. Where the research was carried out in close vicinity of a school, each school was also contacted by letter. Ethical approval for this phase of the research was obtained from the Faculty of Health Ethics Committee at Leeds Metropolitan University.

2.3.3.4 Process

In advance of the observational fieldwork, each site was mapped out, recording the overall environment and road layout including any particular hazards. The maps were designed to track each individual's route through the observation site. For each

observation period, contextual factors such as weather, light and road surface conditions and any temporary hazards were also recorded.

The precise location for the observers was selected to give good visibility and they remained in this location throughout the observation period. Subjects were observed when they came into the researchers' view until they moved out of it.

Data collection started in June 2005, and continued until November 2005. A summary is provided in Table 2.1 and full details in Appendix 6.

Table 2.1: Summary of observation fieldwork		
Area	Date	Number of observations
Leeds suburban	June/July 2005	88
	August 2005	25
	November 2005	6
Leeds inner-city	July 2005	74
	August 2005	16
	November 2005	14
North Yorkshire rural	July 2005	36
	August 2005	25
Warwick urban	August 2005	16
	September 2005	36
London inner-city	November 2005	74
Total		410

2.3.4 Analysis

The analysis initially involved collating the observation schedules and field notes, and familiarisation with the data. A qualitative approach was used derived from framework analysis, frequently used for the analysis of transcripts. This method has been developed to incorporate the key characteristics of qualitative analysis and allows systematic, comprehensive, grounded or generative analysis, as well as allowing the researcher to analyse within and between cases (Ritchie and Spencer, 2002; Pope *et al.*, 2000). The framework approach involves five stages: familiarisation, identifying the thematic framework, indexing, charting and interpreting the findings (Ritchie and Spencer, 2002; Pope *et al.*, 2000). A framework for the analysis was provided by the overall focus of the observation together with key themes emerging from the observation. This included patterns of supervision and control, modelling and efforts to educate. Key elements of the observation were coded and organised into themes and patterns, this was done independently by two researchers. The emerging themes and patterns were

constantly cross-checked against the original data and codes. The findings were then further analysed with regard to the gender and ethnicity of the children and parents, the socio-economic profile of the area and specific environmental factors within the observation area.

2.4 Children’s and young people’s perspective

A central concern of this research study was to explore young people’s views about how parents keep them safe and enable them to develop as safe independent road users. It was felt that qualitative methods were most suitable for exploring this issue in depth. Morrow and Richards (1996) raise the issue of unequal power relations between children and adults potentially affecting the research process, but, as Thomas and O’Kane (1998) note, participatory research techniques can be used to break down such power imbalances. The emphasis throughout this phase was on working with and learning from young people about their experiences and the best ways of teaching them about road safety.

It was important that the methods used were suitable for the age and stage of development of the children and enabled them to express their views freely. Further, as Morrow and Richards caution (1996; p. 101), ‘over-reliance on one type of data collection method in any research methods can lead to bias’. Within each age-band two different methods were used to explore the experiences, attitudes and perceptions of children and young people with regard to their parents’ role in road safety education, as shown in Table 2.2. The methods are discussed more fully below.

Age band	Method 1	Method 2
Key Stage 1 (5–7 years)	Draw and write	Drama workshop
Key Stage 2 (7–11 years)	Draw and write	Drama workshop
Key Stage 3 (11–14 years)	Focus group discussion	Drama workshop
Key Stage 4 (14–16 years)	Focus group discussion	Drama workshop

2.4.1 Recruiting the sample

The sample was obtained initially by approaching schools within the five study areas. Drawing on Ofsted reports and demographic information, they were selected to include a range of levels of deprivation, population density and ethnic mix as well as geographic spread. The initial response was poor, particularly from secondary schools, and the area of search was widened. In total, 129 primary and secondary schools were approached, of which eight secondary and ten primary schools agreed to participate. The structure of the sample for each of the methods used is summarised in Table 2.3. It should be noted that different schools and groups of

pupils were used for the two different components of this phase of the study. An additional five workshop sessions were conducted with the Youth on Health consultation group of young people in Leeds. This enabled a sharper focus on year 5/6 pupils and the issues they face prior to transition to secondary school.

Table 2.3: Participants in the qualitative work with young people			
Research method	Area	Age range	Number of participants
Draw and write	Midlands urban	KS1 (5–7 years)	20
		KS2 (7–11 years)	18
	West Yorkshire inner-city and suburban	KS1 (5–7 years)	46
		KS2 (7–11 years)	56
	North Yorkshire rural	KS2 (7–11 years)	55
London inner-city	KS1 (5–7 years) KS2 (7–11 years)	30 27	
		Total	262
Focus group discussion	Midlands urban	KS3/4 (11–16 years)	18
	West Yorkshire suburban	KS3 (11–14 years)	22
		KS4 (14–16 years)	42
	Yorkshire rural	KS3 (11–14 years)	43
	South East urban/rural	KS3 (11–14 years) KS4 (14–16 years)	11 10
		Total	146
Drama workshops	Midlands urban	KS1 (5–7 years)	25
		KS2 (7–11 years)	14
		KS3 (11–14 years)	25
		KS4 (14–16 years)	23
	West Yorkshire inner-city and suburban	KS1 (5–7 years)	73
		KS2 (7–11 years)	74
		KS3 (11–14 years)	62
		KS4 (14–16 years)	39
Yorkshire rural	KS1 (5–7 years)	25	
	KS2 (7–11 years)	11	
	KS3 (11–14 years)	28	
London inner-city	KS1 (5–7 years) KS2 (7–11 years)	28 27	
Participatory workshops	West Yorkshire Inner-city/suburban	KS2 (7–11 years)	53
		Total	507

2.4.2 *Ethical considerations*

Working with children and young people requires particular sensitivity to power imbalances and ethical issues in relation to access, informed consent, confidentiality and any negative effects of participating in the research (Mahon *et al.*, 1996; Thomas and O’Kane, 1998; Greig and Taylor, 1999).

Access was sought via the head teacher or a nominated ‘gatekeeper’ at each participating school, and negotiation took place in order to identify a class or group of potential participants. Parents of all potential participants were informed about the study via a research information leaflet. The schools and parents were assured that all the research team members had enhanced Criminal Record Bureau clearance and that all phases of the research had Leeds Metropolitan University Faculty of Health Ethics Committee approval. The research activities undertaken with the children took the form of normal participatory classroom activity, but nonetheless parents were given the opportunity to withdraw their children from the research activity. A tear-off leaflet and return envelope was supplied for this purpose. A small number of parents did withdraw their children and the children were given other activities by the class teacher while the research was taking place.

The researchers explained clearly to all the children and young people taking part the purpose of the research and what would be required of them. Their right not to take part or withdraw at any time was made clear and they were given the opportunity to ask any questions. All the participants were assured of anonymity and confidentiality, and this was clearly explained within the context and confines of group working, with (in some instances) a member of the teaching staff being present. Agreement to participate was not assumed, but positive verbal assent was sought from the children and young people before the sessions commenced.

The focus of this phase of the research was on young people’s experience. While the methods used were familiar to the young people, it was acknowledged that the topic of road safety could potentially be distressing for individuals who had experience of road injury either personally or among family/friends. By informing the school staff, the parents and all potential participants, there was opportunity for such issues to come to light and for the individuals involved to opt out. Furthermore, the emphasis of the research was on looking at how children and young people learn to be safe road users rather than on injury.

2.4.3 *Follow-up*

At the end of each session all the participants were given a sticker postcard with the link to the Department for Transport website so they could follow up if more information on safe road use was wanted. All the schools already had contact with their local road safety units if further input was required. Letters and thank you cards were sent to all the classes that participated, as well as to school staff who

arranged the sessions. The school was also given a certificate recognising the important contribution that the school and participants had made to the research process.

2.4.4 *Draw and write*

The draw and write technique has been used extensively to explore the perceptions of younger children for whom more traditional research methods may not be appropriate (Williams *et al.*, 1989a, 1989b; Pridmore, 1996). Although not without its critics (Backett-Milburn and McKie, 1999), it can be a useful device for enabling children to express their perceptions. Not all children find drawing easy, but it is a medium with which they are familiar and the use of drawing has two advantages. Firstly, it enables children who do not have highly developed language skills to express themselves. Secondly, it opens up a whole range of possible responses in which there are no right or wrong answers. Children are therefore freed from potential pressure to give the right answer. Nonetheless, Nic Gabhainn and Kelleher (2002) expressed some concern that young children, in particular, may tailor their drawings and written responses to meet what they perceive to be the expectations of their teacher or, in some cases, the researcher. The phrasing of the instructions given to children about the exercise are of fundamental importance in this regard. Any instructions need to make clear the broad issue that children should focus on and, at the same time, be non-directive, allowing them to express their own views.

The objectives for this component of the research were:

- to gain insight into the perceptions of Key Stage 1 and Key Stage 2 pupils (children aged 5–11 years) about how their parents keep them safe on the road; and
- to identify how parents educate children of this age about road safety.

2.4.4.1 **Conduct of the draw and write exercise**

The session was run by a minimum of three researchers. It began with introductions of the staff and the project, and gave detailed information about the session before asking for the pupil's verbal assent to participate. There followed a few orientation questions asking about their perceptions of risk on the road. They were then asked to think about and then draw '**what your mum or dad or the grown-up you live with does to keep you safe when you are out on the roads**'.

This open phrasing allowed children to include control, supervision or education as they saw fit. Emphasis was placed on the fact that we were interested in their views and that there were no right or wrong answers. Once they had finished their drawing they were asked to write a few words explaining what they had drawn. Those who could not yet write whispered to a researcher who wrote it down for them. If children had special needs they were given support by classroom assistants who

were specifically asked just to give sufficient help to enable them to express their own views and not to influence them in any way.

In order to explore instruction and education more fully, children were then asked to draw a second picture showing ‘**what your mum and dad or the grown up you live with TELL you to do to keep safe on the roads**’. Again, they were asked to write or tell the researchers about their picture and the words parents use.

The session was rounded up with some ‘hands up’ questions about how the children travelled to school. Children were asked whether they used seat belts when travelling in cars and also about bicycle use. They were also given the opportunity to ask the researchers questions.

With the children’s permission all the pictures were collected in with each child’s gender and age marked on for the purpose of analysis.

2.4.5 Focus group discussions

Focus groups were used for exploring the views of secondary age school children. The objectives for this component of the research were to:

- gain insight into how Key Stage 3 and 4 pupils (11–16 years) perceive risk to themselves as road users;
- explore the strategies used by Key Stage 3 and 4 pupils to manage risk as road users;
- identify Key Stage 3 and 4 pupils’ perceptions about how their parents attempt to influence their behaviour in relation to road safety; and
- explore the views of Key Stage 3 and 4 pupils about the effectiveness of what parents do to enable them to develop as safe independent road users.

The use of focus group discussions was felt to be appropriate for a number of reasons. It is widely accepted that the group dynamic can stimulate discussion and encourage participants to consider their own views, allowing issues to be explored in depth. Interviewing several participants together also allows areas of consensus to be identified as well as more conflicting views and individual standpoints (Robson, 2002). The group situation also makes it more likely for participants to be more open (Kitzinger, 1996). Focus groups can also encourage the inclusion of those who would normally shy away from a one-on-one interview (Robson, 2002) and may therefore encourage wider representation. Focus groups are also recognised to be an efficient method for collecting qualitative data since it is possible to interview several people simultaneously (Robson, 2002).

In particular, it was felt that young people would be more likely to feel confident in a group situation and that this would help to overcome any power imbalance

between the researchers and participants. However, although it was anticipated that the group dynamic might encourage inclusion of those who would normally shy away from a one-to-one interview (Robson, 2002), it became clear at the pilot stage that group size had an important effect. To cause minimal disruption within the school, the researchers usually worked with whole classes which were frequently large in size. In such big groups not all pupils felt able to contribute their views. Large groups were therefore split into smaller groups, each facilitated by a researcher, and, where relevant, the subgroup's views were recorded on a flipchart for feeding back to the whole group.

The focus groups interview schedule was developed to meet the research objectives and piloted with young people in Leeds. A copy of the interview schedule is available in Appendix 7.

2.4.5.1 Conduct of the focus group discussions

Wherever possible chairs were arranged in a circle to facilitate interaction. The session began with the researchers introducing themselves and the project. They also asked for the young people's verbal assent to participate. The focus groups were digitally audio-recorded when the school and participants gave permission, alternatively detailed notes were taken. Where flipcharts had been used to record comments, these were collected with the young people's permission. Focus groups usually lasted between 45 minutes and one hour.

2.4.6 Drama workshops

Building on the emerging findings from the methods outlined above, young people's views about the effectiveness of strategies used by parents to enable children to learn to be safer road users were explored more fully. The challenge was to use methods which allowed young people to convey the complexity of the interactions between themselves and parents. Drama has a well-recognised place among health education methods, used with young people primarily as a device for exploring and clarifying beliefs and attitudes and expressing experiences. Although less frequently used for research purposes, techniques such as role play have been used to explore interactions among young people in relation to tobacco use (see, for example, Michel and West, 1996) and have been advocated by Mehl *et al.* (2002) as a means of allowing them 'to project their experiences, perceptions and beliefs onto fictional characters'. It was felt that drama would be a suitable medium for exploring young people's perceptions about what parents do in relation to road safety education, what works and what does not work. Further, by taking on the role of a parent, they were able to empathise with their position and suggest ways in which parents might improve their approach with regard to road safety education.

The specific research objectives for this component of the research were to:

- gain further insight in to the ways their parents enable young people to be safe on the road;
- identify strategies and approaches that are perceived to be effective;
- identify strategies and approaches that are perceived not to be effective; and
- comment on any variations between different age and gender groups.

The research team worked closely with professional drama practitioners to establish a framework for the drama workshops which addressed the research objectives. In order to ensure age appropriateness, the structure of the workshops was adapted within the framework for Key Stage 1, Key Stage 2, and Key Stage 3 and 4. A scenario was developed for Key Stage 1 and 2 children, soliciting their advice for a harassed mum who was struggling to enable her children to be safe on the roads. For secondary school aged children the scenarios used emerged from an initial exercise getting them to think about their memories of significant events in relation to their own education about road safety. It was anticipated that some groups would have more experience of using drama techniques than others and some flexibility was, therefore, built into the structure to accommodate this.

2.4.6.1 Conduct of the workshops

Again, the workshop began with introductions and obtaining informed assent to participate. Each workshop was facilitated by two drama practitioners and incorporated a range of introductory activities such as discussion, pair work and circle of memories (where participants sit in a circle and are asked to think back to various points in their life and share their memories), and sh leading to more advanced techniques, selected to suit the drama experience of participants, such as the following:

- Role play – where participants are asked to perform in a scene as a character in real time and to focus on problem solving. Each participant is facilitated into role through briefing, hot seating and discussion.
- Paired improvisation – participants work in pairs and improvise a particular scene or event. The roles are played through and can be swapped to consider the other role’s point of view.
- Freeze frame – a technique where participants develop a still image, like a photograph or video frame.
- Thought tracking – participants in a scene are asked to share their character’s feelings or thoughts at a particular moment in time.
- Flashback and flash-forward – a technique where participants are asked to develop a piece of drama minutes, hours or days before or after a dramatic

moment or event has, or is about to, occur. These moments can be examined by using stop/start frames.

- Conscience alley – the group form two lines facing each other (forming an alley), one participant walks down the alley (in character) with the two lines of participants voicing the characters' thoughts both for and against a particular decision or action.
- Conglomerates – a number of participants get together to represent the voices, thoughts and actions of one person. Here the form enables all sides of a situation to be explored.
- Meetings – lived through in real time in role.
- Physical theatre – storytelling through physical acting and performance.
- Hot seating – a character in a scene is questioned by the audience about his or her background, thoughts or feelings at that moment in time.
- Audience directs/forum theatre – forum theatre allows an event to be seen from different points of view. A small group acts out a scene while the audience acts as directors, asking performers to act in different ways. The action can be stopped at moments of choice so that alternative ways forward can be played through and explored.

The initial focus of the workshop was on what parents **do**. This was then developed in relation to effectiveness and what could be improved. A team of at least three researchers observed the sessions and were able to probe as required in order to explore emerging issues more fully. The data were recorded through detailed note taking of observations as well as what the participants said. Audio or video recording was not feasible because of the number of different groups working simultaneously alongside each other.

2.4.7 *Analysis*

The data collected on young people's perceptions were analysed qualitatively, drawing on framework analysis methodology already described. Verbatim transcripts of the focus groups interviews were coded and the issues emerging organised into themes. The drawings and written comments from the draw and write exercise and the notes taken during the drama workshops were coded in the same way as for an interview transcript and the same form of analysis was used.

2.5 **Parents' perspective**

Following the observation it was important to explore more fully the reasons and motivations underpinning parents' behaviour when accompanying children and their approach to teaching their children to use roads safely. Carrying out focus group

discussions with parents was felt to be appropriate for the same reasons as those outlined for the young people’s focus groups.

2.5.1 *Focus group discussions: first round*

The aim of the first round of focus group discussions with parents was to explore the various ways in which they influence their children’s road use, including both control and attempts to teach their children. The objectives were to:

- identify explicit strategies that parents consciously use to influence child road safety behaviour;
- encourage parents to reflect on their own road use behaviour and attitudes, and how this relates to how they expect their children to behave;
- uncover attitudes and behaviours that parents have regarding road use that they may not immediately be aware of;
- explore parents’ perceptions of risk for their children when using roads;
- ascertain what affects parental decisions and judgements about accompanying and controlling their children;
- identify how parents prepare their children to be independent road users;
- explore how parents perceive the effect of different environmental factors on how they control and educate their children and the role model they present;
- identify what perceptions parents have about their role in relation to other providers of road safety education;
- ascertain if there is variation in the types of behaviour reported with different broad age-bands, gender and ethnic groups; and
- explore how confident parents feel about enabling their children to be safe road users and their effectiveness.

2.5.1.1 Development of the focus group interview schedule

The questions were based on the research aims and objectives as well as issues that arose from the observation. Reference to the observational phase grounded the discussion topics in the reality of parents’ roadside behaviour. Visual materials developed from the observational sites were used to stimulate discussion about risk. Discussion addressed the following areas:

- views about the risks to their children;
- the level of control and supervision they exercise, how they make judgements about this and the effect of environmental factors;
- how parents consciously try to teach their children about road safety;

- the type of role models they present and the effect this has on their children's road use behaviour;
- views about what is most effective in teaching about road safety;
- parents' confidence about enabling their children to use roads safely; and
- how parents see their role vis-à-vis other providers of road safety education.

Although the framework for the discussion was relevant to parents with children of all ages 0–16, the specific issues emerging were likely to change between different age groups. Focus groups were therefore organised around broad age-bands.

The focus group interview schedule was piloted with a group of Leeds' parents and modified in response to the feedback obtained. The final interview schedule is included in Appendix 8.

2.5.1.2 Recruitment of the sample

The focus group discussions study took place in the areas previously chosen for the observation phase of this study: London inner-city, West Yorkshire inner-city and suburban, Midlands town urban and North Yorkshire rural.

The sample was obtained by approaching Sure Start programmes, and primary and secondary schools, to achieve representation of parents of the following age groups:

- pre-school – 0–4 years;
- primary Key Stage 1 – 5–7 years;
- primary Key Stage 2 – 7–11 years;
- secondary Key Stage 3 – 11–14 years; and
- secondary Key Stage 4 – 14–16 years.

Again, attention was paid to achieving diversity in levels of deprivation, ethnicity, rural/urban location and different traffic environments.

The initial approach was by letter to the head teacher or manager of the Sure Start programme. Those establishments that expressed an interest in taking part were then visited by a member of the research team to discuss participation. On agreement to take part, each establishment distributed leaflets to parents inviting them to participate in a focus group discussion, and providing information about the research to ensure they were fully informed about the study and what taking part would entail. Those parents willing to take part sent written consent to the research team, either directly or via the establishment.

Although the initial intention was that all parents would be recruited in this way, a major challenge for the project was getting schools involved. This was particularly the case for secondary schools. A market research company, Surrey Social Marketing Research (SSMR) Ltd., was therefore used to recruit additional groups. Details of the focus groups are set out in Table 2.4.

Table 2.4: Participants in parent focus groups round 1			
Area	Target age range of children	Number of parents	Age range of other children of parents present
Midlands	Pre-school	4	Pre-school, KS1, KS2, KS3, KS4
Midlands	Pre-school	8	Pre-school, KS1, KS2, KS3, KS4
West Yorkshire	Pre-school	8	Pre-school, KS1, KS2, KS3, KS4
North Yorkshire	Pre-school	10	Pre-school, KS1, KS2, KS3, KS4
West Yorkshire	Primary	1	KS1, KS2, KS3
West Yorkshire	Primary	14	Pre-school, KS1, KS2, KS3, KS4
West Yorkshire	Primary	1	KS2, KS3
West Yorkshire	Primary	17	Pre-school, KS1, KS2, KS3, KS4
North Yorkshire	Primary	25	Pre-school, KS1, KS2, KS3
London	Primary	15	Pre-school, KS1, KS2, KS3, KS4
Midlands	Secondary	9*	Pre-school, KS1, KS2, KS3, KS4
West Yorkshire	Secondary	9*	KS2, KS3, KS4
North Yorkshire	Secondary	10*	KS2, KS3, KS4
London	Secondary	9*	Pre-school, KS1, KS2, KS3, KS4
Total		140	

* Recruited using market research company.

2.5.2 *Focus group discussions: second round*

A second round of focus groups was held with parents. The purpose of this was to focus in more depth on effectiveness and to juxtapose parents' and children's views about what is most effective. The specific objectives in relation to road safety education were to:

- compare parents' and children/young people's views about effectiveness;
- determine the extent to which the approach parents already use and the way they behave is effective in enabling their children to learn to use roads safely;
- identify ways parents could improve their approach;
- ascertain parents' levels of confidence and skill in relation to providing road safety education;
- identify any support required by parents to assist them in providing road safety education; and
- explore parents' perception about their role in relation to other providers of road safety education.

2.5.2.1 Development of the focus groups interview schedule

The development of the focus group interview schedule drew on the findings of the earlier round of parent focus groups and also the research exploring young people’s perspectives – the draw and write and focus groups, and also the drama workshops. The issues addressed included:

- methods parents currently use to teach about road safety and any differences between men and women;
- views about effectiveness both generally and in relation to teaching boys and girls;
- parents’ reaction to the findings of the research with children;
- parents’ levels of confidence and motivation in relation to teaching their children about road safety;
- particular challenges in relation to keeping children safe and enabling them to develop as independent road users;
- how parents can be more effective in teaching road safety and any support required; and
- who has responsibility for keeping children safe and the role of parents in relation to other providers of road safety education.

The interview schedule was piloted with groups of parents in Leeds. No changes were required as a result of this pilot. The full interview schedule is provided in Appendix 9.

2.5.2.2 Recruitment of the sample

Groups of parents were recruited in the same five study areas using the same method as outlined above for the first round of parent focus groups. Again the initial intention was to approach parents through schools. However, because of the reluctance of schools to be involved, especially secondary schools, a market research company was used to recruit groups of parents representing a broad ethnic and socio-economic mix. A summary of the numbers participating is provided in Table 2.5.

Table 2.5: Participants in parent focus groups round 2			
Area	Target age range of children	Number of parents	Age range of other children of parents present
West Yorkshire	Primary	4	Pre-school, KS1, KS2, KS3
West Yorkshire	Primary	10*	Pre-school, KS1, KS2, KS3, KS4
London	Primary	15	Pre-school, KS1, KS2, KS3, KS4
Midlands	Secondary	9*	Pre-school, KS1, KS2, KS3, KS4
West Yorkshire	Secondary	10*	Pre-school, KS1, KS2, KS3
North Yorkshire	Secondary	10*	KS2, KS3, KS4
London	Secondary	10*	KS1, KS2, KS3, KS4
Total		68	

* Recruited using market research company.

2.5.2.3 Conduct of the focus group discussions

A minimum of two researchers were present at each focus group discussion. One researcher led the discussion using a series of open-ended questions (see Appendices 8 and 9). The emphasis of the discussion was on the designated age band for each focus group and this was made clear to parents. However, parents of older children were also able to comment retrospectively on their experience when their children were younger. Furthermore, parents who had more than one child frequently had children within other age bands and at times referred to them. This age range of the children of parents who participated in the focus group discussion is also provided in Table 2.5.

The role of the facilitator was to ensure that all participants could express their views, especially when there were differences of opinion, and to avoid dominance by some group members which may lead to a false consensus (Robson, 2002).

Where possible the focus groups were digitally audio-recorded with the participant's permission, alternatively detailed notes were taken. After the session the researchers also made reflective notes on the process and the key issues to emerge.

Crèche facilities were available as required and refreshments were provided during the session. Parents were reimbursed for any travel expenses and, as a token of appreciation, were given a gift voucher and a pack of road safety materials.

2.5.2.4 Ethical considerations

In order to obtain informed consent, potential participants were provided in advance with full details about the study, the focus group which they were invited to participate in and contact details of the research team. This was briefly reiterated at the beginning of each focus group and participants were reminded of their right to withdraw, without giving a reason, at any time. Participants were also assured anonymity and confidentiality, and were asked to respect confidentiality within the group.

2.5.2.5 Analysis

The analysis again used a framework approach to identify themes emerging from the data (Ritchie and Spencer, 2002).

2.5.3 Survey

Surveys provide a relatively simple and straightforward way of collecting large amounts of data from a population in a relatively short period of time (Robson, 2002). The primary focus of this survey was to test the generalisability of the emergent issues which had been uncovered from the qualitative phases of the study. Specifically, the survey aimed to uncover:

- the age at which parents explicitly teach their children about road safety;
- the strategies parents actually use for road safety with their children;
- views about the effectiveness of different teaching strategies;
- the challenges parents face in relation to road safety education; and
- any differences based on gender, ethnicity or rural/urban location.

2.5.3.1 Development of the questionnaire

The questionnaire development was guided by the broad aims of the research, but drew more specifically on the themes emerging from the qualitative phases of the study. It was designed principally as a fully structured interview schedule for use face-to-face and filled in by the researcher. A copy of the survey questionnaire is provided in Appendix 10. However, it was also acknowledged that some respondents may wish to complete the questionnaire by themselves. The design of the questionnaire ensured that it was sufficiently clear for self-completion. The phrasing of the questions was carefully considered to avoid any ambiguity and potential misinterpretation.

A major factor in obtaining cooperation to respond to questionnaires is the time it takes to complete (Punch, 2003). It was, therefore, imperative that questions were kept to a minimum but still generated the data needed. The questions addressed the key issues identified by parents and young people.

Reliability and validity

Before formal data collection could begin, the questionnaire was critically scrutinised by key referents to check on face validity. The questionnaire was then formally piloted both face-to-face and self-completed to ensure that the questions and statements were clear and that respondents interpreted the questions as intended. Some amendments were made following the initial pilot and a further pilot was conducted. The amount of time taken to complete the questionnaire and level of difficulty was also assessed. The pilot phase also provided opportunity to pre-test methods used to approach potential respondents.

A number of interviewers were used to conduct the survey and in-house training was provided to ensure consistency. The main aims of the training were to:

- ensure that all researchers were aware of guidelines and principles for conducting the survey;
- ensure familiarisation with the research instrument and the appropriate methods for approaching potential respondents; and
- discuss other logistical issues, such as safety, identification, clothing, etc.

2.5.3.2 Sampling

In order to ensure geographical spread, data collection took place in various locations throughout the country – the North, Midlands, South East and South West. A non-probability convenience sample was used. While such samples can be criticised in terms of representativeness, every effort was made to ensure that a range of different groups of parents was included. The characteristics of the sample are set out in full in Tables 3.8–3.10. Public sites such as shopping centres, railway and bus stations were chosen in order to provide access to large numbers of parents. In some locations, where there were small groups of parents (for example, on trains and in Sure Start centres), some elected to complete the questionnaires themselves. Interviewers were available to answer any queries respondents may have and also to ensure that all sections were filled out.

A minimum sample size of 625 was roughly estimated based on a mid-range proportion and confidence interval of ± 0.04 , using the formula:

$$n = \frac{Z^2 \times p(1 - p)}{e^2}$$

Where:

n = required sample size;

Z = standard deviation score that represents the desired probability/confidence level
95% confidence level = 1.96;

p = an estimate of the proportion of people falling into this group;

e = desired level of precision/confidence interval.

2.5.3.3 Conduct of the survey

Permission to conduct the survey was obtained from ‘gatekeepers’ in the different public sites before any data collection took place. Precise locations and times for conducting the survey were also negotiated.

Prior to collecting data all interviewers were briefed, reiterating guidance about personal safety and consistency of approach. A ‘lead’ researcher was on site at all times to deal with practical issues and any potential problems. They also collected completed questionnaires from interviewers for coding.

Data collection started in November 2006 and was completed by the end of December 2006. Some of the questionnaires were conducted in the South East and South West by Surrey Social Market Research (SSMR) Ltd.

Ethical considerations

Interviewers ensured that those who agreed to complete the questionnaire were fully informed about the purpose of the study and were assured that the information

which they were giving would be kept confidential. All respondents completed the questionnaire on a voluntary basis.

In addition, the interviewers carried explanatory information leaflets about the survey which were offered to members of the public who expressed an interest. These leaflets provided information about the purpose of the study and details of a contact person at the university.

To ensure the safety of interviewers, mobile phones were carried at all times and interviewers also worked closely together or in pairs.

2.5.3.4 Analysis

All questionnaire responses were numerically coded using a pre-defined coding scheme. Codes were entered in the statistical computer package SPSS. The data were 'cleaned' and examined for any inconsistencies and double checked for accuracy. Descriptive analysis of the data was carried out and a number of inferential tests were used to examine the relationships between a range of variables.

2.6 Reflections on the research process

The recruitment of schools was more difficult than anticipated, particularly with regard to secondary schools. Curricular and other time pressures were cited as the most common reason for not wishing to participate. Other issues included schools already taking part in a research project and not wishing to take on another, and other schools adopting a 'no research' policy in response to the large number of requests received to participate in research. Some schools showed interest in the research, but could not see where the research activity could be placed within the curriculum or which member of staff could take it on, and thus were less enthusiastic to get their pupils involved. Overall there was little interest in the research topic of road safety, especially among secondary schools.

Of those schools who did participate, most of the primary schools incorporated the sessions into normal classroom activities and in only one case was a special session organised by a PSHE coordinator under their road safety remit. The secondary schools differed by placing the sessions into a variety of timetable slots. The drama workshops for the most part took place in scheduled drama sessions. The focus groups were most often held in tutorial group time or extra-curricular sessions, with an emphasis on the pupils participating as part of their citizenship role. Other schools used the sessions as an educational opportunity, for example demonstrating social research in action for sociology and psychology students and discussing career opportunities with year 10 students. The research team, where appropriate, tailored their sessions to fit in with the school's objectives, allowing time for students to ask questions after the workshops or focus groups.

The overall experience of all the participatory work with children and young people was that the participants enjoyed taking part. There was an element of ‘serious fun’ (Thomas and O’Kane, 1998; p. 344), where challenging activities were combined with enjoyable elements in a group format. The children and young people seemed to appreciate being asked their opinions and views, particularly with regard to what they think is effective and less effective for their age group.

An unexpected outcome was that being involved in the research increased participants’ awareness of the issues surrounding road safety and learning to be a safer road-user. Many of the young people, in particular, commented that when it came to issues around road safety they had ‘not really thought about it before’; some even commented that, as a result of taking part in the focus group or drama workshop, they were much more aware of their road use behaviour and how to behave more safely. Similarly some of the secondary schools commented that involvement in the research had raised their awareness of the relevance of road safety education for this age group. Parents also felt that taking part in the discussion had made them more aware of their approach and how this could be developed or improved upon. Many were surprised by how interesting talking about road safety was.

3 FINDINGS

In this section the findings from the analysis of the qualitative and quantitative phases of the study are presented in the following three main sections:

- **Observation of road safety interactions between parents and children.**
- **Children’s and young people’s perspective**, including:
 - draw and write with primary school aged children;
 - focus group discussions with young people of secondary school age; and
 - drama workshops with primary and secondary school aged children and young people.
- **Parents’ perspective**, including:
 - focus group discussions with parents – round 1 and round 2; and
 - survey.

3.1 Observation of road safety interactions between parents and children

The findings of the observation component of the study are initially presented in relation to the mode of transport used. As the pedestrian observations were by far the largest group (78.7%) these are discussed first, followed by scooters, cycling, car use and bus use. Within each section the main themes to emerge from the data are discussed: parental control, followed by parental modelling and other types of learning. Some of the wider influences on child–parent interaction, including a comparison of the issues that have surfaced from the observations in urban, suburban and rural sites and different road environments, are also considered.

Only children in the company of an adult were included in the observation. Accompanying adults were generally referred to as ‘parents’ (although, as noted earlier, this would include others acting in *loco parentis*). The terms ‘grandparent’ and ‘sibling’ were used when this seemed to be appropriate. It is recognised that observational research has limited capacity to assess age accurately. The children observed were therefore grouped into broad age categories based on estimations. However, for observations involving travel to school, some verification was possible. The following age categories were used:

- pre-school age (up to and including 4 years old);
- young primary school age (5–7 years old);
- older primary school age (7–11 years old);
- young secondary school age (11–14 years old); and
- older secondary school age or teenagers (14–16 years old).

For the purposes of the individual observations, each parent or group of parents plus one or more children was regarded as a unit. The total number of observed child–parent interactions recorded was 410. A breakdown of the location and mode of transport is provided in Tables 3.1 and 3.2.

Table 3.1: Summary of observations by site					
Area	London Inner-city (urban)	Leeds Inner-city (urban)	Leeds Outskirts (suburban)	Midlands Town (urban)	North Yorkshire (rural)
Site 1	12	11	30	9	9
Site 2	11	22	21	3	13
Site 3	11	34	19	4	1
Site 4	10	5	9	18	7
Site 5	22	16	15	6	6
Site 6	8	16	25	12	25
Totals	74	104	119	52	61
Overall total: 410					

Table 3.2: Summary of observations by mode of transport				
Pedestrian	Scooters	Cycling	Boarding or alighting buses	Getting in or leaving cars
323	5 Child using scooter – parent accompanying on foot or on bicycle	12 Child cycling – parent accompanying on foot or on bicycle	16	54

3.1.1 *Pedestrian activity*

The main theme to emerge from observing parents interacting with their children out on the roads was how they controlled their children’s road use behaviour, and the different methods they used. These methods of control were placed into three categories:

- physical control;
- non-physical control (verbal and non-verbal); and
- no obvious use of control (quasi no-control).

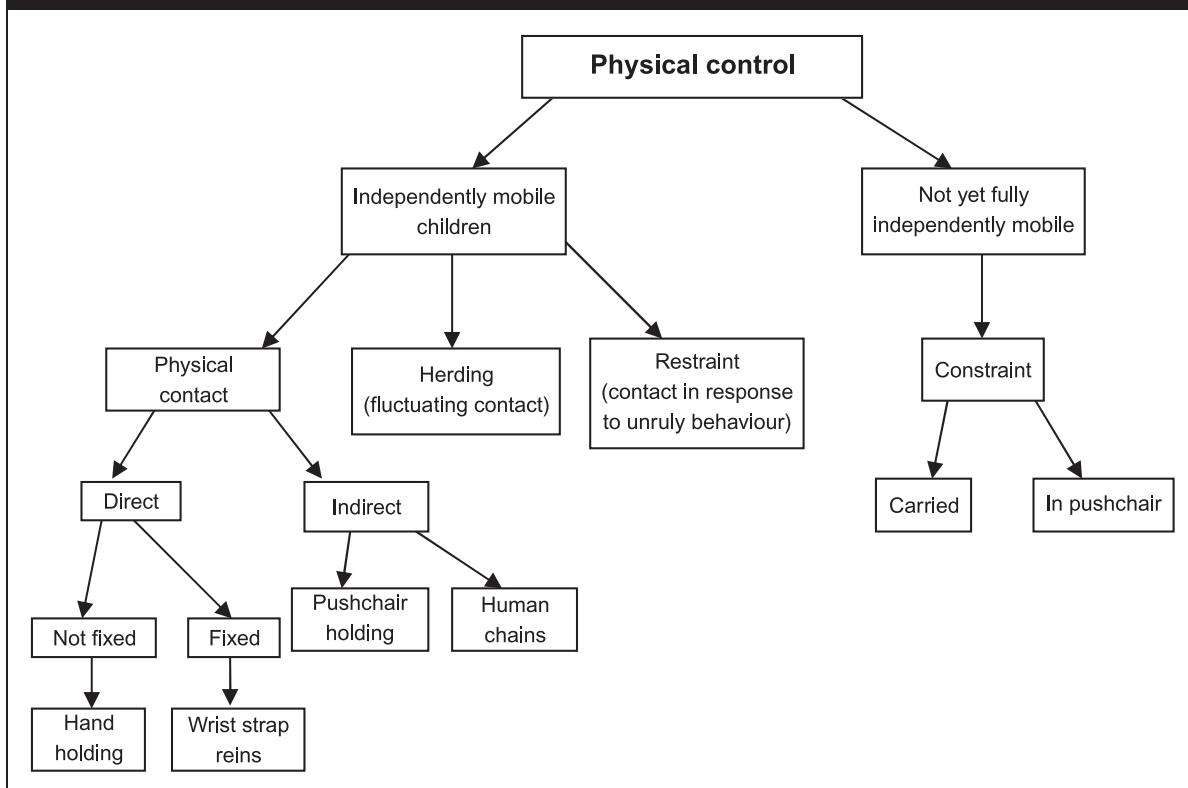
3.1.1.1 **Control**

Physical control

Physical control in this context refers to any contact between the parent and child that directly controls the child’s actions and behaviour when out on the roads. The ways in which parents physically control their children is primarily dependent on the

stage of development of children, their mobility and the degree of independence allowed. The types of control used are summarised in Figure 3.1.

Figure 3.1: Physical control



Children too young to walk or not permitted to walk were in pushchairs, carried in specially adapted equipment or in their parents arms – all of which provided some form of physical constraint. These children therefore played the most passive role in road use.

Physical control of mobile primary and pre-school children was predominantly in the form of direct physical contact, the most frequent form being handholding between child and parent, and less frequently a parental hand on shoulder, arm around shoulders, or a hold on clothing (particularly if children were carrying objects and did not have a free hand). The flexible nature of this type of control meant it was not fixed, allowing predominantly parents (but occasionally children) to initiate it easily, and increase or decrease the level of control exerted as required or desired.

Wrist straps (a length of flexible material that attaches to the wrist of the child and the parent), harnesses and reins were seen in use with pre-school aged children. This type of direct physical contact was categorised differently due to the more fixed nature of the contact. Although the child could not get away from the parent, they had freedom to move within the range of the strap/reins/harness. In many cases the children were seen to stray towards the road at some point in the observed journey

before being pulled back to the parent. Parents were seen to respond with a short comment, but no further explanation or instruction was witnessed in any of these cases.

Less rigid control was exercised through indirect physical contact. This was seen primarily where the child held the arm or side of a pushchair and was a popular form of control encouraged by parents pushing a pushchair. Another form of this control was where a child held the hand of another child who was in direct physical contact with the parent, forming a ‘human chain’. When this was the case, the youngest children tended to be in direct contact with the parent and older ones placed further away, holding their sibling’s hand. Despite the number of children in any one observed group, the chain usually only consisted of two children. The width of the pavement or crossings seemed to influence this, as a longer chain could not be comfortably or safely accommodated. Where there were any other children (usually older), these were placed directly in front or behind the parent, and often the eldest child was seen holding the younger child’s hand. On the occasions where there were two or more parents present in a group, these ‘chains’ were rarely seen except where more than four young children were accompanied.

The marked difference between direct and indirect physical contact was the level of compliance required by the child to maintain the contact. With direct contact, the parent is primarily in charge of the contact, but with indirect forms the child can break away at any point. Levels of compliance with this indirect form of control were high and few children broke away or attempted to do so.

In exceptional cases, physical contact was seen used as a form of restraint to control either unruly or potentially hazardous behaviour from the child, such as trying to break physical contact, having a tantrum by the side of the road or running out on to the road. In these cases the parent was forced to respond quickly, usually preceded by a verbal command or exclamations shouted in response to the potential or actual risky behaviour. ‘No’, ‘stop’ or calling the child’s name were the most frequently used, prior to immediate physical restraint. Restraint took a number of forms. Very young pre-school aged children were picked up and then held closely to the parent or secured in pushchairs, whereas older children (both younger and older primary aged) were held firmly by the hand or, in one case, by both arms. Basic feedback was frequently given once the child was under control, for example ‘don’t just run into the road’ or ‘you nearly got run over’. However, little more was provided by way of explanation. The restrained child had hardly any option other than to comply and was pushed, carried or led across the road.

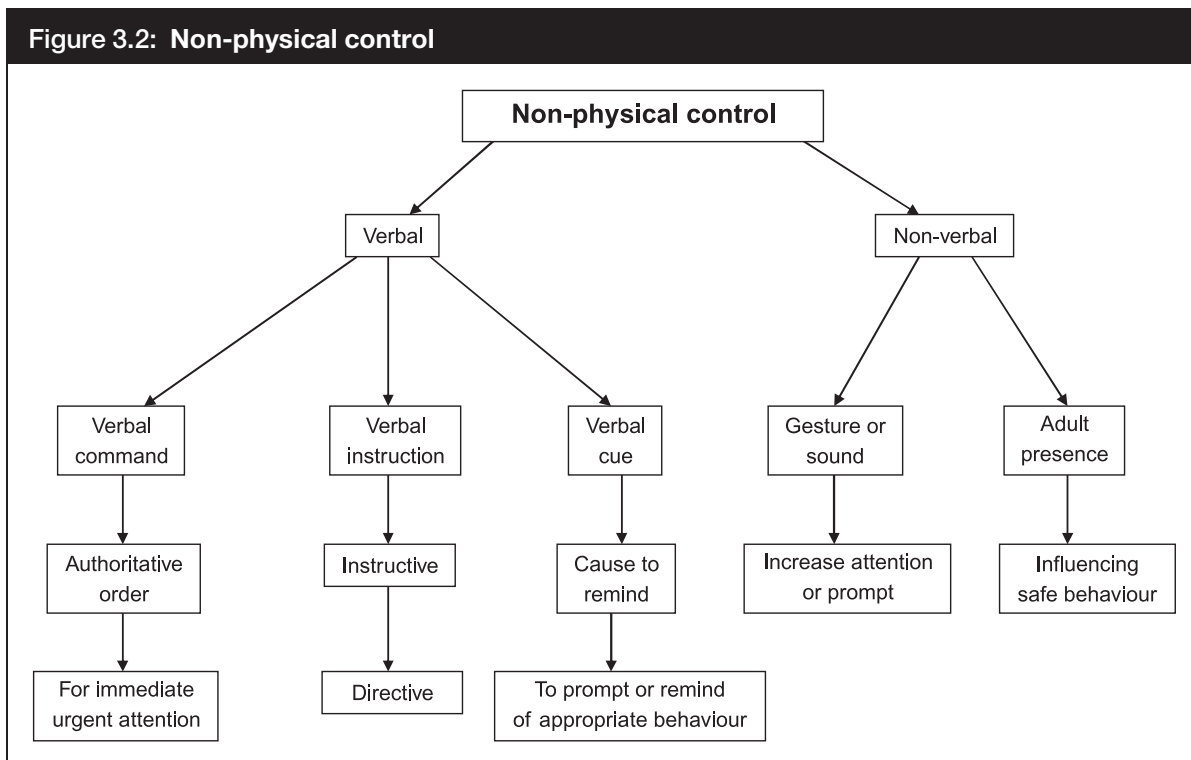
Another form of control was a ‘herding’ technique used by parents who had no free hands available for handholding. The parent used their body to block some movement and encourage the child or children to move in a particular direction, or away from potential harm. Herding was seen with young children, when they did not respond to verbal commands and prompts. This was included within the physical

control category because, although the parent did not always have actual contact with the child, their influence was exerted through the sheer physicality of their position in relation to the child.

Many children were observed walking with their parents without any physical contact between them. However, there was an obvious interaction that exerted some control over the child’s road use behaviour. Most parents maintained a connection with their accompanying children through frequent verbal communication or non-verbal communication (such as gesture or other body language), and through visual and auditory surveillance. With regard to road use behaviour, it was clear that parents could also exert control over their children through non-physical means.

Non-physical control

For a large number of the parent plus children units observed, the interaction seen was non-physical in nature and was thus categorised as non-physical control. Figure 3.2 outlines the types of physical control observed.



The most commonly used form of non-physical control was verbal control. Verbal control included a range of different forms that differed from normal conversation. At one end of the spectrum, verbal commands were used in response to an immediate risk due to unanticipated traffic events or unexpected behaviour on the part of the child. Typical commands involved short, sharp orders such as ‘stop’, ‘wait’, ‘come back’ and ‘watch out’, and were delivered usually in a raised voice or shout to emphasise the urgency of the command. In the case of a very high-risk

situation, parents were not always seen to call out a definitive command, but to shout loudly to simply raise the child’s awareness to the danger. For the most part, all the children observed responded appropriately to verbal commands and warnings.

In contrast, instructions were directed at children’s behaviour to minimise risk and conform to patterns of safe road use. Verbal instructions included ‘stop at the kerb’ and ‘wait at the lights’. There was no obvious expectation that the child knew what to do or would behave appropriately without instruction. When there was such an expectation, communication was categorised as a verbal cue to serve as a reminder either in a long form – ‘what do we do at the side of the road?’ or ‘remember to stop when you get to the crossing’ – or short prompts, for example ‘button’ (to encourage activation of a light-controlled crossing) or ‘look’ (to encourage looking for traffic).

Occasionally, parents were seen using non-verbal, non-physical cues to encourage or prompt behaviour, such as pointing, beckoning or holding a hand up, but these required the child’s attention and for them to be in close proximity to be effective. On occasions this was used in conjunction with verbal control, but more often a hand held out to prompt handholding or pointing to draw attention to pedestrian lights did not require any further communication.

The presence of an accompanying adult per se influenced the behaviour of children. The parent predominantly set the pace and made decisions about the route and the timing of crossing. In most instances they provided a check that children’s behaviour did not in itself constitute a risk and they were able to take action in the form of verbal or non-verbal control if it did. Generally, there appeared to be an implicit agreement between parent and child about what was acceptable in the particular context and, provided the child conformed to this, the looser forms of control were used. However, there was also the potential to increase the level of control in response to the child’s behaviour or to an increase in risk, either anticipated or unanticipated.

Critical distance

It was evident that even when there was no actual physical contact between the child and an adult, there did exist a ‘critical distance’ that determined how far away and in which direction the child was allowed to go before some action was taken.

With pre-school aged or, in some cases, young primary aged children, this distance was close and the child was generally in front or beside and within easy ‘grabbing’ range of the adult. This allowed immediate physical control to be established should the need arise. Responsibility for maintaining this distance rested with the adult who maintained this distance by:

- adjusting their own speed of walking; and
- using the non-physical strategies mentioned above.

Although these younger children responded to verbal control, they exhibited little or no attempt to remain within the critical distance themselves.

Slightly older children were allowed a greater critical distance from their parents. Although most walked in front or at the side of the adult, some children were allowed to walk behind. For the most part these children remained within easy parental arms' reach 'grab range', others within 'dash and grab' range. Even the few children who moved out of physical reach remained well within visual and hearing range. Unlike the very young, this group of children were more aware of the critical distance and, for the most part, made attempts to stay within it by stopping and waiting or returning to their parents when the distance became too far. In fact, few children were seen attempting to cross the road, go round a corner or step off the curb without their parents. There seemed to be a tacit agreement about how far they could go and at which points along the route they should stop. As a result there was less pressure on parents to adapt their pace or use other methods of control to maintain this critical distance and ensure their children's safety.

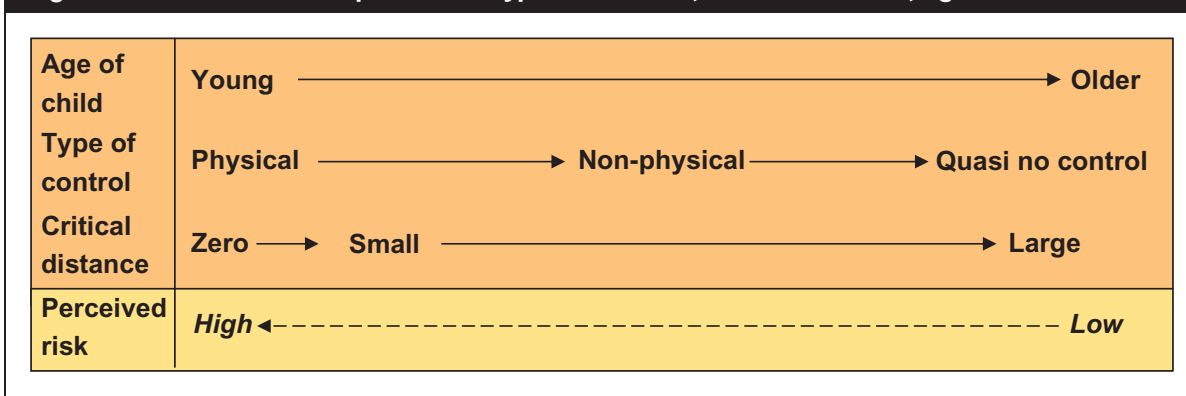
Quasi no control

In the case of older primary and secondary school aged children there was little obvious control over their road use – other than accompaniment by the adult. There was also evidence of the children and young people making more independent road use decisions and, in some cases, leading the activity. Parent and child maintained their distances without obvious physical or non-physical interaction.

The relationship between control and age

In general the findings indicate that, in independently mobile children, there is a continuum of levels of control influenced predominantly by the age of the child, with younger children more likely to be under physical control and older children more likely to be controlled through non-physical methods progressing to quasi no control as they get older. Figure 3.3 shows the relationship between the age of a child, the type of control used and the critical distance tolerated or allowed by the parent.

Figure 3.3: The relationship between types of control, critical distance, age and risk



Parental control with more than one child

For parents accompanying more than one child, this broad pattern of control was still seen to apply in relation to the child’s age. Levels of physical control were influenced by the number of children and the availability of free hands. Overall, the following behaviours were observed:

- One parent with two children – if the children were of a young age, one child was held in each hand. If the parent had only one free hand, the hand of the younger child was held and non-physical contact methods to keep the older child close or to encourage a child to child human chain. If neither child required physical control, non-physical control methods were used, with verbal control often prefixed with the individual child’s name, if not a generic remark. The youngest child usually remained with the parent or was kept in closer proximity than the older child.
- One parent and more than two children – these groups were generally highly organised. If the younger children were of pre-school or young primary age, they were predominantly directly physically controlled by the parent, whereas the older children would be under non-physical control. There were many instances where the older child was seen to be taking direct responsibility of one or more of their siblings, exhibiting similar behaviour to that of the parent and using similar methods of control. These units tended to stay close to one another at all times.

Parental control with more than one adult

When there was more than one adult it was most usual for each parent to take responsibility for one or more children, using the same methods as above. Unlike one parent units, these units did not always travel closely together, with one parent often acting independently of the other.

3.1.1.2 Patterns of control

The observations of child–parent interactions threw up several issues about control and consistency. The first was the variation in levels of control used by parents and how they responded to different situations. The next concerned the general levels of child–parent interactions and how these affected, or were affected by, different situations.

Levels of control

The observations focused on pedestrians as they moved through different levels of risk within the observation site, for example walking alongside a road and then approaching and crossing the road. The way that parents responded to this change fell into three main categories:

- no change in levels of control – regardless of change in activity or environment;
- change in levels of control in response to a change in activity or environment; and
- change in levels of control in response to imminent danger.

No change in levels of control

This group of parents showed no variation in the control they used with their child or children throughout their observed journey, regardless of any change in road use activity or environment.

Three sub-groups fell into this category. The first included very young children who were not yet mobile, together with those who were kept under constant control and generally had not yet developed sufficient road skills for parents to be able to let go. The main method of control was handholding, but where parents were unable to hold the child's hand because of negotiating a pushchair, the child tended to hold the pushchair itself. The second group included much older children and teenagers who were not in need of direct physical or verbal control in order to follow their parent safely across the road. Parents in this instance were merely accompanying their children and exhibiting the 'quasi no control' referred to above.

Change in levels of control in response to a change in activity or environment

Most parents showed a clear change in the type of control they used with their child or children when a change in roadside situation was encountered and the level of risk changed. In many instances this involved a response to the normal road environment, such as junctions or designated crossings. However, obstacles blocking pavements also created higher risk situations by forcing people to walk into the road to avoid them. Obstacles observed included an abandoned washing machine, scaffolding, parked cars and dogs. Parents also, at times, took self-imposed risks, such as crossing between small gaps in busy traffic and where there was poor visibility. They appeared to be aware of the higher level of risk this entailed and responded by increasing the amount of control used.

The change in control conformed to the pattern indicated in Figure 3.3. When the risk increased, direct control would be established or the critical distance reduced so that children were well within the parents' grabbing range. Direct physical control was predominantly used for young children, but not exclusively, and in very risky situations could be seen to be used with all age groups, often accompanied by verbal commands or instructions. Slightly older children seemed to anticipate this behaviour and often could be seen closing the gap between themselves and their parent and responding more quickly to cues to hold hands or the pushchair. Essentially, they appeared to be more skilled at 'reading' the road situation and knowing how to respond to it. Older primary aged children could often be seen responding to environmental cues by coming close to their parent, so even if there was no physical contact, the potential to establish it easily was notably increased.

Less commonly, there was an increase in non-physical control only, which involved a lot of verbal encouragement and directive body language (specific gesticulation, for example). This tended to occur when parents did not have an available hand to hold or when children were reluctant to have any physical contact.

Increasing control in response to a situation is, as expected, much more evident with younger children, but some parents of older children and teenagers showed definite changes in their behaviour by establishing closer physical proximity and occasionally casual physical contact, such as a hand on the child's shoulder, in preparation to cross a busy road.

Change in control in response to imminent danger

Parents who changed the level of control they used with their child in response to danger were similar to those in the previous category. However, in this case these were parents who specifically:

- identified that their children's behaviour posed an immediate risk to their safety; and
- reacted to immediate unanticipated danger by using physical or verbal control to minimise risk and injury – the risk being more immediate and specific than the categories above.

There were a number of children whose behaviour posed a very real risk. Examples included: pre-school and young primary aged children not concentrating on their environment because of an upset or tantrums, or running into the road despite parental warning without any due care or attention. Direct physical contact was then established by the parent (usually accompanied with some verbal warnings) to stop the children behaving further in such fashion. The physical contact was either in the form of restraint until it was safe to cross, or a constraint, such as being picked up or put in a pushchair.

On a few occasions, unexpected events were observed, for example cars not stopping at crossings or approaching faster than anticipated. Parental responses were a combination of reactive verbal commands and physically removing the child from danger.

What did seem to make a difference was how interactive the parent and child were overall with one another. Those parent and child units that were engaged in regular conversation and eye-contact with one another required overall less rigid forms of control by the parent.

3.1.1.3 Levels of parent–child interaction

When examining the different levels of control used by parents, it became obvious that there were clearly different levels of interaction between children and their parents, and this affected how they related to one another in terms of road safety behaviour.

Child–parent interactions were regarded as either 'general' (based on how the parent and child or children related to one another simply travelling down the road)

or 'specific' interaction (in relation to a specific road use activity, such as crossing the road). Interaction included verbal and non-verbal communication (such as eye contact and gesticulation), physical contact or simply having a close proximity to one another.

A wide range of general interaction was noted among the observations. At one extreme a few parents and children were seen to be totally engaged with one another, for example unbroken dialogue, close physical contact and high levels of non-verbal interaction. Subsequently, these children and parents were seen paying less attention to road crossing and other road use activity than those who were less interactive. In these cases, the level of general interaction was seen as detrimental to the child's road-crossing education, as little specific interaction relating to road safety was seen, regardless of the age of the child.

At the other extreme, parents and children (particularly young people of secondary school age) were seen travelling together but exhibiting no obvious interaction with one another apart from a closer physical proximity to one another than to other pedestrians. In this case the child or young person tended to simply follow the parent's lead, and no specific road safety based educational interaction was seen.

For the most part, however, the observed levels of interaction fell between these two extremes. Parents and children who were overall more interactive were seen actively conversing with one another as well as, in the case of younger children, holding hands or older children simply travelling in close proximity to one another. Because the observation was carried out at some distance, it was not possible to record the content of conversations. Nonetheless, some inferences can be made from the observed behaviour. Communication differs from verbal control as described above, in that it is less directive in purpose. Conversation mostly appeared to be of a general nature and, in most cases, ceased on approaching a crossing or other potentially hazardous situations. It was at this point that attention was turned to the road crossing or other activity (where in some cases specific communication about road crossing occurred, but, in many, little or nothing was said) and only on completing the task did the general conversation pick up again. What was most notable was the relative ease that the parent and child could shift attention from one another to the road environment and back.

Other parents and children were notably less interactive with one another, particularly with regard to conversational exchange. For younger children of pre-school and young primary school age, holding hands or holding a pushchair was the main contact with the parent and this level of control did not require further interaction. Older children were seen walking alongside, in front or behind the parent with no obvious general interaction. Although, in most cases, the parent responded appropriately to the specific road crossing or other hazards, interaction was often no more than a short verbal cue or a sudden increase in physical control to bring them together before crossing the road. These children appeared to play a very

passive role in road crossing, either being led or simply following the parent across the road. Occasionally a parent would make an increased effort to encourage the child to engage with the task, but this was less likely than with those parents who were overall more generally interactive with their children.

It was obvious that, in some cases, one of the ‘unit’ – either parent or child – was attempting to interact without reciprocal attention from the other. This was particularly seen in parents of young and older primary school aged children who preferred to walk or run ahead of the parent, making general interaction difficult. In these cases the parents were often extremely attentive towards their child and the road environment, but their child very much less so. With regard to involving the child in the road crossing activity, this group of parents was forced to use higher levels of verbal control to engage the child and to facilitate specific interaction.

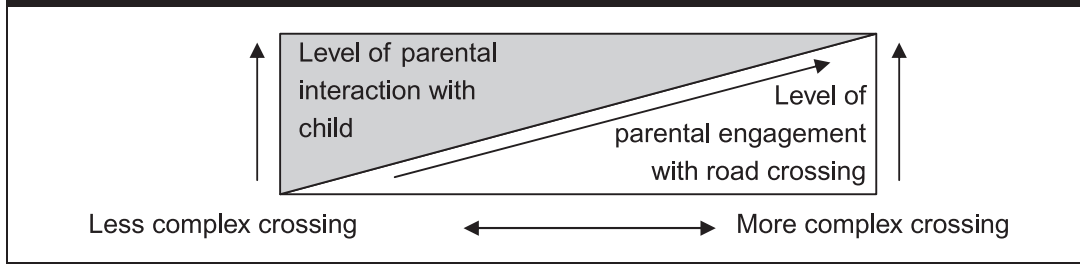
3.1.1.4 The effect of the environment on control and specific interaction

As previously discussed, how parents perceived environmental risk seemed to have a large influence on the control used. Where the level of risk was perceived to be low, for example on quiet roads with little traffic, the level of control decreased and the parent and child moved freely within the limits of their established ‘critical distance’. Apart from very young children, for the most part little direct physical control was used. As the perception of risk increased (usually as the volume of traffic increased or on approach to a road crossing), the critical distance became progressively smaller and more direct, indirect or close physical contact was established.

Busy roads with high volume of traffic and complex road-crossing situations (both designated and non-designated crossings) precipitated a higher incidence of direct physical contact with younger children, and higher levels of close contact and verbal control with older children, both when travelling down the road and at the crossing. What was also very noticeable was that, regardless of the level of general interaction between parent and child, at high-risk crossings the parents transferred their attention to the road. There was little, if any, communication with children other than simple verbal control if required. Children also took on a passive role and followed the parent’s lead.

However at crossings that had less traffic and involved simpler road layouts, the parent was able to share attention between the road environment and the child, and talk about crossing. Most communication about crossing therefore took place in quieter less complex situations. This dynamic is summarised in Figure 3.4.

Figure 3.4: Complexity of road crossing and parent child interaction



Urban and rural environments

Environmental characteristics had a strong influence on behaviour and there was some variation between urban (inner-city and town), suburban and rural locations. For instance, in the urban environments where high volumes of traffic and often complex road layouts were found, designated crossings were frequently used, providing they were conveniently sited. The heavier the traffic flow, the more likely parents with children would wait for the lights to change colour (where applicable) and the traffic to stop before crossing. Children and young people tended to walk closer to their parents, but this did not necessarily stimulate more interaction and was often due to busy and congested pavements. In the less urban areas where traffic was less dense, children and parents behaved in a more relaxed fashion, often not using available crossings or crossing before the cue to go at designated crossings, simply because the lower volume of traffic allowed gaps through which people could cross. Additionally there were less designated crossings available. Although most parents still stopped and looked before crossing, their actions were often less obvious. Where the roads had little traffic, children were, on the whole, allowed to stray a little further away from parents, particularly older children.

In rural areas there was a combination of relaxed control and hyper-vigilance, particularly where there was no pavement and few obvious crossing places. Parents with children were able to move around more freely than in the more densely built environments, and the light, often infrequent, traffic was notable. However, when traffic did approach, parents were careful to get their children's attention, close the critical distance and apply control, as well as in some cases take evasive action, such as stepping onto a grass verge or going single file.

Parents on the whole showed remarkable adaptability to specific environments. Some of the observation sites were located in areas of interest for people visiting from outside the area, and the observations that took place in these sites during the holidays threw up the effect that familiarity or lack of familiarity could have on behaviour. In these areas there were two main types of parental behaviour. First, where the parent approaches and then crosses the road with confidence and in an appropriate way. Second, the parent who obviously is unfamiliar with the road and requires more attention in order to assess the situation and to cross the road successfully (particularly where there was no designated crossing). This behaviour

was more notable in congested places than quieter ones and, on a number of occasions, risky decisions were taken where the parent did not seem to have full appreciation of the specific road situation. The children of these parents were seen regardless of age (observed up to young secondary school age) to take a very passive role, simply following their parent’s lead. In these cases little interaction took place between parent and child during the road crossing. This suggests, again, that in situations which demand the parent’s attention, such as unfamiliarity and or complex road crossings, parents are less likely to communicate with their children.

Wider influences on control and interaction

Time pressures

A number of observations that involved parents choosing to cross the road away from safe or designated crossing places, combined with elements of risk taking (for example crossing before the traffic had stopped or running to ‘catch the green man’), often appeared to be very hurried. In these cases their children were often led by the hand under direct physical contact, or were encouraged to keep up by frequent verbal command and instruction. Conversely, parents who were less brisk in pace tended to spend more time on road crossing and, for the most, part took more care.

The weather

Heavy rain was seen to have an immediate effect on parents’ behaviour. Sudden downpours caused people, including parent–child units, to run for shelter. Road-crossing activity in such conditions was often hurried, with parents choosing direct routes across the road, or proceeding before all vehicles had stopped at designated crossings. Little attention was paid to the road environment in these cases, and this was often made worse in some instances by the use of umbrellas and coat hoods reducing vision, along with a loss of visibility due to the weather itself. Most parents and children caught out in this weather tended to run rather than walk.

Parents and children travelling in steady and persistent rain were less hurried than those seen in heavy rain. Umbrellas, hoods and rain-covers limited visibility, particularly for children holding pushchairs who could not see past the rain cover, and those wearing hoods without a draw string. One primary school aged child was seen at the side of the road looking left and right, but unable to see anything as his hood did not move with his head.

The proximity of parent and child was closer in poor weather than in fine. There also seemed to be more reliance on physical control, particularly for pre-school and primary school aged children. For parents and children transferring in and out of cars in the rain, a similar hurried approach was taken with less attention paid to the road environment.

Temperature also had an influence. Fewer parents and children were seen out walking in the winter observations compared with the summer observations in the same area. All the observed parents and children also appeared to be more hurried in the cold than in the warmer weather, and overall there was less interaction between parent and child. With regard to road-crossing activity, there did not seem to be any obvious difference in how people crossed the road or used designated crossings.

Distraction

During some of the observations a number of parents were clearly distracted, both from paying due attention to the road but also from communicating with their child. The main cause of distraction was walking with, and interacting with, friends who did not have accompanying children. (In units of two parents or adults with children, this did not seem to apply.) Using a mobile phone was also seen to divert parental attention. In these cases, younger children were, for the most part, taken under physical contact (predominantly through handholding) to keep them safe, whereas older primary aged children simply walked on in front or behind. Parents did not lose all focus, however, and were seen to respond in most cases when the children strayed too far away or too near the road. Occasionally, accompanied children were seen to be distracted by factors such as eating when walking, playing with toys or by one another. In most cases parents merely increased their attention on the child, or their level of control rather than tackle the source of distraction.

3.1.2 *Modelling*

What children observe is generally held to be a major influence on learning. Therefore it can be said that the behaviour exhibited by parents when with their children can contribute significantly to their learning. The role models presented by parents – consciously or not – was therefore a focus of the observations.

Overall parents demonstrated safe road use behaviour by going through an appropriate repertoire of activities in response to the specific environment. Only a few parents were seen leading their children into potentially hazardous situations.

Generally parents adapted their behaviour to suit specific features of the environment or traffic situation. With regard to the choice of place for crossing the road, parents used designated crossings unless doing so would involve a detour. Some parents were not prepared to go even a few metres out of their way to use a crossing.

Other environmental cues were seen to influence the choice of crossing place – dropped kerbs (particularly for parents with pushchairs), pavement-based ‘tactiles’, changes in road surfaces and speed tables were popular places to cross. In areas where barriers were in place, movement tended to be directed by the physical layout, and restrictions created by pedestrian barriers were followed in all cases where they existed.

The choice of crossing place when there was not a designated crossing or an obvious place to cross varied. For many, road crossing was merely a continuum of the pavement, especially when crossing side roads and drives. For others, a detour was made to cross in a ‘safer place’, for example moving away from junctions or from parked cars obstructing visual fields. In some cases there was no obvious explanation for the choice of route. In all cases, there was little evidence of explaining the rationale to the child or involving them in the decision.

Once the decision where to cross had been made, most parents stopped at the roadside and looked for oncoming traffic. In places where there were parked cars, parents were often seen to step out to the outer edge of the parked cars and look (often keeping their children behind them) rather than finding alternative places to cross.

Decisions regarding when to cross the road were influenced by a number of factors. On busy roads, particularly those without a clear view of the road, parents were generally hyper-vigilant when looking for traffic, turning their heads both ways repeatedly until it was safe to cross. Nonetheless, in many other situations the way parents visually assessed a situation was adapted to the specific environment. On quiet roads with a clear unobstructed view, parents could be seen visually scanning the road situation on approach to the crossing, and therefore not always stopping and looking again before actually crossing the road. On one-way streets, parents often glanced only in the direction that oncoming traffic was supposed to travel in, rather than looking both ways as the child might expect. At designated crossings it was possible to see parents assessing whether the traffic had stopped by using their visual field and only a minimal turn of the head.

At light-controlled crossings parents tended to wait for the green pedestrian light cue to cross, especially when traffic was busy. The focus of attention was predominantly on the ‘green man’ lighting up straight ahead or to the left-hand side on a puffin crossing, except on particularly busy junctions where parents were seen also looking ‘right and left’ to ensure traffic had stopped. However, on quieter roads or when hurried, parents would cross before the lights changed – treating it like a straightforward undesignated crossing.

At zebra crossings the tendency was to look primarily towards the direction of traffic on the side of the road closest to the child and parent. For the most part, parents waited until the traffic on both sides had stopped, particularly in very busy areas, or that the road was clear before stepping onto the crossing. Parents therefore seemed to pay attention to the potential risk posed by traffic at this type of crossing than rely just on the zebra crossing itself.

Pedestrian refuges, located between lanes of traffic, allowed the road to be treated like two one-way streets, with most parents looking towards the immediate direction

of traffic, crossing when safe to the refuge and then reassessing the other side before crossing.

Auditory cues also appeared to influence behaviour, particularly in response to road crossing. For example, parents were seen to commence crossing when traffic noise ceased or the auditory signal on a designated crossing indicated a temporary halt in traffic flow. The noise of an oncoming vehicle increased parental attention at the side of the road prior to commencing crossing. Abnormal sounds generated by emergency vehicle sirens, high performance or heavy goods vehicles again increased parents' attention and occasionally prompted action, such as stepping away from the road as these vehicles approached.

There were, however, a number of instances when parents paid little attention to the possible risk from traffic. Despite the potential for a vehicle to appear at anytime, many parents were particularly inattentive when crossing side roads, driveways and car park entrances, and there were several instances of them having to break into a run to avoid oncoming traffic, or vehicles being forced to stop. In other circumstances, usually in heavy slow-moving traffic, a minority chose to walk into the road, crossing by either weaving between stationary traffic or actually stopping oncoming traffic.

So, overall, the road use behaviour of parents and the role model they present was based on their understanding of the specific situation and levels of risk. It was often a sophisticated adaptation to specific aspects of the road environment and traffic situation rather than simple conformity with rules. The main drawback to this was that, in many cases, the model presented to accompanying children was often highly complex and situation-specific, and therefore difficult for children to both understand and replicate.

3.1.3 *Other methods of learning*

The ways that parents control their children, combined with the role model they present, clearly contribute to children's learning about road safety. The observation also focused on looking for more explicit methods used when out on the roads. These other methods of learning are summarised in Table 3.3.

Establishing routines appeared to be an important influence, for example always stopping at agreed points such as junctions or crossing places and waiting for parents. Children seemed to assimilate these routines and were observed going semi-automatically from walking on their own to stopping and holding their hand out for their parents to hold while crossing and then going off on their own again to their next agreed stopping point. Failure to conform with the routine prompted a reminder from the parent.

Table 3.3: Types of learning		
Type of learning	How learning is achieved	Level observed among parents and children
'Routinisation'	Control – physical – verbal Accompaniment Role model	High
Knowledge Simple rules	Verbal control Verbal instruction	Moderate
Complex rules	Role model	Low
Understanding	Explanation Experience	Low
Skill development	Practical roadside experience Feedback – from parent – from near-misses	Low
Attitudes	Explanation of consequences Role model	Low
Motivation	Praise/reward Threats/punishment Explanation of role model	Low

Many of the children who were physically controlled only were simply led across the road. There was no direct communication from the adult in terms of instruction or providing explanations. Furthermore, children conformed quite passively with the adult's behaviour and there were few (if any) signs of children focusing their attention on, or taking an active interest in, the road or traffic. The use of verbal control did, however, demand children to be more actively engaged in the process of road use and clearly contributed to learning some of the appropriate behaviours for road use. Instructions such as 'wait there', 'stop at the kerb' and 'wait for the light to go green' were used along with shorter commands such as 'wait' and 'stop'. These commands were linked to establishing routines, and children's behaviour at times anticipated them.

Verbal control also contributed to developing children's knowledge of the 'rules' of road safety, particularly comments more specific to road use, such as 'stop at the kerb', 'wait at the crossing' and 'don't cross the road without me'. Parents were also seen and heard to use complementary additional instruction. This was based around what children should do, for example 'press the button and wait for the green man', 'wait for the cars to stop before we can cross safely' and 'look to see if any cars are coming'. Both verbal control and instruction were used more often with pre-school and primary aged children, and were predominantly used in relation to simple road-crossing rules, rather than more complex ones. Light-controlled crossings were particularly popular in this regard, with a focus on the push button on the wait box.

Parents with older primary and secondary aged children were less likely to be seen giving instructions, prompts or obvious educational input, other than talking about the direction they were travelling in.

Parents were much less likely to be seen making an obvious attempt to explain why children should follow instructions or why they themselves behaved in a certain way. Instruction, therefore, was rarely supplemented by explanation. However, there were a few occasions where this did happen. Some parents of young children were observed making a game out of stopping and looking, using pointing to indicate the pedestrian red light changing to green and the traffic stopping, before crossing. Other examples at non-designated crossings involved explanations of why it was best to wait until the traffic had passed. An example of a parent providing an explanation to an older primary aged child was at a zebra crossing where visibility was obscured by an illegally parked vehicle. This parent took her child's hand, explained why she was hesitating at the crossing and then why she chose to move away from the crossing to cross elsewhere. When there was little communication between parent and child, and particularly for older children and teenagers, most learning appeared to take place through direct experience, in addition to the observational learning and 'routinisation' referred to above.

For some children, parents encouraged the development of road safety skills by involving them in road-crossing decisions. However, this was again a less common occurrence. When it did happen there was more emphasis on the child deciding when to cross rather than where to cross. For younger children it was part of a game looking for the cars and saying when they could cross, whereas for older children there was less parental involvement as the child made the decision themselves. There were some signs of parents conferring with their teenage child about road crossing, particularly on exceptionally busy roads, but again these were exceptional cases. Where children of all ages embarked on unsafe behaviour, parents were there to minimise harm, by shouting or physically restraining the child. On a few occasions, the observation witnessed near-misses where either a car did not stop at designated crossings or parents did not wait for the traffic to stop before crossing. The extreme reaction from the parent and child in response to the threat indicated that the negative experience had a powerful effect.

There were few instances where parents presented a consistent role model coupled with explanation to encourage a positive attitude towards road safety. Children, for the most part, were seen to accept their parent's road use, and were rarely seen to question their behaviour. Even in more high-risk situations, children often simply moved closer to their parents (regardless of their age) and followed their lead. Although, in some particularly hazardous situations, older children and teenagers were seen to verbally suggest safer alternatives to parents, such as moving position or waiting for the road to clear before crossing.

Finally, there was some evidence that parents used other methods to reinforce and motivate behaviour. A few parents were observed using verbal threats and punishments to enforce safe behaviour, for example ‘If you don’t wait, you will have to hold my hand’. Others reinforced behaviours with verbal praise as a reward, particularly for younger children, for example ‘Press the [pedestrian wait box] button . . . good boy’. These methods were targeted towards younger children and used for simple road use behaviours. There was very little evidence of parents using them with older children.

Standing at the roadside waiting for an opening to cross often took time and it was striking that many of these opportunities for practical roadside training and education were not used by parents. Any evidence of education usually was seen at quieter, lower-risk sites. The more complex the road use activity and the higher the level of risk, the more attention the parent paid to crossing safely and less to communicating with their children. However, at times, the potential for explanation and skill development in these situations was apparent, but was not exploited.

3.1.3.1 Gender

Children

One of the objectives of the observation phase was to determine whether there was any difference in how parents treat male and female children when out on the roads together. There were no obvious differences seen in the ways parents controlled, modelled or used other forms of learning with boys or girls. The main influence, particularly with regard to type and levels of control used, was the individual child’s age and general behaviour as opposed to gender.

Parents

More of the children observed were accompanied by mothers than fathers. For the most part there was little difference between male and female parents in their approach to road safety, although fathers tended to figure more prominently at the extremes of both good and bad practice. Some fathers, for example, encouraged their children to participate in road-crossing decisions, provided explanations and at the same time acted as a positive role model regardless of the child’s age. In contrast, at the other end of the spectrum, fathers were observed taking very obvious risks when road crossing, with less attention to maintaining the safety of the child.

As previously mentioned, in situations where both mother and father were in the group, the male parent almost always ‘led’ the group, with the female parent behind. The male parent made most of the road-crossing decisions in these cases, with regard to where and when to cross. In many cases the mother responded to any risk inherent in the father’s decisions by establishing physical or verbal control of the child or children.

3.1.3.2 Ethnicity

The observations included parents and children from a wide range of ethnic groups. There were no obvious differences seen between parents of different ethnic background. The main factor was the environment that the child–parent interactions took place in. The majority of ethnic minority child–parent units observed were in areas of higher deprivation with a more urban profile.

3.1.4 Scooters, tricycles, bicycles, cars and buses

3.1.4.1 Use of scooters

A small number of primary school aged children were seen using scooters (non-motorised). All of these children were accompanied by parents on foot, except one child with a scooter whose parent was on a bicycle. None of the children were seen wearing any protective clothing or head gear.

In most cases the child was allowed to ride the scooter in front of the parent, often further than many of the pedestrian children were allowed. However, like the pedestrian behaviour, there seemed to be an unspoken agreement about where the child should stop and wait for the parent and again this distance was age-related. For example, the older of two siblings on scooters was allowed to go much further before stopping than the younger. Parents were particularly vigilant about watching their children on scooters and verbal control was used more regularly, with a particular reference to avoiding on-pavement collisions. At road crossings, parents tended to take physical control of the scooter rather than the child, and contact was released only when the parent was ready to cross. In all cases the child crossed the road on the scooter.

The children seen using scooters focused much of their attention on the actual mastery of riding the scooter rather than the road situation itself. None of the accompanying parents were seen either modelling scooter behaviour, or giving specific instruction or explanation to improve safe scooter use other than basic verbal control.

3.1.4.2 Cycling

Despite some observation sites being selected to include well-defined cycle routes, very few children were observed on bicycles accompanied by parents.

There were only two parents observed carrying pre-school aged children on their bicycles in specially designed child seats and one parent pulling a trailer carrying a single child. In all cases, the parent's modelled safe cycling behaviour, including cycling on the road as opposed to the pavement, stopping at traffic lights appropriately and using hand signals before turning. All the parents were wearing cycle helmets and high-visibility clothing, and both children in the child seats were

also wearing cycle helmets. There was, however, no observed interaction between any of the parents or the children throughout the observed period.

Only a few children were seen out using tricycles. These pre-school age children, due to their very young age, often struggled to manage the tricycle independently or safely and were kept under very close parental supervision, with frequent physical assistance and control exerted to prevent collision or straying into the road. These children were not allowed far from their parents. In all cases the parents were very focused on the child's activity, often complementing the physical contact used with high levels of verbal interaction. All travel occurred on the pavement and at a road crossing the child was assisted across the road by the parent. In one case the parent was so focused on manoeuvring the tricycle, little attention was paid to the traffic, and a collision was only narrowly avoided.

Among the primary aged children, only two parents were seen accompanying their children on bicycles, the rest were seen following on foot. Similar principles of interactive control applied to cycling as did in pedestrian behaviour, except that there was obviously much less physical contact and more verbal commands, instructions and cues used. The critical distance between parent and child was further still on a bicycle, but the younger children were seen to remain closer to the parent than the older children. Parents were still reluctant to let their children out of sight and pedestrian parents were seen walking quickly or even running to keep up with their children where verbal control was not sufficient to reduce the distance between them. Any verbal interaction itself was much more obvious due to the parent's need to shout to be heard by the child. All the cycling observed was pavement based and parents attempted to retain verbal control, for example where the child should stop or slow down. They also gave simple instructions in response to arising situations, for example avoiding collisions with pedestrians. Similarly, to the children observed using scooters, child cyclists were very engaged with the activity of cycling, leaving little scope for reciprocal interaction with their parents. What was clear was that parents had to work much harder to control their children and subsequently had fewer opportunities to teach their children when they were cycling. In all cases, the children cycling independently were placed in front of their often pedestrian parents thus were unable to learn from the parental model. Furthermore, the greater distances between child and parent, as well as the child's high levels of engagement with cycling, made any other meaningful interaction about road safety challenging.

Among the primary aged children, most were seen wearing cycle helmets, but no high-visibility clothing. There were no children of secondary school age seen cycling accompanied by their parents. However, on school routes, particularly in the suburban and rural areas, a large number of unaccompanied children and young people were seen cycling to school. Of these, most were male, with very few seen wearing cycle helmets or high-visibility clothing. Groups of young people cycling were most likely to exhibit the most unsafe cycling practice, including cycling on

pavements, travelling the wrong way on cycle paths and straight over the top of roundabouts. In a number of cases these cyclists posed a risk to pedestrians and drivers.

3.1.4.3 Car behaviour

Seat-belt use

For the most part, children and parents observed getting in and out of a car or van were seen to be wearing seat belts or some form of child restraint. Some negative exceptions to this included very young children being carried on the laps of front- and rear-seat passengers, and when the car was overcrowded and there were insufficient seat belts for the number of children travelling. What was also observed was, despite wearing a seat belt for the journey, many children and adults released their seat belts early in anticipation of stopping and before the car became fully stationary.

Getting in and out of a car

The amount of parental input given to how children got in or out of cars was on the whole proportional to the age and ability of the child. Parents of younger children took the most active role and were seen physically assisting very young children in and out of cars because of the child's inability to do so independently. In most cases, the child was lifted in and out of the car, and thus took on a completely passive role.

Parents of older pre-school and young primary aged children had a more facilitatory role. The majority of children in this age group were able to climb in and out of most vehicles (except some larger vehicles, such as 4x4s or vans). In most cases, even if dropping off or picking the children up, parents made themselves available to open or close the car door and to closely supervise the transfer between car and pavement.

Some modification of behaviour was seen in response to the levels of traffic on the pavements or roads. For example, on quiet roads, pavements or in car parks, car doors were opened wide, whereas where there was more traffic, parents would vary the width of the car door opening as traffic approached. On busier roads and pavements, a number of parents of more mobile children were seen shielding their children – with one hand on the car door, one on the door frame and their backs to the traffic, creating a 'safe zone' for the child to get out of/into the car safely. This allowed the parent more control over the situation, and formed a more visible barrier between the child and the traffic.

Older primary aged and secondary school aged children were allowed more freedom in line with the increase in their capability. Fewer parents were seen opening car doors for this age group and, when picking up or dropping off, many parents did not

leave their vehicle. However, there was some evidence of verbal prompts being given as the children entered or left the vehicle, usually of an instructive nature.

Parental modelling – car behaviour

Where parents chose to position their cars to drop off or collect their children appeared to be influenced by a number of factors. Getting as close to the destination as possible was popular, even if this required pulling over onto zigzag lines, next to barriers or holding up other traffic. In quiet areas, cars were parked predominantly in legal and safe places, but in busy areas, such as near to schools at peak times, cars were seen to pull up where opportunities presented themselves, including on pavements and grass verges, on junctions, across driveways and other places where they created a hazard. Cars that were stopped in particularly risky places tended to be transporting children old enough not to require assistance getting in and out of the car. In these cases these young people responded appropriately to the situation by exercising caution when entering or leaving the vehicle.

Cars parked where the parent and child were absent for longer than a few minutes were more carefully and legally positioned, and not necessarily close to the destination. Parents getting in or leaving their cars responded appropriately to the level of risk around them. They could be seen watching for traffic, and opening car doors cautiously in busier areas.

For parents with younger children, the position of a child car-seat often appeared to influence the decision as to which side the parent took the child out of the car (whether kerbside or roadside) rather than the environment itself. For slightly older children, the reasons why parents allowed or chose to encourage their children to get in and out of the car either kerbside or roadside was less clear. In most cases children tended to get out of the car on the side they were seated. Some parents encouraged their children to clamber across from the roadside to allow them to exit on the pavement, while other parents allowed their children to get in or out of the car into the road, but responded to this more risky situation by assisting the child as described above.

On the whole, the busier the road or pavement that the child was accessing or the more dangerous the position of the car, the more physical and/or verbal assistance the parent gave and the more attention the parent and often the child paid to the environment around them. There was, however, little evidence of parents explaining to the child the reasons why they were behaving in these ways.

3.1.4.4 Bus behaviour

A number of the observation sites had bus stops located within them and, during the course of the data collection, observations were made of parents with children boarding or alighting buses. Most of the observed bus users were parents with very

young children (pre-school and young primary). Those parent–child units waiting for the bus did so within close proximity of each other, and as the bus approached there was an overall increase in physical contact observed. The majority of the buses observed were low-level buses allowing access at pavement level. In all cases, parents allowed their child or children onto the bus first, giving assistance where required and staying very close to them, almost ‘herding’ them on, particularly where there were many people boarding and alighting. For those alighting from the bus, many encouraged their children to step off first as they followed closely behind. On the observed occasions where the bus stops were very congested and crowded, the child was usually directed to move to the far side of the pavement away from the crowds and wait until the parent could catch up. For the older children and teenagers, little interaction was seen, and the child followed the parent’s lead whether getting on or off the bus.

3.1.5 *General findings*

Overall, the observation did show that parents made some attempts to influence safe road use (Box 3.1). However, much of the parental interaction was based predominantly on protection and control of the child, rather than providing a more educational experience. In the most part, there was a wealth of opportunity for parents to carry out more interactive practical roadside teaching for children of all ages. However, few parents took advantage of this over and above establishing routine behaviours and role modelling. Where children were engaged in using scooters, tricycles and bicycles, the emphasis was on developing the skill to use the vehicle rather than safe road use, and parental input was particularly low in this regard.

Box 3.1: Summary of key points – observation

- Parents use different types of control with their children, ranging from physical control to maintaining close proximity, verbal control and loose accompaniment.
- As children get older, parents are less likely to use physical control and rely on verbal control and accompaniment to influence road use behaviour.
- As risk gets greater, parents are more likely to use physical control, regardless of the child’s age.
- The role model presented by parents is inconsistent and, at times, adapted to specific aspects of the environment. The rationale for their behaviour is not always articulated.

Box 3.1: (continued)

- The place where parents decide to cross the road is often guided by the environment and specific characteristics. Some parents choose to take the most direct route rather than using a designated crossing.
- There is little specific communication with children about road use and a lot of missed opportunities for communication.
- Parents who talk to their children more generally are, however, more likely to communicate about traffic and road use.
- There is an inverse relationship between the level of risk on the roads and communication between parents and their children.
- Most attempts to teach children about safe road-crossing occur at designated crossings or simple crossings in quiet areas, rather than more complex sites.
- There are few attempts to engage children in road-crossing decisions. If parents do, it is more likely to involve decisions about when, rather than where, to cross.
- Most parents and children were seen using seat belts or child-seat restraints, although there was a tendency for older children and teenagers to release their seat belts in preparation for getting out before the vehicle was stationary.
- The reasons parents chose to help or encourage their children to get in or out of the car onto the road or onto the pavement side often seemed dependent on the position of car seats for younger children, but were less clear for older children.
- Parental assistance and protection given to children getting in and out of cars was related to the age of the child and the perceived risk from the surrounding environment. This was also reflected in getting children on and off public transport.
- Parents often stopped their cars in illegal and hazardous places in order to pick up or drop off their children as close to their final destination as possible.
- Parents of primary school aged children who travelled on bicycles were unlikely to accompany their children on bicycles themselves.
- Children riding bicycles or scooters often focused on controlling the bicycle or scooter rather than communicating with parents and being aware of the road situation.

3.2 Children’s and young people’s perspectives

3.2.1 Draw and write

The themes to emerge from the analysis of the draw and write exercise are presented by school year to identify the key issues for each group. Some year groups are combined to reflect the structure of the groups involved in the draw and write activity. A summary to demonstrate progression between the age groups is provided in Table 3.4. This is followed by a comparison of the issues emerging in the different urban, suburban and rural groups. It is important to bear in mind, when interpreting the draw and write findings, that they represent children’s perspective and the salient features for them about what their parents do and say. Examples of some of the pictures drawn are used to illustrate key issues.

3.2.1.1 The sample

Overall 262 primary school children took part in the draw and write exercise: 50.8% girls and 49.2% boys. The breakdown of the sample between the various regions and by school year groups and Key Stage is shown in Table 3.4.

Table 3.4: Composition of sample by area and school year							
Area	n	Key Stage 1		Key Stage 2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		5–6 years	6–7 years	7–8 years	8–9 years	9–10 years	10–11 years
West Yorkshire suburban	69 (26.3%)	38		31			
West Yorkshire inner-city	43 (16.4%)	25		18			
Midlands urban	38 (14.5%)		20			18*	
North Yorkshire rural	55 (21%)				28*		27
London inner-city	57 (21.7%)		30			27	
Total	262						
*Shared year group							

3.2.1.2 General comments

Younger children generally found it easier than older children to distinguish between what their parents **do** to keep them safe on the roads and what they **tell** them to do. In many instances the older children saw these as the same thing. There was the occasional expression in the older children’s drawings that being told about road safety was an issue for younger children:

‘I have been told when I was 5 years old.’ (Boy, aged 10: rural)

In order to orientate the children before introducing the draw and write activity, there was some preliminary discussion about risks on the road and getting to school. After doing the drawing there was a general discussion which included seat-belt use and cycling.

Levels of accompaniment were higher in younger children and also in London, suburban and rural areas. More children seemed to go unaccompanied to school in the inner-city area (about a quarter of Year 3, 8–9 years old) and small town (almost half of Year 5/6, 9–11 years old). Car use was also lower in these areas and, reciprocally, more children walked to schools.

Children of all ages were aware that being out on the roads is risky, frequently couched in terms of the different types of vehicle on the roads and the possibility of being hit, particularly if you are not looking. The Year 6 (rural) children had a more sophisticated understanding of risk which encompassed unsafe driver behaviour (speed, drink-driving, using mobile phones, carelessness, reversing into main roads), cyclists not indicating, environmental problems (obstructed view, parked cars, potholes, poor weather) and personal behaviour such as not wearing seat belts, not looking both ways and, for cyclists, not wearing helmets.

All children claimed to use a seat belt when in a car, but, on probing, a much smaller proportion – in the region of 40% – used one **all** the time. The usage rate in rural areas was higher – about 60%. Reasons for not using a seat belt were well understood, even by Year 1 children who identified the following:

- forgetting and not being reminded – by either parents or older siblings;
- being uncomfortable;
- seat belt not working, getting stuck;
- no middle seat-belt – or problems with the middle seat-belt; and
- having to sit on someone’s knee.

The role of siblings was important in relation to seat-belt use. Comment was made about older siblings telling them what could happen if they did not wear a seat belt and also about how they themselves try to get their younger siblings to use a seat

belt. The negative influence of older siblings also emerged, albeit very much less frequently, for example telling them not to bother with a seat belt.

Additional reasons for not using seat belts raised by older children included the following:

- short journeys;
- bumpy roads;
- old cars not being fitted with seat belts;
- insufficient number of seat belts for the number of children in the car;
- where there is little chance of being seen by the police;
- parents being in a hurry and not checking (especially fathers); and
- protection offered by airbags makes them not necessary.

They were more likely to wear seat belts when travelling in the front rather than the back. Children did not use seat belts in buses or taxis and some added that they were not told to do so.

Bicycle use was more of an issue for suburban and rural children than those in urban areas. Younger children (Year 1) saw a parent's role as making sure the bike is safe, holding on or pushing you, making you use protective equipment and making you stay in the garden/safe place. By Year 3 perceptions still included the safety of the bike and having proper lights and brakes, stabilisers (for some), wearing protective equipment, helping you learn to ride and staying away from roads. Avoiding falling off is the main priority for this group rather than coping with traffic. A similar picture emerges in Year 4/5 and it was only in the Year 6 group that the use of bikes on roads while unaccompanied by adults emerged to any extent.

3.2.1.3 Key Stage 1: key themes

Year 1

Accompaniment featured prominently as the way parents keep children safe, mostly involving holding hands. This was frequently associated with road crossing and using various types of designated crossing, particularly light-controlled and crossing patrols. The notion of being with a parent (mostly mothers) was only occasionally developed further in relation to how this kept them safe, for example by helping them to cross the road, 'stopping at the pavement' or 'pressing the button'. In only a few instances were parents shown giving instructions such as 'stop', 'stand back', 'stop, look and listen' and 'look both ways'.

Although asked to draw themselves with a grown-up, a couple of children still drew themselves alone (commenting specifically on this) or with a sibling. One showed being walked across the road.

There is a tendency to see ‘others’, particularly parents, as keeping them safe, but with a non-specific view of **how** this works. The picture emerges of being kept safe by being with a parent and holding their hand, and parents checking that it is safe to cross. Traffic lights, light-controlled crossings and crossing patrols were also seen to ‘keep you safe’. Some drawings, particularly those of suburban children, showed being in a car as a means of keeping safe. For children this age the distinction between fantasy and reality can be blurred, for example one child showed a ‘Superhero’ keeping them safe.

Children depicted themselves in a passive role and there was little evidence of active involvement in decisions about crossing. The parent, often but not exclusively ‘mum’, tends to be shown pressing the button at light-controlled crossings rather than the child. Only a couple of drawings included being told to look both ways.

Notwithstanding the children’s limited involvement in road-crossing decisions, the drawings showed good awareness of the road environment and a clear demarcation of pedestrians being on the pavement and cars on the road. The edge of the pavement seemed to be the ‘safety boundary’. A large proportion of the inner-city children’s drawings included light-controlled crossings. A considerable number also included long queues of cars. Although some of the suburban children also drew these, they were not quite such a prominent feature.

A lot of waiting was depicted. There was slightly greater emphasis on waiting for cars to stop in the suburban children’s drawings than in the inner-city children’s, where there was greater reliance on waiting for the lights to change.

One child with visual impairment demonstrated a high level of understanding of what his mother was doing – holding hands, looking for cars and waiting for them to go past, and particularly listening for cars coming.

In terms of what parents tell them to do to keep safe, only about a third of the drawings included anything associated with teaching them how to cross roads safely. Within these, ‘stop, look and listen’ and look ‘left and right’ received most attention. A child with visual impairment placed particular emphasis on listening. Waiting for the green light was mentioned and ‘Learn your Green Cross Code’ with no reference to the content. Other things parents told them were more general in nature and included:

- ‘don’t run or mess about’;
- ‘don’t go on the road’; and
- ‘stay on the pavement and keep back from the road’.

Some drawings showed parents giving instruction about the immediate situation, such as hold hands, stop or when to cross and stay in the car.

Year 2

Accompaniment was again a key issue in how parents keep their children safe, including holding hands or holding onto the side of pushchairs. However, there were differences in the pattern emerging in inner-city London and the Midlands town, which may reflect the lower traffic density in the smaller town and the greater traffic speeds that this allows. The drawings of the London children tended to show more handholding than those from the town, who were more likely to show themselves walking alongside their parent rather than holding hands. Keeping away from the edge of the road featured prominently for the town children. A number of drawings showed crossing with the school crossing patrol or at designated crossings. Where mention was made of pressing the button at light-controlled crossings, it was usually the parent rather than the child doing this. Parents in both locations were depicted as playing the active role in road-crossing decisions, not the children themselves. However, although few in number, some children in this age group drew themselves using roads without an adult present – one child (town) alone using the school crossing patrol, one (town) waving goodbye after being seen across the road by her mother and another (London) accompanied by their brother.

Again the drawings showed awareness of the road environment and, in some instances, the complexity pedestrians have to cope with – for example one (London) drawing showed a crowded pedestrian refuge with a note that ‘you cross half the road and then wait’. Others showed specific local features, such as cycle lanes and road markings to look left. Almost all drawings showed some kind of designated crossing, mostly light-controlled, and those of the town children often showed a school crossing patrol as well.

The main thing that town parents (again mostly mothers) told this group was to keep away from the edge of the kerb. They also told children to hold their hand – or hold onto the pushchair – when crossing or approaching risky situations. Being told not to run was also mentioned, as was putting a seat belt on in the car. Instructions tended to be clear and simple, and mostly concerned with verbal control. While it was unusual to see evidence of parents offering explanations, there were some signs of this beginning to emerge in relation to why it is important to stay back from the edge and keep near to the parent. In London, children’s view of parents’ communication was more concerned with being careful, holding hands not crossing alone, looking for signs that say you can go, and warnings about danger and to stop at the side of the road. In both areas a small minority included looking both ways/ left and right and stopping at the roadside.

3.2.1.4 Key Stage 2: key themes

Year 3

Accompaniment and holding hands featured in the drawings, but by Year 3 a considerable proportion of inner-city children were depicting themselves accompanied by siblings or alone. In some instances the drawing just focused on holding hands with older siblings (both brothers and sisters), but others provided some insight into how they coped without an adult present, for example:

- looking very carefully;
- waiting for the traffic lights;
- using the school crossing patrol; and
- looking ‘left and right three times’.

Some of the suburban drawings showed children without an adult, but less frequently than the inner-city group. Although some children in both areas are clearly using roads independently, it was more usual for the drawings to show some accompaniment by parents, often linked to using crossings, school crossing patrols and waiting for cars to stop. Some drawings had ‘Stop, Look, Listen, Live’ written on them. Again, drawings of children with parents showed the parent as being in control with very little involvement of the child. One went so far as to show the mother stopping the traffic. There were only a couple of examples showing the active involvement of children, for example a child looking for cars with her dad and ‘my mum and I look both ways before we cross the road’. Only rarely did the drawings convey any specific preparation for using roads alone. Examples include a parent seeing the child across a road.

In the inner-city children, the importance of waiting for the traffic lights or for cars to stop emerged strongly. For the suburban children, stopping or being told to stop at the kerb or at traffic lights was a prominent feature. While younger children see the lights keeping them safe in a non-specific way, by Year 3 children appreciate the implications for their own behaviour, i.e. stopping at the lights, using a crossing.

In terms of what children are told by their parents, some drawings showed children going out on their own, with parents in the background if they were shown on the pavement. A number of drawings showed the parents inside the house telling their children what to do – see Figure 3.5.

Some children showed themselves being allowed to cross roads alone (in some instances supervised by parents). Some of the inner-city children were clearly expected to go to the local shops on their own (see Figure 3.6).

While the Year 2 drawings showed parents’ communication to be largely concerned with control, the picture emerging from the Year 3 drawings was more about telling

Figure 3.5: Going out alone seven-year-old girl, suburban

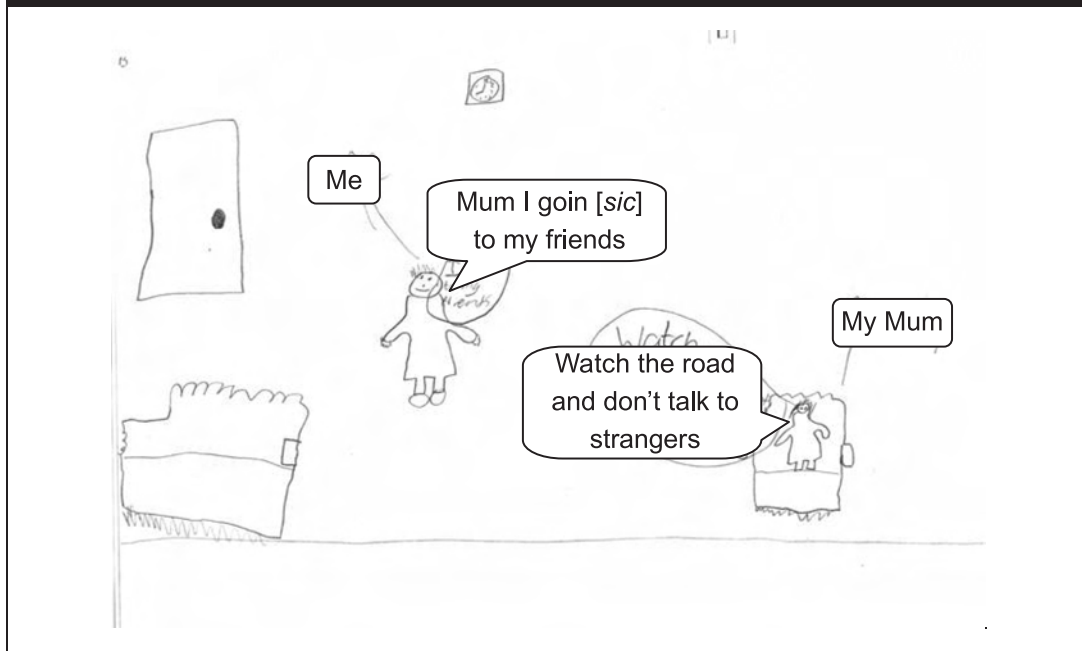
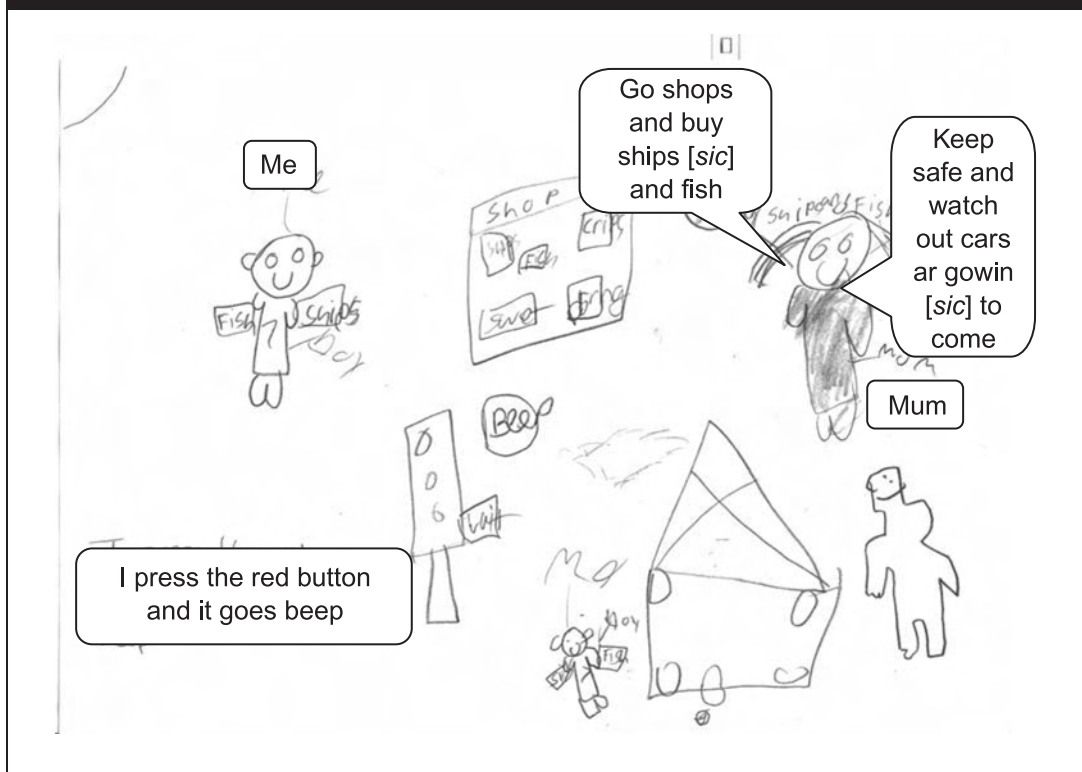


Figure 3.6: Going to shops alone seven-year-old boy, inner city



children how they should cross the road. Some comments were still linked to the immediate road use task, for example:

- ‘cross now’; and
- ‘don’t run off’.

However, most comments were of more generic relevance. A number drew their parents giving vague advice to be careful or good, and cross safely or properly and watch out for cars. While some children were told not to go on the road by themselves, others were told how to cross the road. However, the information given was patchy and not in any way comprehensive. It included:

- be careful;
- watch the road;
- variations on ‘stop, look and listen’, ‘stop, look and go’ and ‘listen and look’;
- variations on ‘look both ways’, ‘look left and right’ and ‘look right, left and right again’;
- when a car comes look left and right;
- cross at the lights/with the lollipop lady/’press the button and wait ‘til the noise comes’;
- do not run across the road;
- do not stand in the middle of the road;
- stay on the path; and
- do not cross the road.

Only exceptionally was any reference made to specific hazards. One drawing showed parents warning about cars coming out of drives.

Although asked to draw what parents tell them, some (especially inner-city children) drew brothers or sisters instead – see Figure 3.7. For some groups of children, older siblings clearly have an important role in teaching them how to use roads. Uncles and grandparents were also mentioned. Stranger danger seems to be a priority for some parents and ‘not talking to strangers’ was mentioned in a few of the drawings.

Figure 3.7: Accompaniment by sibling seven-year-old boy, inner-city



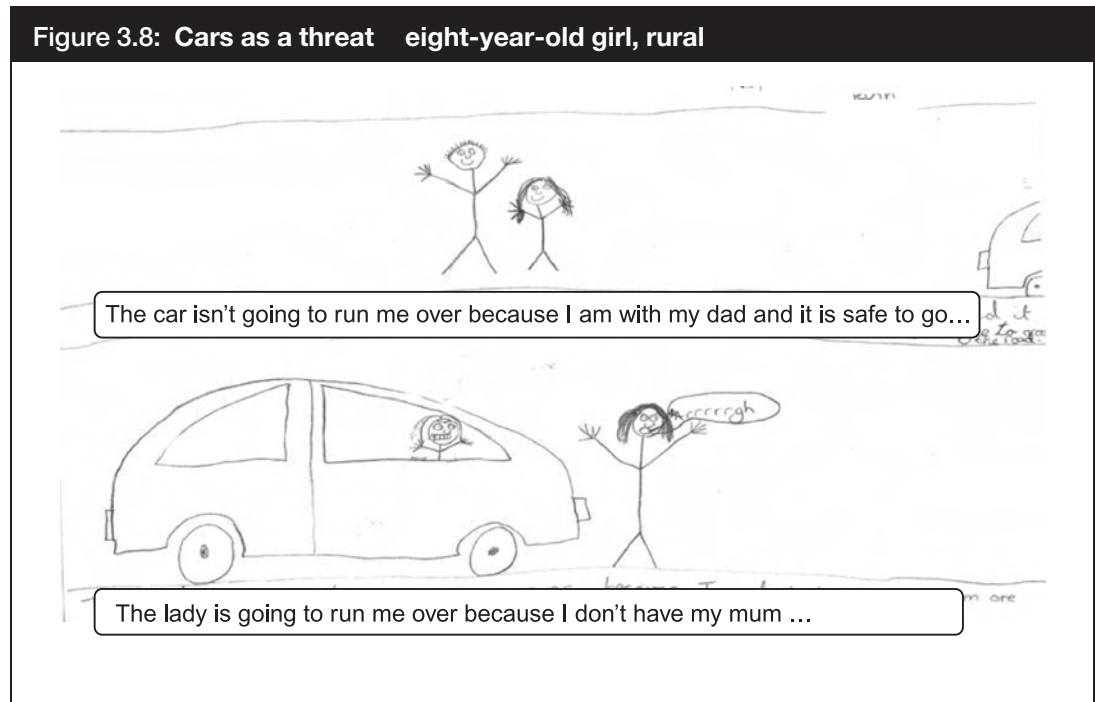
Year 4/5 and Year 5

The pattern again differed between children in rural and busy urban environments – in this instance London. The Year 4/5 children from a rural environment appeared to have greater freedom on the road. There were signs of greater distance between the child and parents when out on the road. Handholding was included in some drawings, but less frequently in this age group and the status of being allowed **not** to hold hands emerged. Although accompaniment was still mentioned, this was starting to be less frequent in this age group in rural areas and usually included the parent giving additional instructions, such as:

- ‘watch the road’;
- ‘wait for [parent] before crossing’;
- ‘look both ways’;
- ‘wait, there is a car’;
- ‘stop, look, listen, think’ or just ‘stop, look, listen’;
- ‘cross now’; and
- ‘STOP!’, as an emergency response to a sudden risk.

The type of instruction encouraged the active involvement of children more than in younger age groups, rather than simply being a means of control, for example

making them look both ways. This age group appeared to be more actively engaged in the process of road crossing, for example looking and waiting **with** a parent or parents supervising independent crossing. However, for a few rural children, just being with their parent seemed, in itself, to be associated with protection from the danger and even menace presented by cars (see Figure 3.8). Light-controlled crossings and school crossing patrols were mentioned relatively infrequently by rural children and one showed ‘mum . . . stopping the traffic so I am safe’.



For the Year 5 children from London, accompaniment still featured very prominently, with drawings also showing the use of light-controlled crossings and handholding to cross roads. The drawings also sometimes additionally showed the accompanying parent (or childminder) giving instructions about how to cross, but less frequently than in the rural children. These included:

- variations on looking left and right – ‘always look right and left’, ‘look left and right’ and ‘look left, right and right again’; and
- ‘stop, look and listen’.

As well as verbal controls such as:

- ‘wait’; and
- ‘hold my hand at the road’.

Being told to use seat belts was also mentioned.

Only a small proportion of the London children's drawings showed themselves using roads alone. In one the mother was shown being concerned about 'not talking to bads' rather than how to cross the road. Parents tended to be depicted as in control and only rarely were they shown helping or 'supporting' their child in road crossing.

The use of safety equipment featured in a few rural drawings:

- 'putting the glaring thing on your bike';
- reflectors; and
- a wrist strap for a younger sibling.

Many of the drawings of what parents **do** included parents giving instructions of some sort. The children were also asked to draw what their parents tell them. For the rural children these included some general comments, such as:

- 'stay off roads';
- 'watch the road'; and
- 'stay in sight'.

However, more specific road-crossing advice was also given:

- 'look both ways';
- 'look before you cross';
- 'don't run across roads'; and
- variants of the Green Cross Code – 'look, listen, live', 'look, listen, stop', 'look, listen, learn', 'watch, look, listen, cross', 'stop, look and listen', 'stop look, listen, go', 'stop, look, listen, think and go' and 'stop, look, listen, live'.

In some instances detailed guidance was depicted (see Figure 3.9), but this was the exception and the scope was more frequently limited.

A few rural drawings showed parents telling them about consequences, for example getting run over (see Figure 3.10).

Again there was little mention of specific hazards. One drawing referred to not crossing 'at sharp corners' and one to 'taking the safe route'.

In rural areas, a number of the drawings showed children using the roads on their own and in some instances on bicycles. Parents' advice to them as cyclists was very general, referring to their position on the road and emphasising the need to be vigilant. It included:

- 'stay on the side of the road';

Figure 3.9: What parents say Year 4/5 boy, rural



Figure 3.10: Consequences Year 4/5 girl, rural



- ‘watch out for cars’; and
- ‘look, look and look again’.

One rural drawing raised the difficulty of applying ‘stop, look and listen’ in situations where gaps in the traffic flow are infrequent – ‘I can’t cross because there are cars on the road’.

Year 5/6 and Year 6

These children struggled more to distinguish what parents do from what they tell them to do, as by this age these were often seen to be the same thing. There were signs of unaccompanied road use and, even for accompanied children, more active involvement in crossing:

‘I am pushing the button and waiting for the green man.’ (Girl, aged 11: town)

‘I am telling mum to watch the lights.’ (Girl, aged 11: town)

However, parents were still occasionally shown activating the lights at designated crossings. Unaccompanied children tended to show themselves using some form of road crossing or school crossing patrol, but this was not exclusively the case. The role of siblings, other relatives and friends also started to emerge, particularly for the town children:

‘My cousin and his friend tell me to “stop, look and listen”.’ (Boy, aged 11: town)

Accompaniment and handholding were relatively uncommon among this age group, but still sometimes shown together with the use of crossings, waiting for the ‘green man’, not crossing until safe, and instruction to ‘look both ways’ and ‘never walk on the road’. However, among the rural children, most of the drawings of children with parents showed them in a car. Being reminded to use seat belts emerged strongly for the rural children as one of the ways parents keep them safe – possibly reflecting greater car use among this group. Other aspects of good driving practice were also occasionally mentioned: obeying the speed limit, indicating and not using mobile phones. Only one drawing depicted the more general way that adults could keep children safe by ‘giving way to children’.

The use of bright clothing emerged in the rural drawings. Although rare, a number of additional specific issues emerged among the rural group, such as crossing unmanned railway crossings and not going into property where there might be fork lift trucks.

In terms of what parents tell their children, the drawings showed three types of comments about pedestrian behaviour:

- **Specific advice about road crossing:**
 - look/check before you cross the road;
 - look ‘left and right’, ‘both ways’, ‘both ways twice’ and ‘right, left, right’;
 - variants of the Green Cross Code – ‘stop, look and listen’ and ‘look, listen, hear and think’;
 - wait for the ‘green man’; and
 - use the pedestrian crossing/go to a lollipop lady.
- **General advice:**
 - be careful;
 - keep safe;
 - cars go very fast;
 - do not talk to strangers;
 - general reassurance that it is alright to cross; and
 - take your phone/watch.
- **Verbal control:**
 - for urban children this included:
 - stop at the edge of the road (on scooter);
 - wait;
 - hold my hand when crossing; and
 - do not run;
 - and for rural children this included:
 - do not walk on the road (if there is a path);
 - walk on the inside edge of the pavement;
 - wear bright/reflective clothes; and
 - not to go onto railway/industrial property.

An issue which emerged alongside the increase in independent road use was ‘don’t talk to strangers’.

By Year 5/6 most children had or were learning to ride a bike. Bike use featured most prominently in the drawings of rural children and their perceptions of the advice given by parents included:

- **specific advice about cycling:**
 - look both ways;
 - wear a helmet – keep your helmet on;
 - signal;
 - do not ride into oncoming traffic;
 - do not ride across the railway track until it is safe;
 - dismount before crossing a road;
 - dismount when you get to busy roads;
 - make sure your bike lights are working;
 - have a bell on your bike; and

- wear suitable clothes:
 - bright /reflective bands;
 - proper footwear; and
 - not baggy trousers;
- **general advice about cycling:**
 - be careful in the traffic/busy traffic;
 - do not ride recklessly/do tricks/cycle without hands; and
 - take a mobile phone with you.

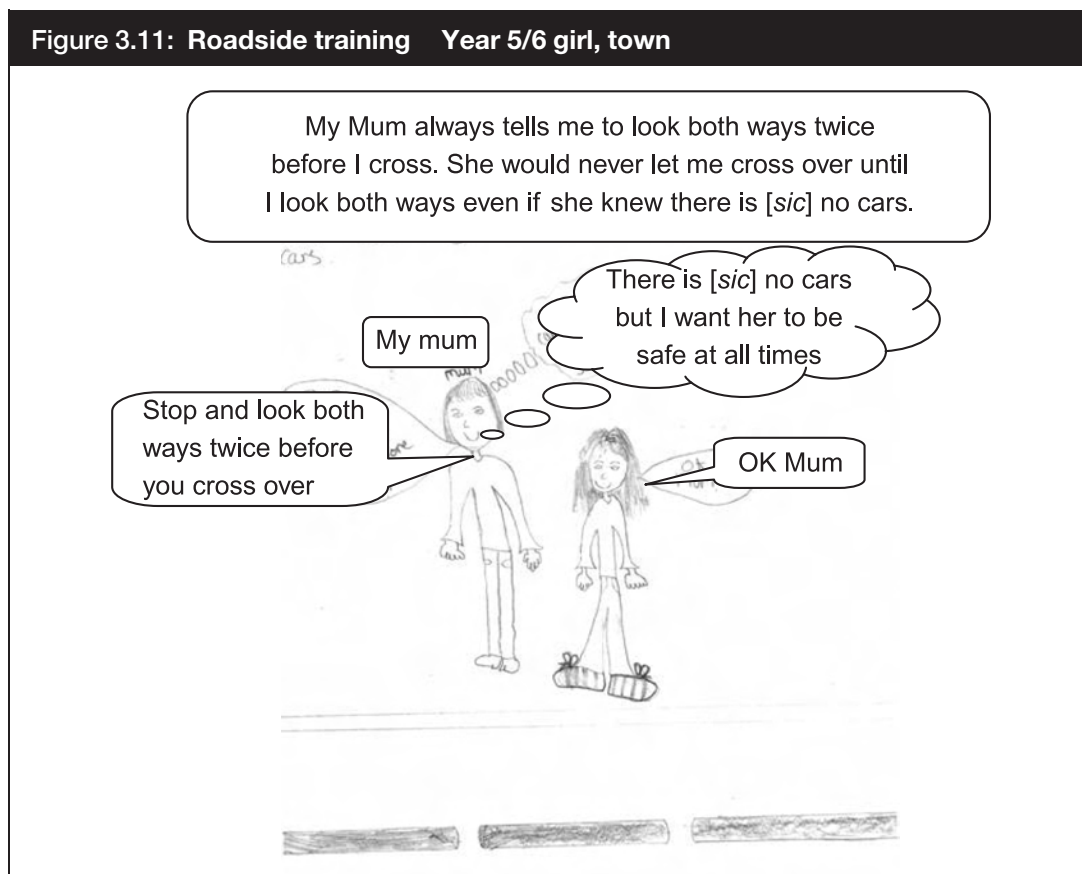
In relation to car use, parents telling them to wear a seat belt was mentioned and particularly so by the rural children, possibly linked to the high rate of car transport to school among this group.

Reasons or explanations underpinning the various instructions were rarely given, but were included on occasion, for example:

*'Look both ways to ensure there are **no** cars.'* (Girl, aged 11: town)

'Do not run across the roads so you will not slip.' (Girl, aged 11: town)

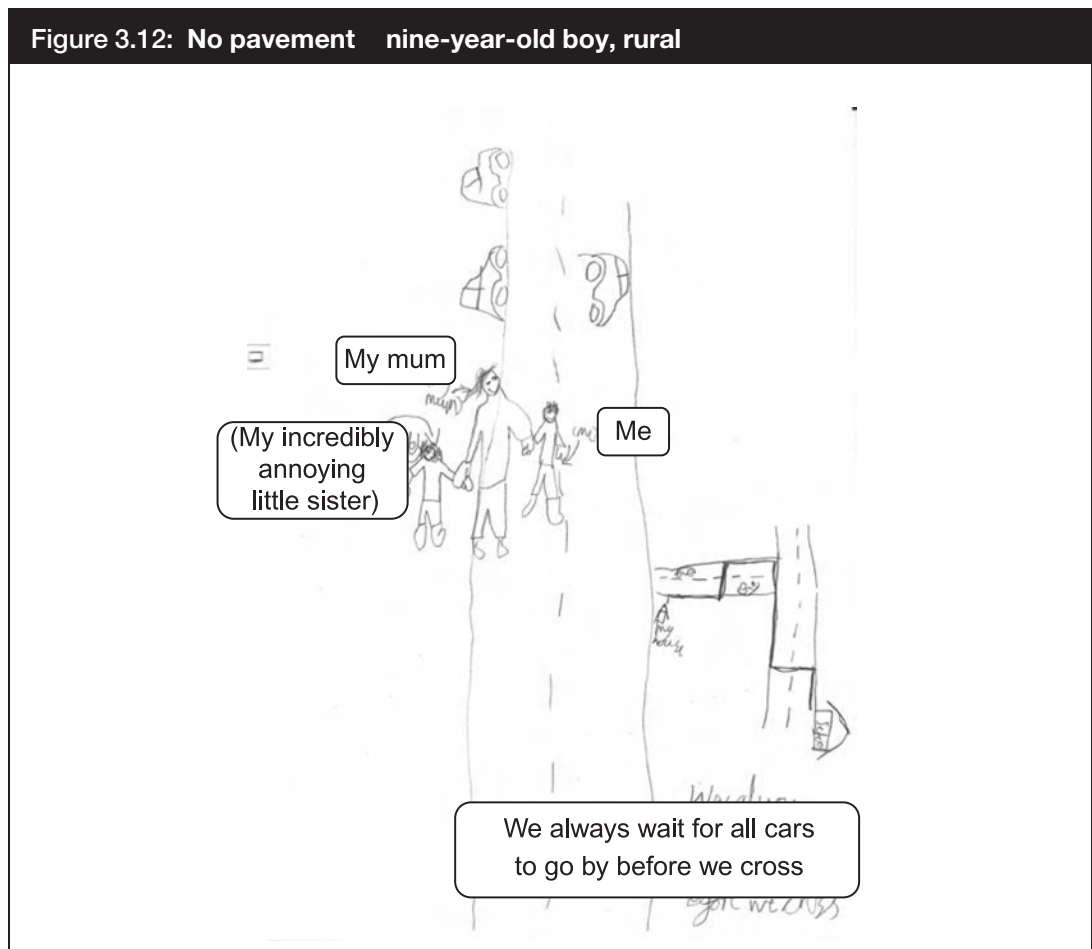
There was very little evidence of children being aware of the rationale underpinning their parents' approach, but one drawing indicated awareness that a mother was training her daughter to look even when there were no cars coming (see Figure 3.11).



3.2.1.5 Comparison of areas

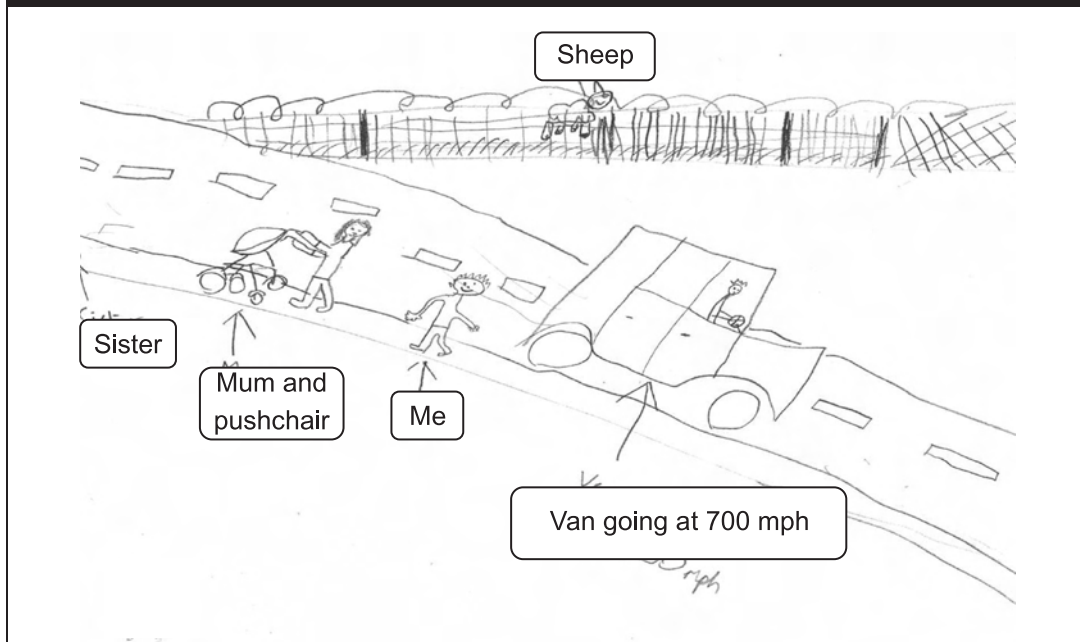
While the foregoing indicates commonalities across all groups within the various age bands, there are some differences between inner-city, suburban, town and rural children that are worthy of note.

The drawings, even in Year 1, showed high levels of awareness of the road environment. The urban and inner-city drawings tended to show an orderly demarcation between cars and pedestrians, with a solid line between the pavement and the road. While this was also the case for some rural drawings, the demarcation between the pavement and road was less clear and some even showed groups walking on the road (see Figure 3.12).



The rural drawings included traffic lights and crossings less frequently than the urban drawings. The speed of cars and cars coming out of nowhere and presenting a real menace or threat also emerged more prominently for the rural children (see Figure 3.13). For the town and suburban children, speed and traffic density were also an issue and ‘waiting for cars to stop’ was a strong theme to emerge. In contrast, the London and inner-city children placed greater emphasis on ‘waiting for the lights’.

Figure 3.13: Rural traffic Year 4/5 boy, rural



Particular issues for town children (especially Year 2) were standing back from the edge of the road/not slipping off the kerb and walking rather than running, possibly linked to the speed of traffic which was a feature of some of the drawings from town children.

Independent road use is depicted later in London children than other groups and higher levels of parental control, both physical and verbal, were maintained for longer. In contrast, the inner-city children showed signs of using the roads on their own comparatively young. The rural, suburban and town children, although often accompanied, tended to show themselves as having freedom of movement and communication with parents centred on verbal control, particularly their position on the road when young and how to cross the road with the older age groups. For these groups, independent road use is shown later than in the urban children, but earlier than those in London. When they acquire some independence these groups also appear to have greater freedom of movement. Bicycle usage was shown more frequently in the drawings of rural children.

Accompaniment by siblings features most prominently in the inner-city children, possibly linked to larger family size and shorter distances between home and school for this group.

3.2.1.6 Summary of progression

Year 1

High level of accompaniment and physical control. Responsibility rests totally with the parents. Communication was centred very much on ensuring compliance. For some children the distinction between fantasy and reality is not clear.

Year 2

Still a high level of accompaniment, but reduction in actual physical control – except in London where this remains high, and in situations of higher risk when physical control is re-established. Although parents are beginning to let go as far as physical control is concerned, communication is very much in terms of verbal control directed at children’s positioning on the pavement (keeping away from the kerb) and behaviour such as walking not running. Although children are allowed greater freedom of movement, parents are still in control of the situation. Communication focuses on control rather than on enabling children to take responsibility.

Year 3

Accompaniment and handholding are still high, but there is an increase in unaccompanied road use, especially among inner-city children. Some signs are beginning to emerge of children’s involvement in looking for traffic and supervised road crossing – but very limited. The emphasis is on stopping and waiting for traffic.

Years 4 and 5

Greater independence is evident, although accompaniment still features. For a few children, being with parents is seen to confer safety in itself, but more commonly parents are shown giving instruction about what to do on the roads, particularly where children have greater independence. Rather than this instruction being geared towards controlling the child’s movement, it tends to be concerned with telling children how to cross roads safely, for example ‘look both ways’. There is a greater emphasis on preparing children to cross roads on their own. However, children’s perceptions of what they are told is of patchy rather than comprehensive instruction/communication. Supervised road crossing was shown, but very infrequently. Children in very busy metropolitan areas, such as London, depict less independent travel, more accompaniment and compliance with their parents’ instructions.

Years 5 and 6

More independence is again evident. Handholding is rare. Accompaniment still features, but drawings show children separate from parents and actively involved in the process of crossing. More children are travelling alone and the role of siblings and peers emerges. Bicycle use starts to feature among rural children.

Distinguishing what parents do to keep children safe and what parents say was difficult as they are becoming the same thing. Although parents sometimes provide comprehensive, detailed advice, it is more frequently either vague or focuses on selected aspects.

What was *not* there

- A systematic, comprehensive approach to teaching children how to use roads safely.
- Explanations for road-crossing routines and underpinning the guidance about how to use roads safely.
- Consistency in the messages children are receiving (numerous variations on looking both ways and the Green Cross Code were mentioned).
- Warnings about specific hazards in the locality.
- Understanding traffic flow and driver behaviour.
- How to cope in hazardous situations, such as cars parked dangerously and when there are no gaps in the traffic.
- The opportunity to practise decision-making and road-crossing skills under parental supervision.
- Preparation for, and advice about, cycling in traffic.
- Accompaniment by adults when cycling on the roads.
- Parents attempting to reduce hazards in the road environment.

3.2.1.7 Summary

Box 3.2: Summary of key points – draw and write

- Physical control features prominently for younger children and in very busy, urban environments it is maintained with older age groups.
- Inner-city children, except those in London, appear to be allowed out on their own first, but are overtaken by rural and suburban children in relation to the freedom they have. London children are accompanied for longest.
- Younger children see ‘others’ and crossings as keeping them safe, rather than having any responsibility themselves. Older children show themselves as more involved.
- Patterns of behaviour are established early and re-enforced through repetition, for example always using the crossing, waiting for cars to stop.
- Communication with younger children centres on control, especially in the period when parents have just let go of physical control.
- The guidance, advice and road safety education given to older primary children is sometimes patchy when addressing specific issues, but frequently vague, for example ‘be careful’. When specific advice about how to cross is given, this frequently does not conform to current recommended practice and includes variations on ‘stop, look and listen’ or ‘look left and right’.
- Children making their own road-crossing decisions while supervised by their parents was unusual.
- Older siblings play an important role in helping some unaccompanied children cope with crossing roads. As well as control, in some instances they also provide instruction on how to cross roads safely, although this does not always conform to conventional guidance.
- Rural children see traffic as more unpredictable than urban children and may have to cope with the absence of pavements or footpaths. In contrast, urban children have a more orderly view, with a clear demarcation between the pavement and the road.
- Children were not always made to use seat belts and were very familiar with reasons for not doing so.

3.2.2 *Focus group discussions*

This section presents the findings from the focus group discussions with young people in Key Stage 3 (11–14 years old) and Key Stage 4 (14–16 years old). The

aim of the focus group discussions was to explore perceptions of risk, how young people manage risk and the ways their parents have attempted to influence their behaviour. The findings from all the young people of secondary school age are presented together in accordance with the themes emerging from data analysis. Where appropriate, direct quotations are used to highlight or emphasise specific points, and these have been anonymised to protect the identity of the young people.

3.2.2.1 Participants

In total, 146 young people participated in focus group discussions in a range of geographical areas. More girls took part (61.4%) than boys (38.6%). A summary of the participants is presented in Table 3.5.

Table 3.5: Composition of sample by area and school year						
Area	n	Key Stage 3			Key Stage 4	
		Year 7	Year 8	Year 9	Year 10	Year 11
		11–12 years	12–13 years	13–14 years	14–15 years	15–16 years
West Yorkshire suburban	64 (43.8%)		22		42	
Midlands urban	18 (12.3%)	9*			9*	
Yorkshire rural	43 (29.5%)		20	23		
South East urban/rural	21 (14.4%)		11		10	
Total	146					
*shared year groups						

3.2.2.2 Young people's perceptions of risks on the roads

Young people first discussed the types of risk they encounter when out on the road. They identified two main types of risk:

- environmental risks; and
- risks caused by others.

Environmental risks

The general road environment, including the high volume and speed of traffic, was recognised as being dangerous and risky. Some young people found it difficult to

judge when a pedestrian could safely cross the road, particularly on major roads with heavy traffic. Other specific environmental factors, such as a lack of pedestrian crossings and complex or confusing road layouts, were perceived as creating particularly difficult and dangerous road-crossing situations and compounding the risks on the road.

Risks caused by motorists and cyclists

Views regarding the dangerous and unpredictable behaviour of motorists creating risks for young people out on the roads emerged across all groups. This ranged from the more obvious and blatant dangerous driving behaviour to poor or inconsiderate driving. Examples included drink-drivers, people speeding, ‘boy racers’ and ‘joy riders’ (particularly for the urban and some suburban participants), failing to indicate correctly, having no headlights and ‘amber gamblers’ (speeding up as traffic lights go amber to avoid having to stop on the red light). The aggressive approach of some drivers towards teenagers was also noted. The young people mentioned cyclists posing a risk, particularly when they cycled at speed both on and off the pavement.

Threat from fellow pedestrians

Some participants spoke of the perceived threat from other pedestrians as influencing their road use behaviour. One specific example included a group of youths that frequently congregated in a particular place. In this case the young person chose to take an alternative route, crossing the road as quickly as possible in an attempt to avoid the more ‘immediate’ threat from this group. In other examples, young people stepped into the road to avoid possible confrontation.

Young people’s own behaviour

Young people recognised that some aspects of their own behaviour could lead to risky and dangerous situations on the road. Behaviours included both intentional and non-intentional risky behaviour. A few young people admitted to intentionally choosing to take part in high-risk sensation-seeking behaviour, such as ‘playing chicken’, despite being aware of the dangers. Some did this to conform to the behaviour of the group they were in, whereas others took a more independent decision to take risks:

‘I’m more likely to play chicken on the roads than say other people . . . you get I dunno – you get excited don’t you? Messing about thinking you are going to die – but you don’t. That sounds proper daft, but do you know what I mean?’ (Key Stage 4: suburban)

In terms of non-intentional risky behaviour, many of the participants mentioned not only general unsafe behaviours (such as playing football near roads and being distracted by equipment such as mobile phones and MP3 players), but also unsafe

road-crossing behaviour, including failing to use designated road crossings or not crossing in the safest possible place. The young people spoke of tending to take the most direct route across roads (especially when in large groups) instead of walking a little bit further to nearby crossings. Some of the young people, however, did state that they would use crossings if they were conveniently sited or the road was very busy. Even when they did use the crossings, the young people commented that they frequently lacked the patience to wait for the signal to indicate that they could cross.

Some participants recognised that there was often a general ‘carelessness’ with regard to road safety among their age group. For example, they spoke of young people ‘forgetting to look’ when crossing or ‘expecting’ traffic to stop for them when they step into the road. Overall, teenagers had a sense of personal invulnerability.

The tendency among young people to travel in groups once they are at secondary school was seen to have the potential to both increase and reduce the risk when out on the roads. On the one hand, it was felt that being part of a large group could put a person at greater risk, for example through not being able to fit on the pavement and getting ‘pushed into the road’, and the greater likelihood of being distracted, ‘messaging about’ and ‘acting more stupidly’ in the company of friends and peers. The dangers of individuals ‘following the crowd’, leading them to cross the road as a big group, oblivious to danger, were also noted. Being in a large group also made them less likely to use a designated crossing:

‘It’s embarrassing to use a crossing when you’re in a big group.’
(Key Stage 4: suburban)

Conversely, some young people said that they felt safer in large groups due to their greater visibility, leading to drivers being more cautious and more likely to stop if needed. One Year 10 participant commented on crossing the road in a group:

‘Because there’s a lot of us, the cars will stop – but you wouldn’t do it – well I wouldn’t do it on my own in that situation.’ (Key Stage 4: suburban)

There was an overall sense among the young people that, by secondary school age, they do know how to cross the road safely and that they are capable of weighing up the road situation and generally making safe judgements or taking calculated risks. However, despite having a good knowledge of ideal road safety behaviour, there was recognition among some of the young people that their road-crossing decisions were often influenced by convenience and what is easier to do – they believed they knew what they should be doing, but did not always do it. In addition, some participants perceived a tendency among people their age not to listen to their parents or to deliberately do the opposite of what they have been told.

Despite being confident in their ability to be safe road users, some of the older teenagers, reflecting on when they first started to go out on their own, admitted that they had lacked skills in judging safe gaps in traffic, leading them to be either over cautious or to take risks. Only experience had taught them how to assess the road situation and act accordingly. There was also recognition among one group of suburban participants that they had needed to adapt their behaviour to take into account the increase in traffic volume as well as the more obvious presence of joy riders and speeding drivers in their area.

Some young people described ways in which they ‘made allowances’ in their road behaviour to compensate for activity that affected their attention to the road environment. Examples included making more visual checks when crossing if listening to their MP3 player.

There was a belief among some female participants within one focus group that girls are generally more sensible than boys, being more likely to use designated crossings and not worrying about it being ‘uncool’.

3.2.2.3 Influence of others on young people’s road safety behaviour

The young people recognised that their road behaviour is heavily influenced by who they are with. Young people commonly acknowledged a tendency to pay more attention to the road situation, be more sensible and take more care when they were alone.

Influence of friends and peers

As mentioned previously, many young people were aware that their behaviour was often worse when they were out with their friends. They acknowledged that they were more likely to be distracted, pay less attention, mess about, show off and cross roads unsafely, and they were conscious that being seen to show concern about road safety may be regarded as ‘uncool’. While acknowledging their reduced attention to road safety when out in a large group of friends, participants in one focus group spoke of maintaining a sense of responsibility for their peers, stating that they would ‘pull them back’ if they stepped into the road when traffic was coming. This ‘duty of care’ however was limited and unspoken, and did not stretch to discussion about finding a safer place to cross.

Some participants stressed that they did not behave less safely with friends, and a few even noted the positive influence that their friends had on their road-crossing behaviour, helping to keep them safe:

‘Sometimes you have a friend who’s careful about crossing the road, and this makes you more careful. If they are always stopping at the road, you are stopping too.’ (Key Stage 4: urban)

Other participants spoke about caring for the safety of each other and commented that paying obvious attention to road safety would be accepted within some groups and not ridiculed.

Influence of younger siblings

Being with, or having responsibility for, younger siblings was noted by some participants as having a positive influence on their behaviour, leading them to pay attention, concentrate and act more responsibly. Some participants spoke of teaching their younger siblings about road safety. This included telling them 'rules' and physically showing them what to do. They were aware of their influence on their siblings and, consequently, the need to 'set a good example' and model safe behaviour. Some of the young people felt that they were actually obliged to be more responsible when with younger siblings as they were likely to be less aware of the dangers of roads:

'You have to be more responsible. You have to get them to do the right thing – wait here, wait for the green man.' (Key Stage 4: suburban)

'You have to tell them to look both ways and do exactly what you don't do.' (Key Stage 3: rural)

A few participants, however, described how trying to control younger siblings when out could be difficult and challenging, with one participant commenting that:

'My brother never listens to me, [he] does the opposite to me.' (Key Stage 3: rural)

Influence of parents

Similar to the influence of being with younger siblings, some of the young people spoke of a tendency to behave better and be more likely to follow road safety rules when out with parents (although some young people were keen to stress that they do not often go out with their parents). This improved behaviour was sometimes put down to parents being likely to shout at them if they behaved badly on the roads. Focus group participants spoke of how parents would occasionally give explanations as to why they believed the behaviour of the young person was unsafe. There was a feeling among some respondents that young people 'tend to do what their parents do' when out together, with parents resuming prime control over road-crossing decisions. Some of the young people stated that they felt safer when out with their parents, regarding them as more knowledgeable about road safety. For some, feeling safer was due to being driven by their parent.

Influence of other factors on young people’s road safety behaviour

Some participants spoke about behaving more safely after witnessing, hearing about or being involved themselves in road accidents. Being affected by news stories of accidents, as well as by memorials and flowers by the roadside, was also mentioned. There was some variation in the perceived length of time that memorials and flowers would have an effect on behaviour, with some participants viewing them as a constant reminder in contrast to others who felt they only had a short-term effect.

3.2.2.4 Responsibility for road safety

In relation to responsibility for their safety, young people felt that when they were younger this lay with their parents or older siblings. Young people of secondary school age commonly felt that road safety was a shared responsibility among all road users. Some of the young people saw themselves as being completely responsible for their own safety, both when out alone and when out with parents. Other participants, while viewing themselves as primarily responsible for their own road safety, felt that their parents should also assume some responsibility for their safety when they are out together. Some participants appeared to place all responsibility on to drivers:

‘It’s the driver’s responsibility – I mean they have brakes and they can stop whereas we might not.’ (Key Stage 3: rural)

3.2.2.5 Use of safety equipment

Seat-belt use

While young people of secondary school age were generally accustomed to wearing a seat belt, not all reported to using one consistently. Some participants stated that they sometimes ‘forgot’ to fasten their seat belt. There was a tendency among a few groups not to use seat belts for short distances or when they felt confident about the driver. For example, some did not use a seat belt when being driven by parents or friends or by taxi drivers, as they were regarded as ‘safe’. Conversely, when risk was perceived to be higher (such as when driving on a motorway), they were more likely to use seat belts. Travelling in overcrowded cars (i.e. not having enough seat belts for all passengers) was another reason given for not using a seat belt. The introduction of penalty fines for driving with passengers not wearing a seat belt had brought about a change in some of the young people’s behaviour, with them not wanting to be responsible for getting their parents into trouble. It is noteworthy that none of the participants showed any awareness of the current legislation which states that young people over the age of 14 are responsible for their own seat belt use.

There was a sense among some participants that there was less pressure on them from parents to wear a seat belt since they had got older. While participants recalled being fastened into a seat belt when they were younger, parents did not now

consistently check or remind them to use a seat belt, particularly when travelling in the back seat. Fathers, in particular, were described as most likely to fail to enforce seat-belt use. In addition to speaking of their own behaviour, it was also noted that younger siblings do not consistently wear a seat belt either.

Cycle helmet use

Some of the young people who were cyclists stated that they wore a helmet all of the time. Most admitted to never or only occasionally wearing one. Some parents told them to wear a helmet, but they took little notice of this. Some of the young people said that they wore a helmet when cycling with parents but not when alone or with friends. The young people gave a number of reasons for not wearing a helmet. Peer pressure was a principal influence, with fears about being ridiculed and laughed at. 'Vanity' was also raised – participants viewed helmets as unfashionable and described them as 'messing up your hair', 'looking terrible' and being 'not cool'. One participant was keen to point out that it was not just that helmets were 'uncool', but that it was actually cool not to wear one.

Participants also gave 'practical/safety' reasons for not wearing a helmet, including them 'getting in the way' when cycling, being uncomfortable and being cumbersome to carry around. It was clear that some of the young people who did not wear helmets had low perceptions of risk or vulnerability. They did not feel the need to wear a helmet and some of the young people justified not wearing a helmet:

'I never felt the need for one. If I fall off I always fall on my hands or chest.' (Key Stage 3: rural)

'No one ever falls off.' (Key Stage 3, rural)

While some of the young people had been influenced to wear a helmet through personal knowledge of injury to others, a couple of participants still did not see the need for a helmet despite being knocked off their bikes by moving vehicles. Gender differences in helmet use were evident within some focus groups, with female participants being more likely to wear helmets than their male peers. However, it should be noted that more boys than girls made reference to cycling. When asked whether they felt that cycle helmets were a good idea, some participants, despite not wearing one themselves, considered that they were a good idea. There was a mixed response to whether more young people would wear a helmet if changes were made to make them more fashionable or comfortable, or if it became law.

3.2.2.6 Methods parents use

The young people were asked to reflect on what parents said and did to keep them safe when they were younger compared to now. There was recognition among

participants that the role adopted by their parents in terms of road safety teaching had changed as they had got older.

A principal change was the reduction in the level of physical control, restraint and protection which parents exercised. Holding hands, being kept close and wearing reins and harnesses were remembered from when they were younger, as well as parents making them walk on the ‘inside’ or between parents. Physical protection from parents was not confined to the past for all participants, however, with some speaking of their parents still occasionally grabbing their arm and holding them back from walking out into the road.

Parents always accompanying them in the past to ensure safety was noted compared to now when they were more likely to cross roads alone. The young people spoke of having less independence when younger and being more controlled by parents, imposing rules and limitations on road use. Examples included not being allowed to walk to school or cross the road alone, having to get off their bike before crossing the road and being restricted with regard to how far ahead from their parents they were permitted to walk or cycle. Participants also spoke of their parents buying them protective equipment, such as helmets and cycle stabilisers, particularly when they were learning to ride a bike.

Some participants recalled their parents ‘showing and telling’ them what to do, and teaching and explaining about road safety rules (such as crossing at designated crossings and waiting for the ‘green man’). A few young people spoke of their parents involving them in road-crossing decisions such as pressing the pedestrian wait box button at crossings or being asked to judge when it was safe to cross. Parents warning them and making them aware of dangers on the road, and possible consequences of behaving unsafely (including being told stories of bad experiences of other people), were also remembered by a few participants. Being encouraged to watch videos with a road safety theme was a further way in which parents attempted to teach them to be safe road users when younger. The use of praise and reward, and conversely ‘bribery’ and threats, were additional methods used by parents, principally when children were younger. Parents threatening to withdraw privileges continued to be a method which parents used now their children were older.

Some participants spoke of how their parents still reminded them about road safety rules and continued to warn them to be careful on the roads; in contrast, other participants described how specific road safety advice had been replaced by more general and vague comments, such as ‘be careful’ and ‘take care’. There was also frequent mention of parents making remarks such as ‘don’t be silly’ and ‘don’t mess about’ (possibly reflecting how parents perceive teenage behaviour). Among some participants there was a sense that parents had now relinquished their responsibility with regard to road safety education, assuming the young people are able to use roads safely, and beginning to trust them:

'When you were young, your parents cared about you more [laughs] you know what I mean – but now they are less responsible, because they think you can do it.' (Key Stage 4: suburban)

'They don't show you any more.' (Key Stage 3: rural)

'They just let you get on with it and hope you are sensible.' (Key Stage 3: urban)

Age-specific advice in relation to road safety was also mentioned, including warning against listening to MP3 players while crossing, advice to be sensible when out with friends and reminders to take mobile phones. Within one focus group in a rural area, a few participants spoke of their parents giving more 'advanced' road safety teaching, for example in relation to explaining how roads work through discussing road signs.

Some of the young people had noted a change in the behaviour of their parents since they were younger in terms of modelling and setting a good example of safe road behaviour. While, in the past, their parents exhibited safe road use behaviour and acted as positive role models, participants described how parents were now more inclined to pay less attention to road safety rules in terms of both their own behaviour and the behaviour of the young people (for example crossing at a designated crossing before the traffic lights have stopped the traffic). There was a feeling that parents were 'allowing' them to take more risks. Some of the young people described how the changes in the behaviour of their parents had even lead to a 'role reversal', with them having to tell their parents how to cross the road safely. The focus groups also highlighted cases of differences between the behaviour of mothers and fathers, as highlighted by one young person:

'My mum was a good example but my dad wasn't – my mum used to always wait for the green man and still does but my dad just dodges the traffic.'

(Key Stage 4: urban)

3.2.2.7 Effective methods for parents teaching young people about road safety

Focus group participants were asked what methods they felt were or would be effective in teaching children and young people about road safety. A range of different methods and approaches were suggested.

Parents using physical control and protection such as holding hands were viewed as effective methods for keeping very young children safe. It was stressed, however, that such methods were not 'acceptable' to young people once they got older.

It was felt that parents should start to teach children about road safety from a young age. Being taught the rules of road safety, such as ‘wait for the green man’, coupled with information about specific road signs was regarded as useful. Alongside verbal instruction, parents physically demonstrating what to do and acting as a positive role model were deemed very effective. The young people felt parents needed to be consistent in their approach and ‘lead by example’. Practical roadside teaching was also viewed as an effective way to learn how to use roads safely.

According to the young people, parents need to be flexible in their approach and encourage the involvement of their children in making road safety decisions. Gradually giving independence, freedom of movement and responsibility to children (for example, by asking them to talk through how they are going to cross safely or monitoring them as they walk a short way ahead) were considered essential. The participants felt that children could be involved in road safety decisions from the ages of 7–8 years.

Along with ‘roadside’ teaching, participants noted the value of parents talking with their children about road safety away from the road environment. It was felt that discussing the consequences of unsafe behaviour and providing real-life examples (especially local) were particularly effective. Making the discussion appropriate and relevant, and targeting it towards the age group of the child, was also important.

Parents giving relevant practical advice (such as not putting bags on cycle handlebars) as well as providing safety equipment (such as reflective bands and helmets) were also viewed by some participants as beneficial to keeping young people safe (despite the fact that many of the young people claimed not to use such equipment themselves). Being accompanied by parents when learning to ride a bike was regarded as effective.

The continual reinforcement of road safety messages was felt to be important and the young people stressed the need for parents to continue even when their children became teenagers.

Some young people noted that using ‘praise’, ‘rewards’ or ‘bribery’ and ‘threats’ would encourage them to behave safely. Being reprimanded was viewed as effective so long as explanations were given. The establishment of clear rules and boundaries (and clear consequences if these are overstepped) was seen to be an effective means of influencing behaviour. Parents withdrawing privileges, such as not letting young people go out with friends if they fail to behave safely, was one example given – such definite consequences potentially having greater effect than the potential risk of injury.

3.2.2.8 Other methods for teaching young people about road safety

Despite the emphasis of the focus groups being on the ways parents provide road safety education for young people, many of them referred to methods that they particularly valued that were not parent led.

Schools were regarded as having an important role in teaching young people about road safety, and participants provided ideas for further initiatives and activities that they felt would be effective. Ideas for learning included discussing different scenarios and problem solving (creating opportunities for young people to think for themselves about the issues), as well as practical demonstrations both within the classroom and the road environment. Initiatives such as a 'Green Cross award' were also suggested.

Practical teaching, through cycling 'proficiency' courses, was also considered to be an effective method of teaching young people to be safe road users. The value of attending specific safety initiatives was noted, and the idea of road safety classes aimed at both children and parents was also raised.

Young people also identified the media as being effective in providing road safety messages to young people. Alongside road safety messages depicted in videos and cartoons, television adverts, in particular, were regarded by many participants as a powerful tool in raising awareness. The THINK! road safety hedgehog campaign adverts were remembered and were perceived as being useful for younger children. While campaign adverts aimed at drivers and teenagers were said to make uncomfortable viewing, it was generally felt that they were effective in gaining attention, principally through showing scenes with which viewers could identify. However, whether the adverts actually affected the behaviour of the young people or had a long-term impact were less clear. The potential of the internet to deliver road safety messages and teaching was also raised.

Above all, participants stressed that, to be most effective, road safety education should be interesting and fun.

3.2.2.9 What does not work?

Participants were also asked for their opinions as to what does not work in terms of influencing young people to be safe road users. Ineffective methods included parents trying to accompany young people (especially when they are with their friends) as well as 'nagging' and 'shouting' without giving explanations. As mentioned previously, participants spoke of the danger of young people rebelling and deliberately contradicting what they had been taught. With regard to road safety campaigns, the young people felt that the use of celebrity endorsement or other key figures did not appeal to them.

3.2.2.10 What have young people not been prepared for?

The young people were asked whether there were any road situations for which they did not feel they had been adequately prepared. Dealing with emergency situations on the road was mentioned. Some young people who cycled felt unprepared for all traffic situations and suggested that advanced cycling ‘proficiency’ training should be made available in all secondary schools. As well as being dependent on their parents providing transport, many participants living in rural areas commented on having had inadequate opportunities to learn about road safety due, for example, to a lack of exposure to busier roads and the lack of designated road crossings on which to learn. They spoke of their learning being restricted to when their parents took them into nearby towns. For some young people this had meant acquiring skills and experience of negotiating busier environments considerably later than children living in more urban areas. Moving to secondary school had been the first time that some had used busier roads without being accompanied by a parent. Two participants living in rural areas raised this issue:

‘The village I live in is very remote and only has one shop there and that is about a mile away. . . you need to have responsibility to go there. Now I have to walk to the bus stop and walk to school, but we weren’t very well prepared for going into town and places like that – it’s very different.’

(Key Stage 3: rural)

‘Until I came here [secondary school] I hadn’t really been given the responsibility to walk to the bus stop on my own, catch a bus on my own and then get to the right school – I wasn’t very well prepared for that.’

(Key Stage 3: rural)

3.2.2.11 Summary

Box 3.3: Summary of key points – focus group discussions with young people

- Young people are aware of the risks of the road environment and see the high volume and speed of traffic, as well as the dangerous behaviour of other people (especially drivers), as principal threats to safety.
- Young people recognise that some aspects of their own road use behaviour and that of their peers could put them at risk. This included being distracted by equipment such as mobile phones, irresponsible behaviour when walking in groups and sensation seeking (such as playing ‘chicken’).
- In some situations, the presence of other people (such as parents, friends and younger siblings) was reported to have a positive influence on road behaviour.
- Overall, young people feel that they know how to cross roads safely. However, they often choose not to follow best practice due to factors such as peer pressure, convenience and not seeing road safety as a priority.
- Young people of secondary school age were very confident about knowing what to do. However, older teenagers admitted that they lacked skills in judging safe gaps in traffic when they first started to go out on their own and were either overcautious or took risks.
- On reflection, young people felt that parents taught them as young children principally through simple verbal instruction when out on the roads. The role-modelling influence of parents was also very important.
- For young people, the input of parents was more likely to be through vague reminders such as ‘take care’ and ‘don’t mess about’. There was a sense that parents had relinquished much of the responsibility for road safety to the young people.
- Young people noted that, in many cases, the road safety behaviour of their parents had got worse since they were younger. Parents often paid less attention to road safety rules and, in some cases, young people felt the necessity to remind parents of safe behaviour.
- A range of methods were felt to be effective for teaching young people about road safety. These included verbal and practical instruction, reminders about rules and reinforcement of relevant road safety messages. Parents leading by example and being positive role models were also seen as vital.
- Some young people spoke of their parents’ role in providing and attempting to enforce the use of road safety equipment. However, parents often failed to implement seat-belt and cycle-helmet use and, consequently, many young people did not consistently wear seat belts and many never wore helmets.

3.2.3 Drama workshops

The themes to emerge from the analysis of the drama workshops are presented by Key Stage to identify pertinent issues for each age range. This is followed by a summary of the issues emerging in the different urban–rural groups, and with respect to age and gender. In the case of the drama workshops, it is important to consider that the findings represent children’s and young people’s perspectives on the ways parents influence children’s and young people’s safe road use, and also what they themselves perceive to be the most effective and least effective methods that parents use to prepare them to use roads safely. Anonymous quotations that were noted verbatim by researchers during the drama workshops are used to highlight specific points throughout this section.

3.2.3.1 The participants

The composition of the sample is summarised in Table 3.6. A total of 507 children and young people took part in the drama workshops – slightly more girls (53%) participated compared with boys (47%).

Area	n	Key Stage 1		Key Stage 2				Key Stage 3			Key Stage 4	
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
		5–6 years	6–7 years	7–8 years	8–9 years	9–10 years	10–11 years	11–12 years	12–13 years	13–14 years	14–15 years	15–16 years
West Yorkshire suburban	140 (27.6%)		45				44		26		20	5
West Yorkshire inner-city	108 (21.3%)		28	30				22		28		
West Yorkshire inner-city/suburban	53 (10.5%)					53						
Midlands urban	87 (17.2%)		25				14			25	23	
Yorkshire rural	64 (12.6%)	11		25					28			
London inner-city	55 (10.8%)	28			27							
Total	507											

3.2.3.2 General comments

All participants, irrespective of age, felt that road safety was more of an issue for primary (Key Stage 1 and 2) rather than secondary age (Key Stage 3 and 4) children. The older the participant, the more likely it was that they did not perceive road safety education, particularly that delivered by parents, to be relevant to them. Even those older children and young people who had been involved in, or had witnessed, a road traffic incident did not necessarily view road safety education as a priority for themselves or their peers.

In many cases, in order to comment on the ways they had learnt about road safety, secondary school and sometimes older primary aged participants had to think back to when they were younger. They reported that, once they started travelling independently, parents and other key figures played a very small role in terms of influencing road use behaviour.

Despite this, all of the age groups that participated felt able to comment on methods or strategies that they felt would be effective ways for parents to influence road safety. They considered both their own peer group as well as younger age groups, and equally identified methods they thought did not work.

3.2.3.3 Workshops with primary school aged children

Key Stage 1: key themes

The methods parents use to keep their children safe on the road

The Key Stage 1 groups clearly emphasised that accompaniment and high levels of control, particularly physical contact, were the main ways parents influence road safety for children their age. They did, however, recognise parents as having an educational role as well, with a clear aim of teaching them how to use roads safely:

'You need to know what to do in order to cross the road safely.'
(Year 2: inner-city)

Education was seen as primarily instructive, with the foundation for road safety education lying in learning the 'rules' of road use. These rules were predominantly based around road crossing and the 'stop, look, listen' principle at this stage. There was also particular reference to using designated crossings:

'Don't cross at the red man.' (Year 1: inner-city)

'Cross when green, not red.' (Year 2: inner-city)

'Push the button to cross.' (Year 2: urban)

'Use the lollipop lady.' (Year 2: suburban)

Interestingly, children commented on designated crossings regardless of whether they lived in an area where these types of crossings were available.

Some children made reference to learning the rules about road safety in a theoretical context whether at home or in school, but mostly parents taught them when they were out using the roads.

One of the differences between the Year 1 and Year 2 pupils was that only the older groups mentioned their parents being a role model from whom they could learn about road safety:

‘Watch what your mum does first, before she tells you what to do.’ (Year 2: inner-city)

However, a number of the Year 2 children also recognised that parents did not always demonstrate best practice when they were out and could therefore be a negative influence on the ways children use roads.

Effective strategies parents use to enable children to use roads safely

When the groups were asked to explore the methods they thought would be the most effective, the use of physical control to maintain safety was popular. Handholding was seen to be the most effective method of maintaining contact and control, but some participants thought reins, harnesses and wrist straps were also useful. One child described these devices as providing a ‘safety net’ for parents to allow controlled freedom.

The children felt that the teaching of road safety rules was important but that it had to be combined with practical roadside experience. There were a number of suggestions of things for parents to teach their children when out using the roads, including:

‘Tell their children to stop, look and listen.’ (Year 2: suburban)

‘When the red light is showing don’t cross. When the green light is showing –you can cross.’ (Year 2: inner-city)

‘Teach the child to listen and explain about looking both ways.’ (Year 2: urban)

The role-plays developed by the children emphasised this by showing the ‘parent’ breaking down the road-crossing activity into several manageable components and teaching this by the side of the road. However, all the teaching was carried out in a didactic manner, without actually involving the ‘child’ in the activity any more than encouraging them to simply follow their ‘parental’ lead.

A number of Year 2 pupils emphasised the importance of practice to develop skills in road crossing and within different environments. They suggested starting off with simple road-crossing exercises and graduating to more complex crossings or those in unfamiliar environments. The need for explanation and discussion in conjunction with instruction was thought to be essential.

The view was expressed that, for parents to teach and explain the rules of road safety, they needed to know the rules themselves. There were also clear indications that parents should ensure their children behaved properly out on the roads in order to instil behavioural norms.

Furthermore, parents need to check their children are following their teaching or instructions, and, if necessary, to enforce and reinforce behaviours, for example in relation to seat-belt use:

'Tell them to put on seat belts and check they've done it. Parents often just think they have – children have to remind them.' (Year 2: urban)

A strong theme among the Year 2 groups was not only explaining why children should behave in a certain way, but pointing out that the consequences of unsafe road use behaviour might be an educational device. However, their views of consequences were couched in very general terms:

'Cross on the green man or you might get hurt.' (Year 2: inner-city)

'It's dangerous not to wear a seat belt.' (Year 2: rural)

'You need to be careful of cars.' (Year 2: inner-city)

When asked what methods would be effective for engaging the attention of a less co-operative child, most of the groups suggested direct or indirect physical contact and a verbal control with a firm authoritative voice to deliver instruction. During the role-plays many of the children moderated the tone and volume of their voice to enact this. Some groups also suggested the use of threats/punishment or incentives. The threats/punishments involved immediate removal of toys either to reduce distraction or aid concentration, or to apply some restraint, such as reins, harnesses or being put in a pushchair 'like a baby' on the basis that this would cause extreme embarrassment to the child. Incentives were recommended in the form of sweets, biscuits and snacks using a 'carrot and stick' approach:

'If you are a good boy I will buy you some crisps.' (Year 1: inner-city)

Key Stage 2: key themes

The Key Stage 2 (7–11 years old) participants were encouraged to consider road safety education and methods used with children younger than themselves as well as their own age.

The methods parents use to keep their children safe on the road

There was much less emphasis within this age group on control and physical contact. In contrast, parental instruction emerged as the most common form of interaction about road safety. Moreover, the range of examples for crossing broadened beyond the use of designated crossings familiar at Key Stage 1 to include places without formal crossing opportunities.

The influence of parents acting as a role model was also identified, particularly by the older children in this group. For the most part, parents were seen to be good role models, but as both the older Key Stage 1 and 2 participants pointed out parents could not always be relied on to ‘do the right thing’:

‘My dad always makes me cross in dangerous places.’ (Year 6: suburban)

A number of children in the Key Stage 2 groups were allowed to cross the road on their own. The first mention by parents that children would be allowed out alone was accompanied by the first appearance of warnings by parents about ‘stranger danger’ in what they told their children.

Effective strategies for teaching children to use roads safely

When asked to reflect and advise on the best ways to teach younger children to be safer road users, there was a definite view that road safety education should start early and, although some participants suggested not starting until children were 5, 6 or even 8 years old, most felt it should begin with the pre-school age group. Instruction should be accompanied by explanation and should be then combined with the physical control required by this young age group to keep them safe.

For older primary aged children there was a shift away from parents using physical control to concentrating on instruction combined with explanation. They thought being taught the rules of road safety was essential, and that these rules should be taught at a young age. However, in order to prepare children (such as themselves) for independent road use, this type of simple instruction should be delivered with more detailed explanations focusing on how and why. It was also felt that their learning would be reinforced by:

- understanding what made unsafe practices unsafe;
- discussion about safety issues when out on the roads with parents; and
- involvement of children in decisions about crossing.

The use of incentives as well as threats/punishments was also brought up as a potentially effective method. Examples given were more specific than at Key Stage 1. The threat or actual removal of a particular treasured possession or privilege was thought to be an efficient way to curb bad behaviour, whereas incentives such as favourite sweets or trips to the park were recommended to encourage safe behaviour.

Giving details of the actual consequences of unsafe road behaviour when explaining about safe road use practice was seen to be a valuable tool by this group as well. The older the participants, the more graphic the explanations of consequences:

'You might get run over if you can't hear the cars coming.' (Year 5: urban)

'They [the cars] nearly killed you every time you crossed the road without looking for cars.' (Year 4: inner-city)

The consequences of the child's actions on others and not just themselves were also raised. For example, within a role-play the 'child' had stepped out into the road without looking and was made by the 'parent' to go and apologise to the driver of a vehicle forced to stop.

There was a strong emphasis in all the Key Stage 2 groups on the importance of gradual responsibility in preparation for more independent road use. Getting involved in road-crossing activity from pressing the button at the pedestrian wait box, to choosing the safest place to cross, to judging safe gaps in traffic was thought to be the most effective way to learn. Parental accompaniment and supervision were thought to be important ways to support this style of learning in order to check, feedback and modify behaviour as needed, while at the same time ensuring that the child is safe. A number of participants felt that not all parents were aware of their children's actual behaviour, and this could affect children's road use as dangerous behaviour could go overlooked or unchallenged. The idea of parental surveillance to check on unaccompanied children's behaviour was thought to be an acceptable way to check for safe road use practice. Where actual accompaniment was not feasible, checking from a distance was recommended or, as some of the urban participants suggested, friends and neighbours could be recruited to this role if necessary.

Overall it was agreed that older children should know how to cross the road before being allowed to travel independently and that they should only be allowed to do so if they proved they could behave safely.

Being allowed to travel on their own conferred young people with some sort of status. Any return to being accompanied by parents to school or other places was then seen as embarrassing. Accompaniment by parents, or the threat of accompaniment for those who already travelled independently, was therefore a powerful strategy for encouraging safe behaviour.

The focus of virtually all the workshops, established by the participants, was on the child's behaviour and how parents could influence this. However, it is noteworthy that one group raised the issue of 'parent power' to take action to reduce risk. In one role-play the 'child' character complained that it was difficult to cross a particularly busy road and his 'mother' suggested that she could campaign for a crossing to make it easier and safer.

3.2.3.4 Secondary school workshops

Key Stage 3: key themes

The methods parents use to keep their children safe on the road

When asked how they had learnt to be safe on the roads, the Key Stage 3 group made references to parents teaching them 'when they were tiny', and using slogans such as 'stop, look, listen'. The participants also felt that they had learnt by watching what other people did in different situations, particularly their parents. Overall, however, there was very little reference to explicitly being taught by their parents.

When asked to comment on what parents did to influence road safety for their own age group, some participants mentioned general advice that parents gave them, including non-specific guidance to take care on the roads, ensuring they have their phone with them and staying close to friends. One young person said that his parent had taken him on different forms of public transport in preparation for going to secondary school on his own, but such examples were rare. For the most part, participants felt that parents started teaching children at about 6 to 7 years of age and then usually stopped at age 9–10 when children 'knew it all', so did not need further telling. They emphasised that parents need to realise that their teenagers (referring to themselves) were no longer 'little' and therefore did not need teaching about road safety. It was felt at this stage that parents should trust their children and give them the responsibility that they felt they deserve.

Another issue to emerge from these workshops was the number of road traffic incidents that the participants had witnessed during day-to-day travel on the local roads, particularly those who lived in inner-city areas. The way these experiences were recalled indicated that they had a major impact on those involved either directly or as witnesses. Many of the participants stressed that such incidents, whether they resulted in a simple 'near-miss' or actual injury and damage, were actually the main way that they learnt about road safety now. This 'real-life experience' was a strong theme throughout. If parents were also present such an event provided an opportunity for discussion between parent and child about the risks on the road. However, for the most part, the parents were not at the scene and many young people said they were unlikely to report being involved in a near-miss or incident for fear of possibly being told off.

Although many of the participants appeared to be able to piece together the events that lead to an incident or near-miss, there were differing views about responsibility and cause. Some of the young people clearly felt that, for the most part, accidents were predominantly the fault of other people, with particular reference to drivers. They did not immediately see their own behaviour as a contributory factor. For example, one participant reported that ‘a car came out and hit me’, but on further prompting it transpired he had not heard the vehicle as he was cycling while listening to music and had not visually checked to see if any vehicles were coming.

Effective strategies parents use to enable children to use roads safely

With regard to what these young people felt parents should do to enable their children to use roads safely, they focused on the parents’ role to keep young children (pre-school and young primary school aged) safe through using direct physical control. They also supported some of the younger participants’ views that parents should not only tell their children what to do in terms of teaching the rules of road safety, they should also explain why they should do it and check that they are doing it. There was a feeling that parents who do not enforce safe behaviour are not fulfilling their responsibilities.

There was also acknowledgement that at their age (Key Stage 3, 11–14 years old) children and young people not listening to their parents was a barrier to encouraging safe road use behaviour. Nonetheless, they thought that parents should not allow children to go out independently until they had shown that they know what to do when out on the roads. It was also suggested that parents could use their own experiences, or examples of real-life situations, as an educational tool and this would be beneficial in terms of bringing home the potential danger and consequences of unsafe behaviour to the young person. Alternatively there was the suggestion that parents should appeal to the individual young person to behave safely. First, as parents explaining how important the child is to them and how their being injured would affect them personally, and second how it would affect the individual child. Here the focus was placed on what the child or young person stood to lose, either in terms of ability, as there was an awareness that injury could seriously affect lifestyle, or aesthetic reasons, such as damaging ‘your looks’. Other motivators were seen to include avoiding humiliation or loss of dignity. An example given to motivate safe behaviour for a young male cyclist was:

‘Think of all the girls who would laugh at you if you hurt yourself.’
(Year 9: urban)

Key Stage 4: key themes

The methods parents use to keep their children safe on the road

The older participants in Key Stage 4 (14–16 years old) had similar perceptions to the younger groups about how their road safety behaviour had been influenced, in

terms of watching their parents, as well as being taught the rules of road safety as young children and learning from the experience of day-to-day road use.

With regard to how their parents were seen to influence their road use as teenagers, few of the participants felt their parents involved them in any formal road safety education over and above general messages of ‘take care’ and ‘be safe’ delivered before they left the house. As with the Key Stage 3 participants, there was the common feeling that parents should trust their children and accept their maturity. Any further development of what they already knew about using roads safely came from their own experiences of using roads. A few participants made reference to learning from near-misses and other risky situations, but this was not as prevalent as with the Key Stage 3 groups. In fact, a number of Key Stage 4 participants admitted to becoming more sensible as they got older.

What emerged from these groups was that a number of these young people demonstrated a deeper understanding of their role as pedestrians, cyclists and overall road users in preventing road traffic collisions and injuries. They recognised their lack of skill and experience when they were younger, newly independent road users and acknowledged that they may have contributed to the number of near-misses or incidents they had encountered. However, there were still divided views on the main cause of road traffic incidents. The young people from the suburban areas, in particular, saw motorists being predominantly to blame for pedestrian casualties, whereas other participants recognised that other people’s behaviour could be a contributory factor. The notion of being ‘lucky’ or ‘unlucky’ also emerged in the context of getting away with potentially risky behaviour. Although there was an awareness of the impact a road traffic incident could have on their lives, many of the young people had a sense of personal invulnerability to the dangers on the roads.

Effective strategies parents use to enable children to use roads safely

The Key Stage 4 participants felt that road safety education was important for children and emphasised that, in order to be effective, parents should use multiple methods to encourage safe road use. These methods included playing games with young children to introduce road safety rules as well as practical roadside teaching with appropriate instruction and explanation. There was an emphasis placed on making road safety education interactive and fun, but to ensure the message was in no way trivialised.

The participants were aware of the complexity of trying to influence safe road use with their age group. They admitted teenagers often ignored parental input, partly because this is ‘what teenagers do’, but also because they feel they know it all already. This group was also conscious that as young people get older their learning comes mostly from experience of using the roads, rather than more formal ‘road safety education’. However, parents were still thought to have a role in the reinforcement of safe road use through reminders of the consequences of unsafe practice, for example referring to real-life events that the young person could

identify with and their consequences. There were mixed views on the effectiveness of parents giving vague advice to 'keep safe'. Some participants thought these continual cues worked as reminders to keep safe, whereas others felt they had no impact and were borderline nagging and possibly counterproductive. Lastly, the provision of safety equipment where required was also seen as a parental responsibility, although the actual use of equipment such as helmets was low.

3.2.3.5 Cycling

Although most participants chose to focus on pedestrian activity, some looked at cycling, particularly those of secondary school age and those not living in highly urbanised areas. Parents were seen as instrumental in teaching children how to ride a bike initially, but few participants of any age reported cycling regularly with their parents. This was in marked contrast to pedestrian behaviour, where being accompanied featured prominently in relation to control, providing the opportunity for shaping behaviour through repetition, modelling and more explicit attempts to educate. Learning how to cope with traffic when on a bike is therefore different from what happens as a pedestrian. Cycling 'proficiency' training was the most cited influence.

Many of the children did not go out on the roads on their bike, cycling mostly on pavements around their homes or in the park. Some of the primary school aged children were made to wear cycle helmets by their parents, but the older participants felt that their parents could not enforce helmet use. Young people who used their bikes on the road commented that parents simply gave them general warnings to be careful when out on their bicycles. The transition between using bikes on pavements to road use and any parental intervention at this time was not made clear.

The issue of using bikes when doing newspaper rounds was also raised and the particular hazards of: balancing on the bike while carrying a heavy bag, poor early morning light, not paying sufficient attention because of being in a hurry, being tired and being overly familiar with the route. However, parents (or indeed newsagents) did not seem to address any of these issues.

3.2.3.6 Car use

All the participants were aware of the need, indeed the requirement, to use seat belts. Parents were either very firm and enforced seat-belt use, or had a more casual approach – not checking that belts were fastened or giving mixed messages. Two Year 6 children highlighted some of these issues:

'Sometimes [my dad] only makes me put my belt on if we see the police.'
(Year 6: inner-city)

'Dad says I only need to put on [a] seat belt on long journeys.'
(Year 6: inner-city)

It was felt that parents would be more effective by always insisting on seat-belt use, checking and being consistent in their own use of seat belts.

3.2.3.7 Least effective methods used by parents to influence road safety education – all age groups

During the workshop the participants were also asked to explore what methods they felt were least effective for parents to influence road safety education. There was a unanimous feeling throughout all the age groups that the most ineffective methods that parents could use were nagging and shouting at children and young people. There was an appreciation that, in certain situations, where danger was imminent, shouting as a warning was appropriate, but at other times it was not effective and a firm tone was more appropriate. Nagging (interpreted as constantly asking someone to do something they already know they should do or are reluctant to do as opposed to the use of appropriate verbal cues and reminders) was felt to have the opposite to the desired effect.

Whereas the younger participants saw that punishment, threats of punishment and incentives had a role to play in influencing children's safe road use, the older secondary school age young people recognised that, although parents did attempt to use these methods, they were far less effective for their age group. This was mostly due to the fact they rarely went anywhere in the company of their parents and what their parents could not see they did not know. So threats such as 'if you don't wear your cycle helmet I will take your bike away' and 'if you don't use the crossing I won't let you go out on your own' were simply empty threats.

Children and young people also complained about parents not always 'practising what they preached', delivering inconsistent messages, exhibiting inconsistent behaviour and not enforcing safe road use. This reportedly led to children and young people being confused as to what was the correct way to behave or even equating maturity with not having to conform to conventional road safety practice. This therefore lessened the impact of other road safety education.

3.2.3.8 Comparisons of areas

Young people living in inner-city areas showed a high level of awareness of the risks associated with urbanised environments – including joy riders and police chases. This group also appeared to have witnessed or experienced more collisions and near-misses than those living in suburban or rural areas. In addition to the risks, some protective factors were also identified within urban environment. The existence of closely knit communities within some densely populated urban areas provided a wider network of individuals who could be involved in safeguarding

children. Primary school aged children living in such an area reported siblings, aunts, uncles, grandparents, other extended family and neighbours having an influence on road safety. Those who had younger siblings already took an active part in their sibling's road safety education. Such a 'community' approach did not emerge in the other areas or, indeed, all the urban areas.

The participants from the rural areas, particularly the very young children, discussed the rules of road safety in similar terms to the children from more inner-city areas. What was striking was the continual reference to the use of designated crossings, including school crossing patrols, even when these did not exist in the local area. Whether this was because the focus of much road safety education is on 'busy' areas and the use of designated crossings was not clear. However, the messages do not appear to be adapted to the local context.

3.2.3.9 Comparison of gender

No major differences emerged between the issues raised by male and female participants in the workshops. Both sexes described similar experiences, both positive and negative to the other, although the male participants did report having witnessed or been involved in more road traffic incidents. It was the general attitude and behaviour of the participants observed that seemed to influence their perceptions of road safety education rather than their gender.

3.2.3.10 Summary of progression

With regard to the ways children identified that their parents had influenced their road use, there was a clear progression in what parents did to suit the age and development of the child.

For Key Stage 1 children, parental accompaniment and physical contact featured prominently, combined with instruction on how to cross roads safely.

Physical contact and control decreased during Key Stage 2 but the children were still predominantly accompanied when out until Years 5 and 6. Instruction remained the main form of teaching, but with more explanation including the consequences of unsafe road use behaviour. By Key Stage 3 and 4 most participants felt their parents had little input into road safety education, and that any learning was mostly through their own experience, either of using the roads day to day or more powerful experiences based around involvement in or witnessing road incidents.

Children's views about the most effective methods for parents teaching road safety followed a similar pattern, with emphasis on using a comprehensive and consistent approach.

References to pre-school aged children saw accompaniment as critical together with physical control. Techniques such as handholding and reins and harnesses were seen to be effective ways of maintaining safety, and for providing an opportunity to teach road safety rules at the same time. Practical roadside teaching was perceived to be the most useful way to teach children, but reinforcement through play and reinforcement away from the roadside was seen to have some benefits.

For young primary age children, more variable physical control was suggested depending on the level of environmental risk and the behaviour of the child. For this age group it was felt that instruction should be accompanied with a clear explanation of the importance of safe road use including detailing the dangers and consequences. Preparation for independent road use requires practising road crossing in different environments and getting involved in road-crossing decisions, while still under close supervision from parents. Only when children prove they can cross the road safely and consistently should they be allowed out alone.

For those children who travel independently, some early monitoring of behaviour was thought to be helpful so that parents could provide feedback and, if necessary, try to modify any risky behaviour. Ensuring young people continue to understand the risks of unsafe road use behaviour through the use of real-life experiences and other awareness raising was thought to be the most useful strategy for parents at this stage in their lives when many young people have a strong sense of invulnerability.

3.2.3.11 Suggested support for parents

The participants were also asked whether they could identify anything that might support parents in helping their children to learn to use roads safely. For younger children, games incorporating road safety information were seen to be useful, either in the form of board games or less structured play with road mats, cars and/or dolls. Booklets, leaflets, magazines, videos, web sites and posters were seen to be informative support material for all ages, although it was suggested that these materials would only be of benefit if they were age appropriate and appealing to children and young people. Other methods suggested included road safety songs, poems, raps and cartoons which children and young people could learn and recite to reinforce messages. Films and adverts showing the direct consequences of road traffic incidents were felt to be effective for older children and young people, but they had to appeal very specifically to this group, and there was divided opinion over whether they were effective for all. Other suggestions included the opportunity for parents and young people to campaign for more crossings or other road safety interventions to create a safer environment for road safety education, and for practical roadside and cycle training from external agencies to reinforce parental training.

3.2.3.12 Non-parental road safety education provision

Despite clearly stating that the aim of the workshop was to ascertain the parent's role in influencing safe road use, all the groups that participated in the data collection made references to types of road safety education not delivered by parents. This included input from school crossing patrol officers, road safety officers, the police and schools, particularly at Key Stage 1 and 2 level. There were also many references to media campaigns, although knowledge of these was patchy in some areas. As previously mentioned, cycle training or 'proficiency' was seen as one of the most high-profile interventions.

3.2.3.13 What was not there?

- The use of specific messages applicable to the young people's particular local area was scarce, especially with regard to children living in rural areas.
- References to any parent-led cycle training, particularly on-road cycling, after primary school age.
- References to parents providing any information or advice about safe road use behaviour and drugs and alcohol.
- Any parental education on how to cope in hazardous or dangerous situations, or the procedure if a young person is involved in, or witnesses to, a road traffic incident.
- Any indication that parents are using opportunities such as travelling in the car to teach children, and particularly young people, more about safe road use.
- Any evidence of parents and other road safety education providers working together to deliver road safety education.

3.2.3.14 Summary

Box 3.4: Summary of key points – drama workshop

- Road safety is an issue seen to be predominantly for primary rather than secondary school aged children.
- All children reported that parents initially used a variety of methods, including physical control and the teaching of basic rules, before progressing to instruction, explanation and practical roadside experience to educate children about safe road use.
- Children of older primary and secondary school age felt that, once they became independent road users, their parents' role in influencing safe road use substantially reduced to general reminders to 'stay safe' or 'take care'.
- Children from all age groups recognised that parents did not always demonstrate best practice when out on the roads, with particular reference to fathers.
- Younger children referred to being told about consequences of unsafe road use behaviour in more general terms than the older children who were aware of more specific examples.
- With regard to the most effective ways for parents to teach road safety, all children agreed that physical control, in conjunction with consistent instruction and basic explanation, was the best way to start with very young children.
- As children mature, a gradual reduction in physical control when out using the roads, with more detailed instruction and explanation (including details of consequences of unsafe road use), was felt to be effective.
- The involvement of accompanied children in road-crossing decisions was also felt to be a very effective method of learning safe road use.
- It was thought that all parents should follow their own advice and be a consistent role model at all times.
- Older children felt that all children should be accompanied and their road use behaviour monitored until they could prove they could manage the roads safely. Only then should they be allowed to travel independently.
- Rewards and incentives or threats and punishments were also seen by some children to play a part in encouraging safe road use.
- The most effective methods for parents of secondary school aged children to use were thought to be reinforcement of rules through detailing 'real-life' events that occurred or relevant consequences that could occur as a result of unsafe road use.
- All children felt that shouting (except in emergency situations), nagging and empty threats were the least effective ways to influence safe road use.

3.3 Parents' perspective

3.3.1 Parents' focus group discussions

This section presents the findings from both the first and second round of focus groups with parents and is presented in accordance with the themes which emerged from data analysis. Where appropriate, anonymised direct quotations are used to highlight or emphasise specific points.

3.3.1.1 Participants

Overall 208 parents took part in focus group discussions, 14 round 1 focus groups and 7 round 2 focus groups were conducted in a variety of geographical areas within the five main study sites. A summary of the participants is presented in Table 3.7.

Area	Broad target age range		
	Pre-school	Primary	Secondary
West Yorkshire suburban	8	2 (4*)	(10*)
West Yorkshire inner-city		31 (10*)	9
Midlands urban	12		9 (9*)
North Yorkshire rural	10	25	10 (10*)
London inner-city		15 (15*)	9 (10*)
Total	30	102	76

*Round two focus groups.

3.3.1.2 Parents' perceptions of risks on the roads for their children

Parents were very aware of the risks on the roads for their children and the potential dangers in their area. The risks described by parents have been categorised under environmental risks, risks caused by motorists and children's road safety development.

Environmental risks

High traffic volumes and difficult and complex road layouts were major hazards which parents felt put children at an increased risk of injury on the roads. Parents living in urban areas expressed concern about the volume of traffic at all times of the day and the potential impact this could have on their children. Other parents, living in rural and suburban areas, commented on the volume of traffic during specific times of the day – these times typically coincided with the start and end of the school day. Complex crossing systems in built-up urban environments involving multiple sets of lights were a specific problem mentioned by some parents that made negotiating roads difficult for their children. This particular danger was mentioned less frequently by those parents from more rural areas.

A strong theme to emerge was a lack of safe places to cross, which was seen to put children at increased risk. This was raised by a number of participants, predominantly from rural and suburban settings:

‘There aren’t enough crossings around, not enough traffic lights, some places might be very dangerous but there’s none there.’ (Mother of pre-school aged child: suburban)

Where designated crossings were available on busy or complex junctions, they were sometimes felt to be inconveniently placed and parents reported having to walk ‘out of their way’ to find a safe crossing place with their pre-school and primary aged children. Parents also discussed negotiating roads at more dangerous or difficult uncontrolled areas if designated crossings were not available. In particularly busy environments a few participants commented on seeing parents pushing pushchairs into the road in order for cars to stop. Some parents talked about teaching their children explicit strategies to cross ‘assertively’ in high-density traffic – this included encouraging their children to make eye contact with drivers.

Parents living in more urban and suburban areas also commented on narrow pedestrian refuges and the lack of space to accommodate them with a pushchair or when accompanying more than one child.

A few parents commented upon residential driveways and the risk these caused for pre-school and younger primary aged children. More noticeably the risks associated with driveways were commented on by those living in more suburban areas. Many of the focus group participants had concerns about younger children not appreciating the potential risks of driveways – this was especially the case for those children who were becoming increasingly independent and who may be distracted when playing or running along the pavement. Parents of pre-school children commented on the inconspicuousness of driveways and the danger caused by reversing vehicles:

‘You think they are safe walking on the path and they are running ahead of you and there are cars reversing out of the driveways.’ (Mother of pre-school aged child: suburban)

Parents in more urban areas did not mention the risks caused by driveways. These parents did, however, comment on the dangers of children playing on residential streets close to their homes.

Risks caused by temporary construction work and scaffolds were also raised by a few parents. Those who regularly use pushchairs, or negotiate roads with more than one child, commented upon having to step into the road with their children in some situations. This was highlighted by one mother:

'If they're doing some work and they're obstructing the pathway you can't get through, you might have to literally go in the middle of the road just to get past.' (Mother of pre-school aged child: rural)

Risks caused by motorists

The risk caused by drivers on the road was a major theme which was discussed in all focus groups. Few parents had complete trust in drivers adhering to the rules on the roads. Some parents recalled experiences where drivers had not stopped at controlled crossings while they were with their children:

'Drivers not always observing pelican crossings. It's like what's the point of teaching children to use them if drivers do not stop at them. They are supposedly safe.' (Father of secondary school aged child: rural)

'Cars, drivers not watching what they are doing, there are cars that just go straight across through a red light. They don't have the time to stop so they just carry on going.' (Mother of pre-school aged child: urban)

Parents living in more urban environments discussed many incidences of drivers speeding around areas where their children lived and played. Other participants mentioned 'joy riders' or described how their streets were being used as 'rat runs' or shortcuts to main roads. The vulnerability of children in these particular areas was summarised by one mother:

'It only takes one driver. . . it's just not in your control, no matter what you teach them, they still aren't safe from drivers.' (Mother of primary aged child: inner-city)

It was clear that many parents felt that they could teach their children to cope with certain roadside situations, but that other more 'unpredictable' events (e.g. reckless drivers) were difficult to prepare for.

Cars and other stationary vehicles parked at the side of roads were recognised by parents as hazardous for children when negotiating traffic. Parents identified a number of different risks associated with parked cars. These included the visual obstruction which the car causes – young children were felt to be particularly at risk because drivers would not be able to see them as they stepped out from behind cars. Parked cars also made it difficult for children and parents to find safe places to cross:

'You tell them not to cross between parked cars, they'd have to walk a mile up the road to find somewhere safe.' (Mother of primary aged child: rural)

The difficulty of finding a safe place to cross was compounded if parents were also using a pushchair:

‘Parked cars, I don’t like having to step out in between parked cars in order to cross the road . . . you go out and look, then you have to move back, get the pushchair and hope that there still isn’t a car there.’ (Mother of pre-school aged child: urban)

The risks associated with parked cars were mentioned less frequently by those parents living in rural areas. However, across the geographical areas parents commented on irresponsible parking and driving outside schools, especially in relation to picking up and dropping off children. Parents regularly recalled occasions where unsafe driver behaviour by other parents outside the school gates had caused children to be at an increased risk of injury by obstructing their vision of oncoming traffic, or by blocking the pavement:

‘Parents are sometimes to blame – they just park, and go “oh I’m only going to be here for five minutes” then they just go. They don’t think of the consequences and they don’t even park it straight. The back end is sticking out then the kids can’t walk up the pavement.’ (Father of secondary school aged child: urban)

Children’s road safety development

Parents recognised that their children’s lack of capability could potentially put them at risk on the roads – misjudging speed and the distance of traffic were highlighted by some as particular skills which were not fully developed in their younger children. Some parents felt that a principal reason why their children’s road safety skills were limited, especially in coping with high volumes of traffic or complex road systems, was that they had been frequently driven to places by car. The consequence of this was that the children had not gained the necessary pedestrian skills and had not been given the opportunity or experience to manage complex or difficult road situations:

‘Now you have that element of choice of where you send your child [to school] and you might end up having to take them in a car, missing the opportunity to teach your child road safety because children nowadays are always in the car or on public transport, they don’t walk as often.’ (Mother of primary school aged child: inner-city)

There was a general consensus among parents that when they were children, they had been able to travel more independently than their own children due to fewer vehicles on the road causing risks and less opportunity of being driven to places by

car. Parents commented that society had changed and, as a result, they felt that they had been more 'street wise' as children:

'She's not as street wise as I think we were as kids.' (Mother of primary school aged child: suburban)

'It's a different society than when we were kids. There are more cars on the street, the vans are much bigger.' (Father of secondary school aged child: rural)

Parents also expressed concern about their children's attitudes to traffic and road safety, with older secondary school aged children expecting cars to stop for them or believing that they were 'invincible' to injury on the road. A 'casual' attitude to road safety caused some parents of teenagers to be particularly anxious, especially when they were walking unaccompanied by a parent or with their friends.

Distraction

Parents of older primary and secondary aged school children raised concerns about how easily distracted their children could be from paying appropriate attention to the road. 'Texting' or speaking on mobile phones were perceived to divert attention away from concentrating on the roads and MP3 players were felt to restrict the ability of children to listen carefully for traffic:

'I also don't like the way children are now wearing ear-phones when walking to school, they can't hear anything.' (Mother of secondary school aged child: urban)

'When they get to 12 or above, they start to wear the iPods and things and that really is a problem with the older ones.' (Mother of secondary school aged child: rural)

Some parents also commented on older children running out onto the road to collect footballs without giving appropriate attention to the roads:

'I do think that kids get excited playing football and sometimes it's just a matter of "I'm getting the ball" and they are not realising they are on the road and all of a sudden it's "wallop".' (Father of secondary school aged child: inner-city)

The influence that peers have on a child's road safety behaviour was a concern raised by the majority of parents, but more specifically from parents of older primary and secondary school aged children. Rarely were peers described by parents as having a supportive influence for road safety, instead they were seen as having a negative and

distracting influence. Parents acknowledged that this was especially the case for older children who were given more independence on the roads:

'You know they know it all, but when they get to high school and are with their mates it goes out of the window. At 11 to 15 they take their brains out sometimes.' (Mother of secondary school aged child: rural)

Despite this, some parents did discuss the beneficial effect of children walking in groups to school and to clubs, perceiving that children were more visible to drivers and that being in a group offered protection from 'stranger danger'.

3.3.1.3 Strategies used by parents to influence child road safety behaviour

During the focus groups parents discussed the ways they kept their children safe on the roads. A number of physical and verbal strategies were identified, as described below.

Physical strategies

A number of physical strategies were suggested by parents as ways to keep their children safe on the roads. Handholding and keeping children within close proximity were the most frequently cited strategies used by parents of pre-school and younger primary aged children, as was ensuring that the child was on the 'inside' of the parent away from the kerb.

Some parents suggested that they would carry their younger children in particularly dangerous situations or across busy main roads or junctions. Reins and wrist straps were also discussed, and were mentioned by suburban parents as an approach used for keeping very young children safe on the roads. These devices were felt by some to allow children a sense of independence, while at the same time ensuring that children were safe:

'Wrist straps, you can't go wrong with them. They've kind of got their independence haven't they and they can start to learn how to make decisions then.' (Mother of pre-school aged child: urban)

Many parents taught their children about road safety while they were on their reins. One parent, however, was concerned about the use of reins and felt that children and parents may become too reliant on them, making the transition to walking without reins more challenging.

Some parents continued to hold hands with their primary school aged children and this was particularly the case in busy areas. Other parents, however, had a more flexible approach, tending to hold hands when they perceived there was a higher

level of risk and letting go when the risk was lower. This was explained by one mother of an eight-year-old child:

'I hold her hand to cross roads, I'd let her walk down the pavement, but when we get to the road I'll hold her hand.' (Mother of primary school aged child: suburban)

Encouraging children to hold onto the pushchair or getting them to 'ride on the buggy board' was an approach that parents with more than one child used. This ensured that the parent and child were still in close contact. The importance of having a 'regime' and being organised when out on the roads was also referred to. Younger children were kept under closer supervision than older children who were allowed to walk ahead or behind the parent. Parents with larger families reported using older siblings to assist in supervising younger children. A number of parents acknowledged the fact that giving the older siblings this responsibility meant that the child often took fewer risks on the road and that their own confidence increased.

Parents of older primary and secondary school aged children described using physical methods of control less frequently for influencing roadside behaviour with their children. Alternative strategies for older children, principally verbal control, were adopted to ensure that they were safe. Some parents were reluctant to let their older children negotiate traffic independently, and these parents found it difficult to 'let go' and allow their child to make their own independent road-crossing decisions. This was highlighted by two mothers:

'I just grab my thirteen-year-old's hand – she doesn't like it!' (Mother of secondary school aged child: inner-city)

'When I go into town with my daughter who is 15, my automatic reaction is that I go to get her hand when I'm crossing the road and she'll be really embarrassed.' (Mother of secondary school aged child: urban).

Verbal strategies

Verbal approaches used to keep children safe were of three different types: response to imminent danger; coping with risky situations; and more general roadside instruction or education.

Response to imminent danger

Shouting at children was felt to be an appropriate strategy used by some parents when they felt that their children were in potential danger. However, subtly changing the tone of voice to emphasise when the roadside situation was becoming more difficult or risky was felt to be a more effective method for highlighting dangers to younger pre-school children.

Coping with risky situations

Verbal control was used with children who were becoming increasingly independent as a means of negotiating boundaries or to establish landmarks in the journey where children would have to wait for their parent. Parents gave examples of verbal instruction, such as ‘wait at the lamp post’ or ‘stop at the post box’. Other children were able to walk independently on the pavements but had to stop at kerbs to cross with their parents:

‘They were allowed to walk ahead, but they weren’t allowed to cross the road, so they’d go on ahead and then stop at the kerb. We’d catch up and cross and then they’d do it again.’ (Father of primary school aged child: inner-city)

General roadside instruction or education

Repeating road safety messages to children, such as wait at the kerb, look right and left etc., were strategies which parents felt equipped their children to deal with the potential hazards on the road. Parents frequently mentioned ‘drilling’ these rules into their children to ensure that they used roads safely. Continual repetition of road safety ‘rules’ was a method which some parents used when approaching crossings – one parent even described how she had used a song with her daughter to remember the process of crossing the road safely:

‘... if you’ve got a little road safety song that you can sing at the edge of the kerb. I have a little song about looking left and right.’ (Mother of pre-school aged child: suburban)

The way parents articulated road safety messages to their children often reflected the terminology they had learned as children. Parents frequently commented on remembering what ‘Tufty the Squirrel’ had said and made reference to the ‘Green Cross Code’.

Parents of older children who were allowed to go out on their own commented on giving vague, general advice to their children – ‘be careful’ and ‘watch the roads’ were examples frequently mentioned by parents.

A few parents who had children approaching driving age suggested using car journeys as a method for reinforcing road safety messages. These parents felt that, for older secondary school aged children, pedestrian road safety education was not a priority. However, parents did feel that the message could be incorporated and reinforced in different ways, such as when learning to drive. Pointing out potentially unsafe pedestrian behaviours of others on the road while travelling in the car was a technique which some parents used both for preparing their children for their driving test and also for reinforcing road safety:

'I point out the behaviour of other children on the roads. "Look at that kid; I hope you don't behave like that." I think that goes a long way.'
(Mother of secondary school aged child: rural)

Factors affecting parental control and accompaniment

A number of factors influenced the level of control parents exercised and whether they allowed their child to go out unaccompanied. These included environmental issues, familiarity with the environment, time pressures, and the age and personality of the child.

Environmental issues

Parents identified environmental issues as a factor which affected the level of independence they gave to their children. Factors such as whether the area was busy or quiet determined the levels of physical or verbal control used. On quiet roads, parents reported giving children an increased amount of freedom. On busy roads, parents felt that their priority was safety and, therefore, they increased the levels of physical and verbal control that they used. In one focus group there was disagreement among some parents who lived in an urban area who felt that levels of control to keep younger primary and pre-school children safe had to be consistent:

'Always keep them close, you can't trust any road even if it's quiet.'
(Mother primary school aged child: inner-city)

Familiarity with the environment

Unfamiliarity with roads and complicated crossings caused parents to be more likely to increase their levels of control and supervision. Keeping children safe on unfamiliar roads was the main concern for parents, rather than letting children participate in road-crossing decisions, such as where and when to cross.

Time pressures

A majority of parents felt that being in a hurry affected the levels of control and supervision they used with their children. Parents commented on being more likely to use physical forms of control and less likely to involve children in road-crossing decisions when in a rush:

'If I'm in a hurry I just grab hold of their hands and I do the looking and then run. I make sure they're safe.' (Mother of pre-school aged child: suburban)

'Nine times out of ten I will never say "right, it's time to stop and look both ways". It's more like "right, come here, grab me hand we're going" as I don't have time for that!' (Mother of primary school aged child, inner-city)

Age and personality of the child

The age and personality of the child was an important consideration for parents when determining control and supervisory needs on the roads. Younger children, in general, were kept under tight supervision when walking and crossing the roads, with older children given more independence. One parent who regularly looked after a number of children raised this:

'I keep some of mine within grabbing distance, but others I look after are older so they're allowed to go to the next lamp post, within shouting distance.' (Mother of primary school age child, urban)

The personality of a child was also felt to determine the level of control required on the roads. Some parents suggested that they had a number of children who varied in their perceptions of the road and hazards, with some children described as being overcautious on the roads and others far less so. Parents felt as though they had to take into account personality traits when deciding on appropriate levels of supervision and control.

For some parents there was a dilemma about when they could safely 'let go', especially for more boisterous children. While their main concern was clearly to keep children safe, there was also an acknowledgement that giving some independence to the child was necessary for them to learn how to cope. For example, one mother felt that she had held onto her child (a boy) for too long and this may account for his lack of road sense. Parents were reluctant to say whether girls or boys were generally more responsible and felt that personality was of over-riding importance.

Parents as role models

Setting a good example was felt to be one of the most essential elements of roadside education with children. It was clear that parents felt that children learned how to be safe road users through observational learning, gained primarily from their parents. Therefore, some parents emphasised the importance of doing things 'properly', especially with younger children. This included activating pelican crossings and waiting for the green man. One father suggested a direct association between good parental modelling and children becoming safe road users:

'You probably find that the children who are good on the roads, their parents are probably very good role models.' (Father of secondary school aged child: rural)

Some parents felt that the modelling influence they have is reduced as their children got older. This is principally due to spending less time with their children when out on the roads.

Consistency of modelling

Parents felt that the consistency of their own behaviour and the example they set were very important. It was essential to model good roadside behaviours on quiet roads as well as in the more complex situations presented by busier roads. However, a number of parents commented that there were barriers to being a good role model for their children all of the time. Time constraints and being in a hurry were frequent reasons for adults taking risks or not conforming to accepted good road-crossing practice. Parents rarely offered explanations to their children for such behaviour. Parents' road use behaviour was more likely to be better and safer when they were with their children. Unaccompanied, parents claimed to take far more risks – some parents were clear that they would not replicate this behaviour in front of their children.

The modelling influence of other adults was a concern for parents. A number of parents were conscious of how children may follow adults across roads when it is not necessarily safe, for example groups of parents crossing before the pedestrian lights have changed to green. Adults exhibiting poor road safety behaviour was felt to undermine the positive example which parents had demonstrated. These inconsistent messages were felt to confuse children:

'You tell them [the children] one thing, then they see a different adult doing another thing and then they get confused.' (Mother of pre-school aged child: urban)

'It annoys me when you are stood there on a crossing with a child and people just walk past – they just don't think!' (Father of secondary school aged child: rural)

3.3.1.4 Preparing children to be independent road users

During discussions many parents suggested that they had never consciously considered how they would, or how they had prepared, their children to use roads safely and independently, despite many parents commenting that roads were becoming more complex and congested. For many, the process of preparing for independence was 'intuitive' or 'just happened', and rarely did parents talk about making conscious systematic plans or strategies for this independence:

'I certainly didn't sit down and make a great plan.' (Mother of secondary school aged child: rural)

Starting young

There were a number of common approaches which parents had used to ensure that their children were ready to use roads independently. Starting road safety education from an early age and making it fun was deemed important to instil the necessary

knowledge to enable children to be safe. A few parents commented that road safety education had started with their children at a very young age, even prior to the child being able to walk. However, most parents recalled using basic road safety education (i.e. wait at the kerb and look both ways) when their children were toddlers as they were perceived to be at an ‘impressionable’ age in relation to cognitive development. For some, teaching road safety went hand-in-hand with learning the alphabet and counting:

‘Road safety is a bit like your a-b-c or 1–10, teach it when they’re younger.’ (Mother of secondary school aged child: inner-city)

Roadside skill development

Supporting children in a practical, safe and controlled environment to enable them to negotiate roads on their own was an approach few parents mentioned. Agreement was reached that taking time to supervise children and gradually encourage independent decision-making was critical in preparing for independence. However, few parents commented that they had done this with their children. Encouraging children to make supervised decisions independently could begin at a young age and this was highlighted by one mother:

‘Ask them what to do, “shall we cross here?”, make it into a game . . . kids learn through play, whatever you teach them make it fun, involve them, get their hand in. Involve them in decisions, they’ve got to think for themselves. They should be individual thinkers and have an opinion.’
(Mother of primary school aged child: suburban)

Some parents suggested using shopping trips or walking to school as opportunities for developing their children’s skills. Allowing children to take the lead on crossings and deciding where and when to cross was a practical approach to increasing a child’s confidence, while at the same time the accompanying adult could ensure that the children were safe. Some parents suggested correcting their children and giving advice if they had made potentially risky decisions as an additional way to develop skills. However, these parents were in the minority.

Using a ‘gradual’ approach

A number of parents talked about using a ‘gradual approach’ to enabling their children to be safe on the roads. Gradually allowing children to travel independently helped build their confidence slowly and reassured parents that they could cope and negotiate traffic safely. Seeing children across particularly hazardous parts of a journey and then letting the child go alone for the rest was mentioned. A number of parents also commented on watching from a distance (sometimes covertly) to ensure their children were coping. The role of the wider community in ‘keeping an eye’ on young people and ensuring they were not at risk on account of their behaviour was also mentioned.

For some parents the summer before their children started secondary school was used to allow increased amounts of independence on the roads so that children were fully prepared for negotiating the new school journey:

'That summer, suddenly he was allowed to go that bit further. By the end of the summer holidays he had walked further than the distance to the school . . . I don't think he noticed or realised what I was doing, he just thought mum's being a bit cooler today.' (Mother of secondary school aged child: rural)

However, some acknowledged that they had only thought about the journey to school just before their child started secondary school and subsequently there had been little opportunity for adequate preparation. Rare examples were cited of children panicking about the prospect of undertaking the journey alone.

Using negative consequences and 'shock tactics'

Highlighting the negative consequences associated with poor road safety behaviour (i.e. injury and death) was a method some parents used to encourage their older primary and secondary school aged children to take road safety seriously. A surprising number of focus group participants had themselves been involved in road accidents, or described accounts of other people they knew who had been injured or killed on the roads. Using these experiences to demonstrate to older primary and secondary aged children how dangerous and risky roads can be was an approach which parents felt worked and was more effective than reiterating the road safety rules to their children:

'Unfortunately the school my eldest one goes to, a girl has just died – she was in an accident and she was at my daughter's school and a lot of the kids have been made more aware. At the moment it's still fresh and they're taking that bit more time crossing the road and using the crossings.'
(Mother of secondary school aged child: urban)

Using 'shock tactics' was felt to be an appropriate approach for continuing road safety discussions with teenagers. This finding was in complete contrast to the approaches advocated by parents of younger children who suggested making education fun and interactive. Many parents commented that using 'softer' approaches, such as traditional road safety leaflets or 'talks' in secondary school, did little to further prepare their children to cope with traffic on the roads:

'They [older children] need a shock to the system rather than leaflets.'
(Father of secondary school aged child: rural)

'I've got an eleven-year-old and the shock tactic would work with them.'
(Father of primary school aged child: inner-city)

In one focus group, a number of rural parents mentioned how their children had been involved with seeing a ‘real-life role-play’ in school which highlighted the dangers of the road. This was felt to be a particularly hard-hitting approach which provided a powerful and visual message to children.

3.3.1.5 Cycling behaviour

Although the focus of discussion with parents concerned pedestrian behaviour, there was also opportunity to discuss cycling and car use.

Parents distinguished between learning to ride a bike and being able to ride a bike in traffic. In general, parents from inner-city and other urban areas actively discouraged cycling on the roads, with the perception that this was too dangerous for their children. Parents in these areas discussed letting their younger children cycle on side streets, in front of the house or in the park – cycling in these areas was perceived to be safer and a way of building a child’s confidence before cycling formally on the roads. In contrast, those living in more rural areas were more likely to allow their older children to cycle on the roads. However, they encouraged the use of cycle paths when available:

‘If there is a cycle path I insist that they use it, otherwise they should use the road, but with caution.’ (Father of secondary school aged child: rural)

Cycling in rural areas was associated more with purposive travel than in urban areas where it was seen to be more for recreational purposes. This recreational cycling usually took place outside the home, in the park or on the streets.

Relatively few parents in urban and suburban areas accompanied their children on a cycle themselves. However, those in more rural areas were more likely to mention cycling on the roads with their children:

‘I always cycled with them on the roads, I was teaching them then about road safety and signals and things. Even when the little ones were toddlers they were on my back as I was cycling.’ (Father of secondary school aged child: rural)

Parents of pre-school children commented on accompanying their children on foot while they cycled on the pavement and encouraging them to dismount prior to crossing the road.

As with pedestrian behaviour, a few parents felt that setting a good example was one of the best ways to encourage children to be safe on cycles – these parents felt that children learn from what they see. Parents suggested that modelling good cycle safety behaviour to their children (through wearing a cycle helmet and using cycle paths) was one way of ensuring that their children would be safe on the roads.

However, as noted above, relatively few parents cycle with their children and, therefore, many children do not have this opportunity for observational learning. Even for those who do, its extent and duration is severely limited in contrast to pedestrian behaviour.

A number of parents commented that their children had taken part in ‘cycling proficiency’ courses at school. These sessions had been effective in providing the child with basic skills to be safe when cycling while at the same time being delivered in a fun and enjoyable way:

‘The cycling proficiency was something which they looked forward to doing, it’s a good thing. It wasn’t just a one-off thing, it was over six or seven weeks.’ (Mother of primary school aged child: rural)

In addition to cycle safety, parents also felt that such courses raised traffic awareness more generally and were useful for pedestrians too. However, many parents commented that their own child’s school had not provided cycling training courses.

There was a mixed response to cycle helmet use. Many parents insisted on children wearing a helmet at all times, while other parents commented on being more lenient and allowing their children not to wear helmets in certain situations, such as playing in the park or local street. Parents provided a number of reasons justifying why their child did not wear a helmet. These mainly concerned looking different to and standing out from other children, helmets not being fashionable, ruining hairstyles and being uncomfortable to wear. As children got older they were increasingly more concerned about looking fashionable in front of their peers, and cycle helmets were therefore not worn. Peers were felt to be a major influence. One rural parent discussed her ‘constant battle’ with her son to encourage him to wear a cycle helmet. Eventually, the parent had to relent due to the verbal taunts her son received from his peers:

‘My son who is 14, I make him wear a helmet, unfortunately this summer my son stopped riding his bike because he was the only one in his peer group to wear one. We had a bit of a battle between should I insist or should I let him take the taunts from his friends? I’m afraid to say I relented and I let him go without a helmet.’ (Mother of secondary school aged child: rural)

3.3.1.6 Car behaviour and seat-belt use

The majority of parents claimed that they insist on their children wearing seat belts while travelling in cars. Many parents felt that the process of their child wearing a seat belt had become ‘ingrained’ through constant reinforcement:

‘Ours have just always done it regardless, it’s like second nature.’ (Mother of primary school aged child: suburban)

Parents of older children also commented on reminding their children to wear seat belts before they go out in the car with friends or in taxis.

In a few cases, parents spoke openly about their children not wearing a seat belt during certain types of journey – the length of journey was one factor which determined seat-belt use. Parents were also more likely to insist on seat-belt use if the child was travelling in the front rather than the back of the car. A few parents took a very hard line and refused to start the engine until all seat belts were fastened. Others were more casual, telling their children to ‘belt-up’ but not always checking that they had done so. Some tell their children to use seat belts, but did not always do so themselves. This latter group was very much in a minority.

3.3.1.7 Parents as providers of road safety education

Role

Parents saw themselves as having primary responsibility for delivering road safety education and a principal role in enabling their children to use roads both independently and safely. Parents did, however, see other groups and organisations as having an important influence on their child’s road safety development.

Schools were settings which parents felt could do more to deliver road safety messages:

‘There should be a bigger emphasis at primary school, there should be more practical things.’ (Father of primary school aged child: inner-city)

Schools were also seen as a way of reaching those children who may not have had an extensive road safety input from their parents:

‘Using the school scenario will also help those children whose parents don’t give a damn.’ (Father of secondary school aged child: rural)

Parents felt that secondary schools often neglect road safety and focus attention on other health issues (such as drug misuse and healthy eating). Some parents suggested that road safety should be part of a child’s learning from Year 1 right up to Year 11 – changing the focus or delivery of the message so that it was age specific. Other parents felt that using opportunities in classes and school assemblies to discuss road safety was important.

Although parents were seen as having a primary responsibility for road safety, many suggested that the wider community should recognise their responsibility to contribute to keeping children safe on the roads. One father felt that anyone who has any contact with children has a duty to keep children safe on the roads and educate them to use roads safely.

Confidence

In general, parents reported having high levels of confidence in their abilities to provide road safety education for their younger children. Parents felt they had both the necessary knowledge and skills to enable their children to learn to be independent on the roads. It was apparent, however, that parents found engaging with older primary and secondary school aged children difficult. Some parents experienced a major barrier when communicating with older children and encouraging them to listen and take notice of road safety messages:

'The biggest challenge is to get them to listen to you and take notice of you.' (Father of secondary school aged child: rural)

Other parents commented that their children were not interested in road safety, it bored them or that they claimed to already know how to use roads safely.

Many parents were highly motivated to teach their children about road safety. Those parents who had experienced road injury were especially committed to ensuring their children were fully informed. One father did question parents' capacity to deliver road safety education, indicating that some parents may lack the necessary skills to deliver these messages:

'Maybe you think you are motivated to teach road safety but perhaps we're not as good as we think. Maybe we [parents] are lacking.' (Father of secondary school aged child: rural)

For some parents, road safety was a high priority and was an essential part of their child's development. Other parents were more concerned about equipping children to deal with 'stranger danger' rather than road safety.

Gender and approach

Parents

There were a number of differences reported by parents in the ways that men and women provide road safety education. Both male and female participants commented that men were more relaxed about road safety and would be more inclined to allow children a greater level of independence while out on the roads. Women were perceived to be more safety conscious and to allow children less freedom:

'Men want to build confidence in their kids, mums want to keep them safe all of the time.' (Mother of secondary school aged child: rural)

Mothers were generally seen as the primary providers of road safety education through their day-to-day contact with children on journeys to school. Parents felt that fathers were less often involved in road safety.

Children

Few parents claimed there was any difference in their approach to teaching boys and girls about road safety. Girls were sometimes described as being more sensible on the roads and aware of the road traffic environment, whereas boys were more boisterous and therefore needed more road safety education and supervision. Agreement was reached in a number of focus groups that the delivery of road safety education depended on the child's personality rather than being based on the child's gender. Parents felt that road safety education had to be tailored to the specific personalities and learning needs of their child.

Parents' relationship with other road safety providers

Although parents perceived themselves as having the primary responsibility for providing road safety for their children, it was apparent that parents felt that other groups (i.e. schools, nurseries, road safety officers and police) should also contribute. Some parents, however, went as far as seeing themselves having sole responsibility:

'It's with the parents at home. You can't rely on other people to teach your children about road safety.' (Mother of primary school aged child: rural)

Parents generally had little awareness of the road safety education received by their children at school. They were either unaware that schools provided road safety education at all or were unclear about the content that was actually being delivered:

'My kids have never had any homework which would fall under the category of road safety.' (Mother of secondary school aged child: rural)

'I think they do it in PSE studies. I've never heard it mentioned by my son.' (Father of secondary school aged child: rural)

The perceptions of parents with primary school aged children and those with secondary school aged children did not differ in response to their general awareness of road safety provision in school. However, parents of younger children were more aware of 'walk to school weeks' and other similar campaigns.

3.3.1.8 Comparison of children's and parents' perceptions of effectiveness

Throughout the focus groups, parents discussed their views about the effectiveness of methods they had used with their children to keep them safe on the roads. The most frequently cited methods included:

- starting road safety education from a young age;
- teaching children the 'rules' of road safety and repeating them on a regular basis;

- practical roadside learning;
- supervising children when making independent road-crossing decisions (mainly where and when to cross) and gradually increasing their level of responsibility; and
- delivering road safety education in a fun way and adapting the delivery to the personality of the child.

During the second round of focus groups, parents were presented with the views of children about what is effective and ineffective in relation to teaching them about road safety. These views were derived from the analysis of the previous participatory work with young people (see Section 3.2). There were a number of ways for teaching road safety which both children and parents agreed were effective. However, a number of approaches were contested and caused disagreement.

Agreement

On the whole, parents felt that children needed to have a good understanding of rules for using roads. Children also felt that learning the rules of road crossing was an effective way to encourage safe road practices. Many parents reiterated this by commenting that laying down these rules provided their children with the basis for good road safety behaviour.

The role modelling effect of parents was also seen by children as an important way to learn. Parents throughout focus group discussions understood the importance of being a good role model for their children and recognised that, as primary caregivers, their roadside behaviour had to be consistent with the messages they were providing their children.

Parents agreed that providing explanations for road safety decisions helped children to learn the reasons underpinning them. In many ways this represented a move from ‘what to do’ to ‘why’ and allowed learning from specific situations to be generalised to others. However, many parents were aware that they do not regularly provide roadside explanations for their children. Instructions and/or the role model they presented were therefore often situation specific. A few parents appreciated that their behaviour – sometimes for very rational reasons – deviated from conventional rules and that this must be difficult for younger children to understand. In such situations, verbal explanations could help to clarify the reasons.

Highlighting the consequences of potentially unsafe behaviour was an effective strategy identified by both parents and children. Parents of older children particularly commented that telling them about roadside accidents was a way of raising their children’s awareness about the dangers and risks on the roads.

Parents agreed with the perceptions that ‘nagging’ and shouting were ineffective methods for children to learn about road safety. The majority of parents recognised that this was not the best way to encourage learning. Parents of secondary school aged children, however, felt that, in some cases, shouting and ‘nagging’ were the only ways of communicating with their children:

‘Sometimes you’ve got to shout and nag because there is so much going on in their heads.’ (Father of secondary school aged child: rural)

Contested issues

One of the primary areas of disagreement between the views of parents and children was the use of incentives for teaching road safety. Many parents were dismissive about using incentives as a way of encouraging their children to learn safe road practices. A small number of parents did feel that using incentives appropriately could be a useful approach for encouraging learning with younger primary or pre-school aged children. Many parents of older primary and younger secondary aged children did not see the value in using this approach.

Both groups felt that vague messages were not likely to be effective. However, parents of secondary school aged children, in particular, felt that using messages such as ‘be careful’ and ‘be safe’ were instinctive and that not only did these messages relate to road safety but also to ‘stranger danger’:

‘My daughter says why do you say that [be careful] and I’ll say because there are paedophiles, there’s this and that. Whenever they walk out of the door I say “watch out, be careful”. (Mother of secondary school aged child: rural)

3.3.1.9 Additional support required by parents

Parents recognised that they had responsibility for teaching their children about road safety. However, parents commented on additional support they needed to enable their children to be safe road users. Some of these suggestions were targeted at environmental improvement, making roads and crossing opportunities safer. Others were to provide legal backing for the use of safety equipment.

Increased number of designated crossings

Many parents wanted to see more designated crossings in their area so that busy and complex roads would be made easier for their children. Some parents talked at length about making more crossings available on routes to schools and other leisure facilities to make negotiating the journey easier for children. Many parents wanted to see more school patrol crossings in high-risk situations.

Policy action

Many parents commented that making cycle helmet use compulsory would be an effective way of ensuring that children were safe while cycling. Although most parents tried to get their children to use a helmet when cycling on roads, there was a high level of resistance among young people to doing so. Parents believed that increasing the acceptability of helmets by making it a legal requirement would remove any choice.

The need to protect children from the excessive speed of some motorists was recognised. Some parents felt that stronger sentencing for irresponsible and reckless drivers would encourage motorists to travel more considerately. Many felt that fines were too lenient for those who consistently speed. Increasing the number of speed cameras was an additional intervention which parents felt would help keep children safer on the roads:

'Instead of fining people for doing 10 mph over on a country road, have speed cameras around schools and if someone is caught speeding or doing something silly in a car they come down on them a lot harder.' (Father of primary school aged child: inner-city).

Using the media more effectively for road safety education

Most parents recalled the media campaigns they had been familiar with when they were children (i.e. Tufty Club and the Green Cross Code) and the majority of parents were aware of the television advertisements for road safety which were currently targeted at their children. Parents of pre-school and younger primary aged children commented that their children had seen the hedgehog campaign and that it had been effective in raising awareness around road safety. Generally, parents of younger children felt that using cartoon characters was a credible way of delivering road safety messages. Many parents commented that their children enjoyed watching the adverts and did learn important road safety messages such as 'stop, look, listen, think'. The parents of older children also felt the advertisements targeting their children were appropriate and that the 'shock' of seeing some of the real-life images had encouraged them to think more about road safety. The majority of parents felt that more adverts should be on television, especially during peak times when children were watching television.

Parents commented that using the internet to deliver road safety messages would be an additional resource which would benefit their children. A number of parents that took part in the focus groups noted that their children had access to the internet and that using this as a resource for road safety education would be welcomed.

Driver education

Parents commented that they would like to see drivers re-educated in having more consideration for child pedestrians. Some parents felt that it was important that drivers understand the roads from the perspective of the pedestrian and particularly the child pedestrian.

3.3.1.10 What was not said by parents?

There were a number of issues which were not raised by parents which may have been expected during focus groups. Generally, parents had not thought comprehensively about how they prepared their children to be independent road users. Rarely had parents put in place a systematic approach to delivering road safety education to their children.

Parents did not comment on preparing their children to deal with negotiating roads in the dark and very few parents mentioned having encouraged their children to wear high-visibility clothing or reflective strips. Some parents made reference to equipping their children to deal with the school journey, but this was frequently suggested to be carried out in the summer and not during winter months.

Parents of older secondary aged children did not comment on alcohol use and pedestrian behaviour. Alcohol was not raised during any of the focus groups and parents did not raise concerns about its influence on their children's pedestrian behaviours. Parents of older secondary aged children also rarely commented on pre-driver education even though many of the parents had children who were soon reaching driver age.

Despite parents recognising that peers can have a detrimental impact on their child's road safety behaviour, parents did not comment on equipping their children to cope with these influences. Similarly, parents were aware that MP3 players and mobile phones affected their children's concentration and distracted them away from the road crossing. However, no parents mentioned discouraging their children from using these items.

3.3.1.11 Summary

Box 3.5: Summary of key points – focus group discussions with parents

- Parents are conscious of the risks in their local environment which affect the safety of their children.
- In keeping children safe on the roads, parents adopt a number of physical and verbal control strategies. The levels of control vary in response to a number of factors, including the age and personality of the child.
- Parents frequently mentioned repeating the ‘rules’ of road safety to their younger children. Often these ‘rules’ reflected what parents had been taught as children.
- Parents reported being positive role models to their children on the roads. A number of parents, however, did comment on being a poor role model when constrained by time.
- Parents facilitating children when making independent road-crossing decisions while accompanied in safe and controlled environments was rarely mentioned.
- Parents felt that starting road safety education from a young age was an effective way of preparing children to be independent road users.
- Using ‘shock tactics’ and highlighting the consequences of poor road safety behaviour was also regarded as an effective method to use with older primary and secondary school aged children.
- On the whole, parents felt confident in their ability to teach their younger children about road safety. Engaging older primary and secondary aged children, however, was felt to be difficult.
- Cycling was seen as being more for purposeful travel in rural areas. Parents in more urban environments described their children’s cycling as more ‘recreational’.
- The majority of parents recognised the difficulty of encouraging cycle helmet use, with most feeling that they were fighting a losing battle with their children.
- Seat-belt use was reported to be high. However, some parents who told their children to fasten their seat belt admitted that they would rarely check that their children had done so.
- Parents identified additional support that would help them enable their children to be safe road users. Increasing the number of designated crossings and introducing legislation that would make cycle helmets compulsory were mentioned by some parents.

3.3.2 Survey

In total 1,016 questionnaires were completed by a convenience sample of respondents. Every effort was made to include in the survey a broad spread in relation to key factors such as geographic area, age, and birth order of child and ethnicity of parent. However, as a probability sample was not used (see Section 2.5.3), some caution should be exercised in generalising the findings to the whole population.

3.3.2.1 Respondent profile

Nearly three-quarters (74.1%)¹ of respondents were female and 25.9% male. Almost half (46.5%) were aged between 31 and 40 (see Table 3.8)

Age (years)	Frequency	Per cent
20 or under	14	1.4
21–30	176	17.6
31–40	466	46.5
41–50	308	30.7
Over 50	38	3.8
Subtotal	1,002	100.0
Missing	14	
Total	1,016	

In relation to ethnicity, 88.8% of respondents described themselves as ‘White British’, the next most common group was ‘Any Other White’ background followed by ‘White Irish’ and then ‘Asian/Asian British’. The sample composition closely matches that of the UK population as a whole; in the 2001 census, 92.1% of the population described themselves as White (ONS, 2003a), the comparable figure in this survey is 92.5% (see Table 3.9).

Just over three-quarters (75.6%) of respondents were employed in full-time or part-time work. Those classified as not seeking work or a home maker accounted for 17.3% of the sample and there was a small number who classified themselves as students, unemployed or retired (see Table 3.10).

Just over three-quarters of respondents (77.5%) had two adults living in the house while 86.2% had two or more. Approximately one in seven had only one adult per household, this is in comparison to one in ten throughout England and Wales in the 2001 Census (ONS, 2003b) (see Table 3.11).

¹ Percentages quoted throughout this section are valid percentages, i.e. missing data are excluded before percentages are calculated.

Table 3.9: Composition of the sample by ethnic group				
Ethnic group		Frequency	Per cent	2001 Census (%)
White	British	888	88.8	
	Irish	18	1.8	
	Any other White background	19	1.9	
	<i>Subtotal</i>		92.5	92.1
Mixed	White and Black Caribbean	7	0.7	
	White and Black African	4	0.4	
	White and Asian	3	0.3	
	Any other mixed background	1	0.1	
	<i>Subtotal</i>		1.5	1.2
Asian or Asian British	Indian	17	1.7	
	Pakistani	12	1.2	
	Any other Asian background	1	0.1	
	<i>Subtotal</i>		3	4
Black or other British	Caribbean	10	1.0	2
	African	11	1.1	
	<i>Subtotal</i>		2.1	2
Chinese or other ethnic group	Chinese	3	0.3	0.4
	Other ethnic background	6	0.6	0.4
	<i>Subtotal</i>		0.9	0.8
	Total (excluding missing)	1,000	100.0	
	Missing	16		
Total		1,016		

Table 3.10: Composition of the sample by employment status		
Employment status	Frequency	Per cent
Employed full-time	436	43.6
Employed part-time	320	32.0
Not seeking work or homemaker	173	17.3
Student	35	3.5
Unemployed	28	2.8
Retired	9	0.9
Subtotal	1,001	100.1*
Missing	15	
Total	1,016	
* Not all tables total 100 due to rounding.		

Table 3.11: Composition of the sample by number of adults per house		
Number of adults per household	Frequency	Per cent
1	138	13.8
2	777	77.5
3	65	6.5
4	17	1.7
5	2	0.2
6	3	0.3
Subtotal	1,002	100.0
Missing	14	
Total	1,016	

The majority of respondents (80.6%) had access to either a car or a van. The remaining 195 respondents (19.4%) did not have access to a car or van; this was in comparison to 27.4% of the general population in the 2001 Census (ONS, 2003c).

Location

Nearly half the respondents (46%) said traffic was quite busy around where they live, just over a quarter not very busy (26.2%) and just over a fifth (20.6%) very busy. Only 7.1% said it was quiet (see Table 3.12).

Table 3.12: Composition of the sample by how busy traffic is in area of residence		
How busy traffic is	Frequency	Per cent
Quiet	71	7.1
Not very busy	262	26.2
Quite busy	460	46.0
Very busy	206	20.6
Subtotal	999	99.9*
Missing	17	
Total	1,016	
* Not all tables total 100 due to rounding.		

Respondents were asked to categorise the area they lived in. The most common category was the outskirts of town (34.9%), followed by the outskirts of a city (25.2%), and then a village (19.8%). Only 32 respondents described where they lived as rural (see Table 3.13).

Table 3.13: Composition of the sample by area type		
Type of area	Frequency	Per cent
Outskirts of town	349	34.9
Outskirts of city	252	25.2
Village	198	19.8
Town centre	114	11.4
City centre	54	5.4
Rural	32	3.2
Subtotal	999	99.9*
Missing	17	
Total	1,016	

* Not all tables total 100 due to rounding.

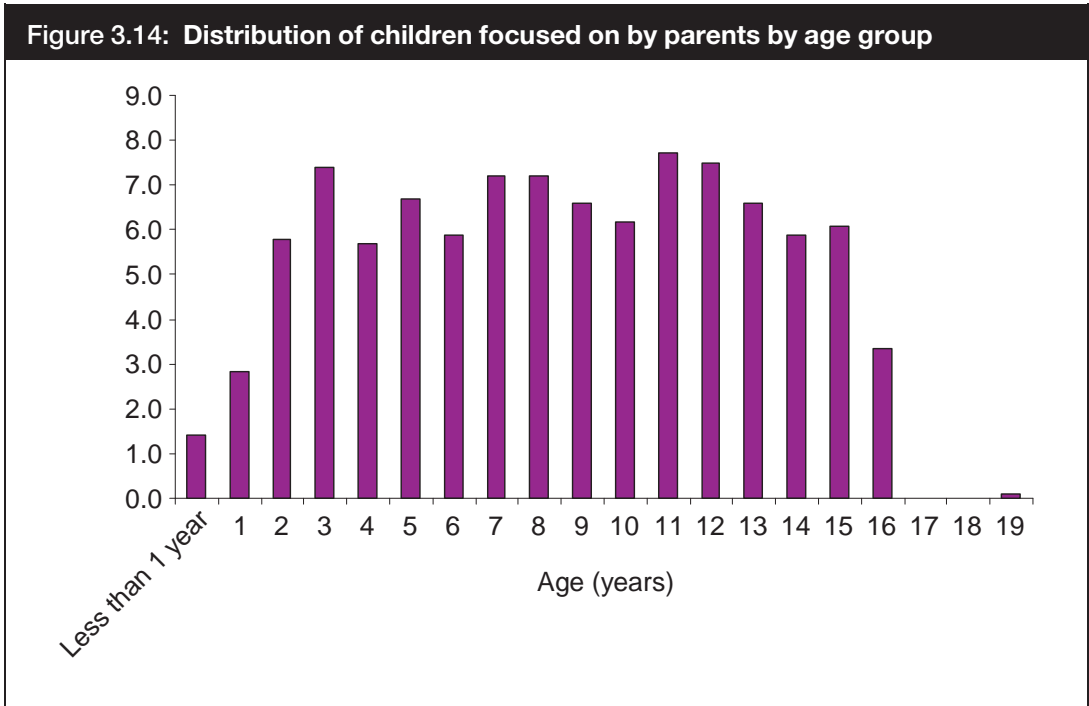
Rural respondents were significantly more likely to have access to a car or van than urban respondents (chi-square = 25.283, $p = < 0.001$).

Just over half of respondents (52%) lived in Yorkshire and the Humber, while 17.6% were from the South East and 12.4% from the South West (see Table 3.14).

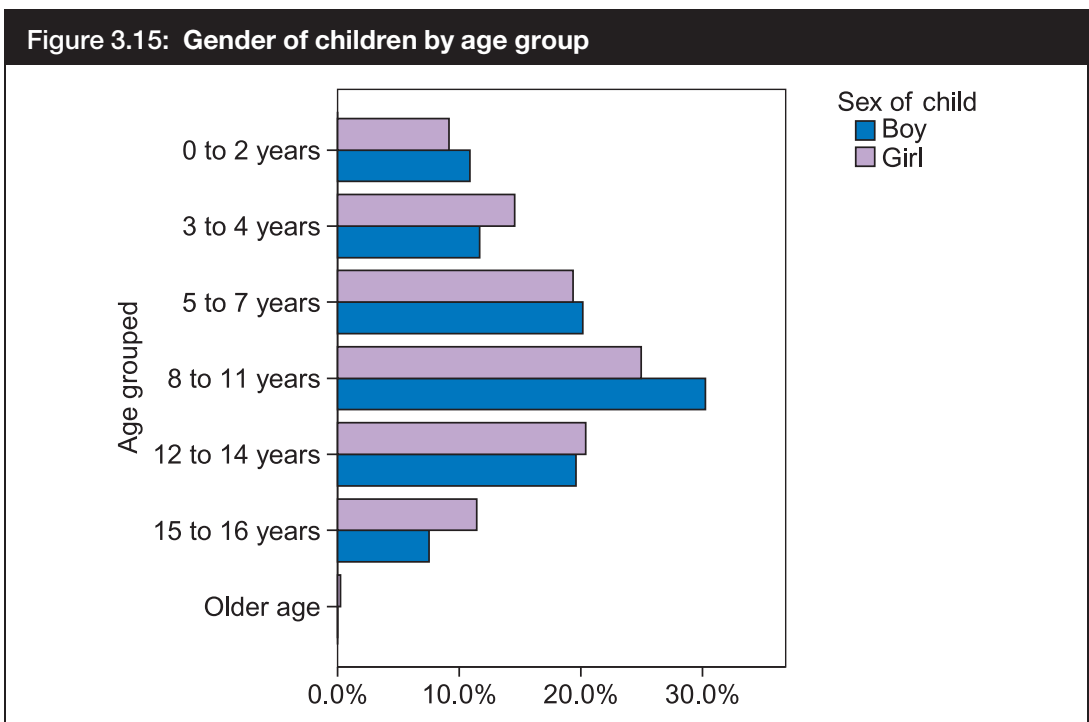
Table 3.14: Composition of the sample by geographic area		
Geographic area	Frequency	Per cent
Yorkshire and the Humber	521	52.0
South East	176	17.6
South West	124	12.4
London	39	3.9
West Midlands	37	3.7
East Midlands	31	3.1
North East	22	2.2
North West	22	2.2
East	18	1.8
Scotland	2	0.2
Wales	2	0.2
Other	7	0.7
Subtotal	1,001	100.0
Missing	15	
Total	1,016	

3.3.2.2 The children's profile

To ensure that parents' answers would be specific to a particular age, gender and birth order, they were asked to focus on one of their children (aged 16 and under) when answering questions 5 to 11. The mean age of the children they focused on was 8.5 years and the distribution is shown in detail in Figure 3.14



Just over half (51.3%) of the children focused on were boys and 48.7% were girls. Gender by age group can be seen in Figure 3.15. There were more boys in the 8–11 year age group and slightly more girls in the 3–4 and 15–16 year age groups.



The majority (72.2%) of children focused on in the survey were first born, with just over a quarter (27.8%) second born or subsequent – see Table 3.15.

Table 3.15: Birth order of children focused on by parents		
Birth order	Frequency	Per cent
First	711	72.2
Second	196	19.9
Third	63	6.4
Fourth	10	1.0
Fifth	2	0.2
Sixth	2	0.2
Seventh	1	0.1
Subtotal	985	100.0
Missing	31	
Total	1,016	

Although parents were asked to focus on one particular child for the majority of the questionnaire, most had other children as well. The largest number of children for a respondent was seven. The mean number of children per respondent was 2.01, with nearly half (44%) having two and just under a third (32.3%) having one. The age of the children ranged from 0 to 30 (see Table 3.16).

Table 3.16: The number of children per respondent		
Number of children	Frequency	Per cent
1	327	32.3
2	445	44.0
3	172	17.0
4	49	4.8
5	7	0.7
6	11	1.1
7	1	0.1
Subtotal	1,012	100.0
Missing	4	
Total	1,016	

3.3.2.3 When parents start and stop teaching their children about road safety

Only a few respondents (51) had not yet started teaching their children about road safety. The age distribution of their children is shown in Table 3.17

For those parents who had begun teaching their children about road safety, the mean age was 2.6 years and the most common age was two. Figure 3.16 shows that 62.8% of parents started when their children were two or younger, 17.5 % when they were three and 19.7% when they were four or older.

Table 3.17: Age of children whose parents had not yet started teaching them about road safety

Age (years)	Frequency
Less than 1	15
1	23
2	13
3	3
4	1
Total	55*

* This totals more than 51 as some of the parents who had not yet started teaching their children about road safety had more than one child.



Starting to walk properly seemed to be a trigger for beginning teaching about road safety. Nearly half (47.7%) of parents began to teach their children about road safety when they started walking. A further 42.5% waited until after they had started walking. Only a small percentage (9.9%) started before they had begun to walk (see Table 3.18).

Table 3.18: When parents started to teach their children about road safety in relation to walking		
Stage of walking	Frequency	Per cent
Before they started walking	94	9.9
When they started walking	455	47.7
After they started walking	405	42.5
Subtotal	954	100.1*
Missing	9	
Total	963	
* Not all tables total 100 due to rounding.		

In relation to stopping teaching about pedestrian road safety, the majority (58.8%) said they never intended to stop teaching. However, 10.9% said they intended to stop when their children were between 12 and 14 years,² and 6.1% as young as between 8 and 11 (see Table 3.19).

Table 3.19: When parents stopped (or intended to stop) teaching their children about pedestrian road safety		
Responses: by age and other	Frequency	Per cent
<i>By age</i>		
0–2 years	1	0.1
3–4 years	2	0.2
5–7 years	7	0.7
8–11 years	57	6.1
12–14 years	102	10.9
15–16 years	69	7.3
Older age	61	6.5
<i>Other</i>		
When they understand	23	2.4
Leave home	15	1.6
Don't know	50	5.3
Never	552	58.8
Missing	77	
Total	1,016	99.9*
* Not all tables total 100 due to rounding.		

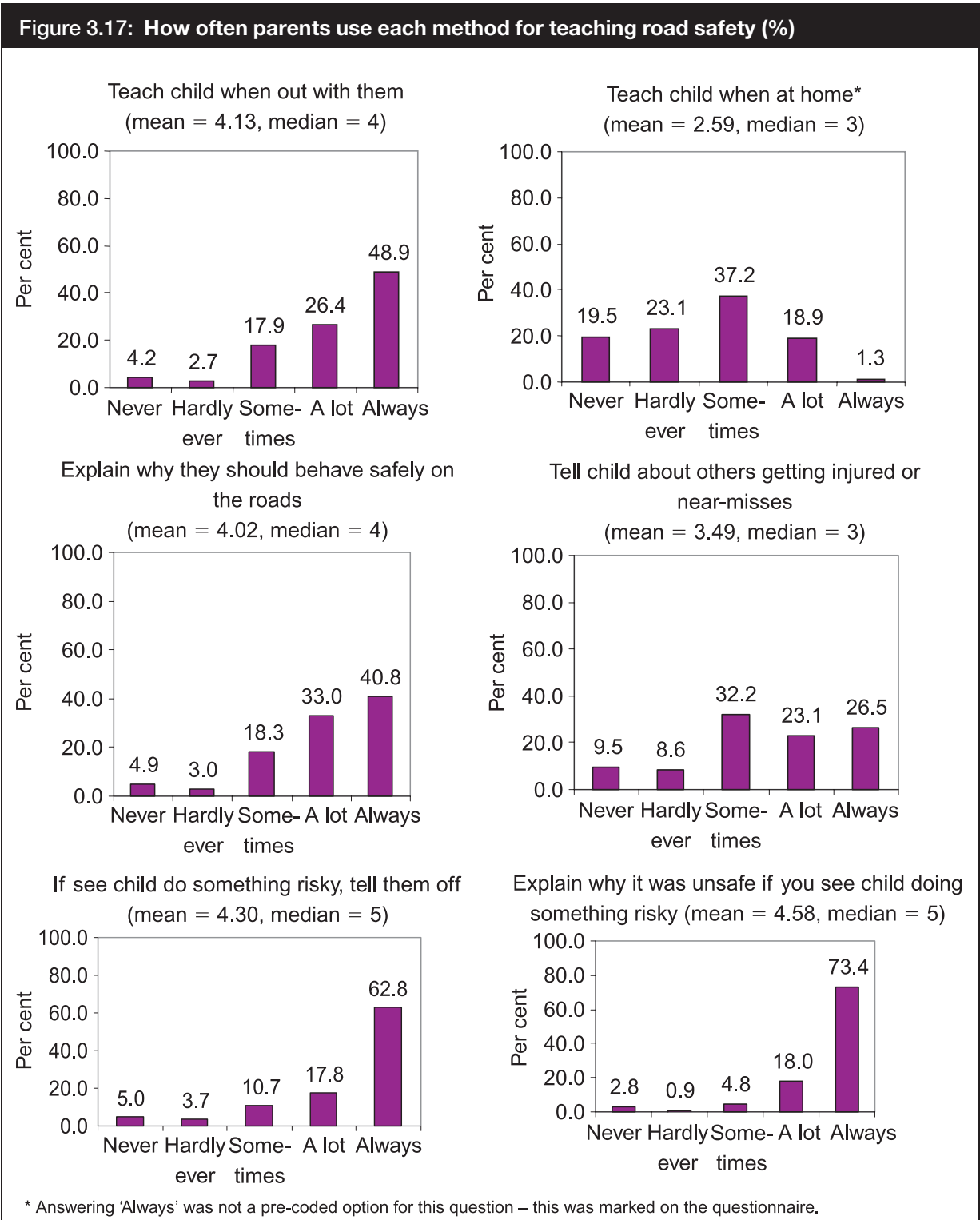
3.3.2.4 How parents teach their children about road safety

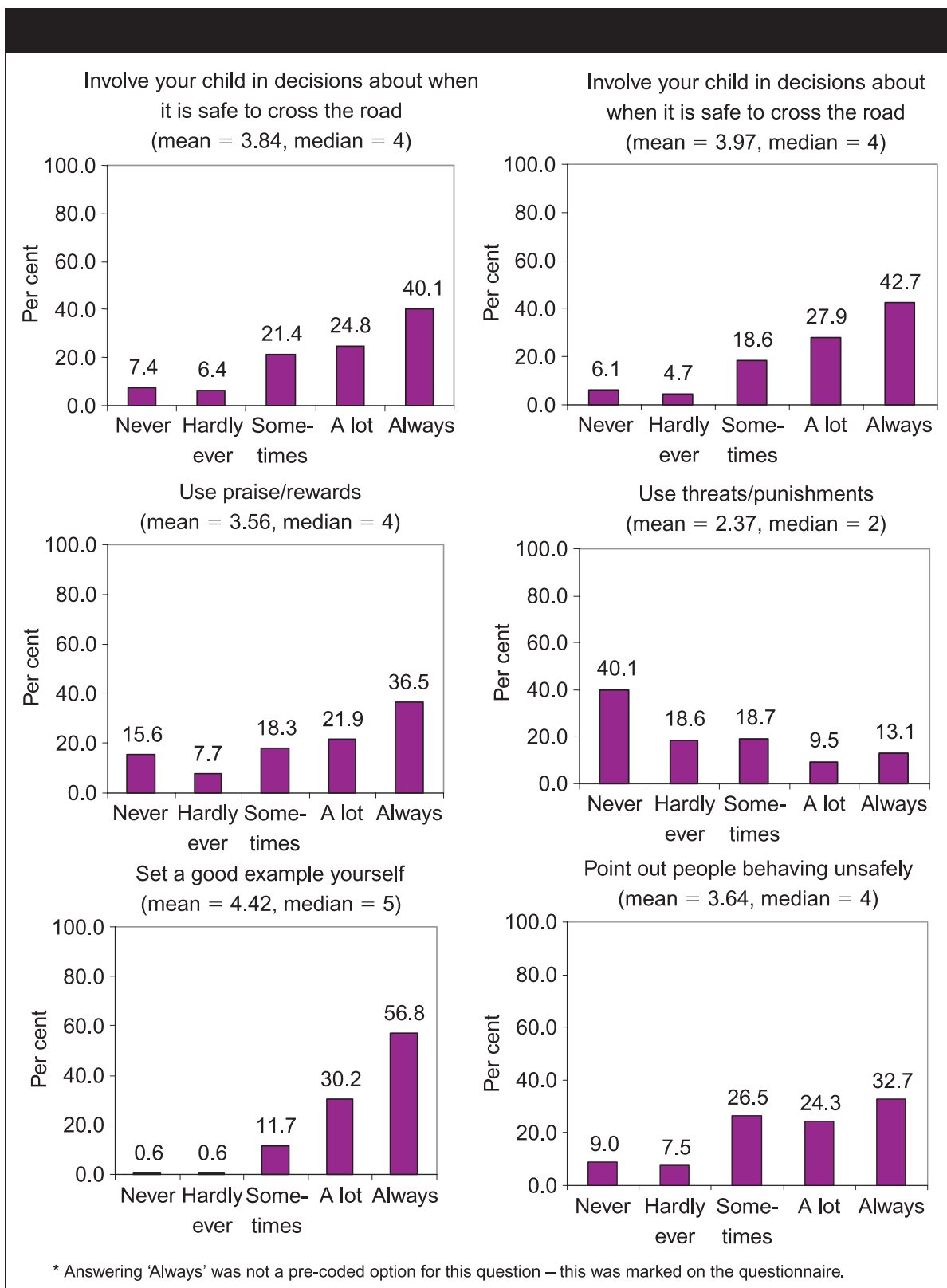
Parents were asked how often they used the various methods which had emerged during the focus group discussions with parents and the participatory work with young people. An overview of the responses for the whole sample is presented before exploring any variation with characteristics such as the child's age, gender and birth order, the parent's gender and ethnicity, access to a car or van, and area type.

² This includes responses of 'teenager'.

All respondents

Bar charts showing how often parents use each method are provided in Figure 3.17. To facilitate comparison of the various methods, a mean score was calculated for each based on: Always = 5; A lot = 4; Sometimes = 3; Hardly ever = 2; Never = 1. Table 3.20 shows the mean score and median for each particular method, ranked in order of frequency of use.





The most commonly used methods were explaining why it was unsafe if they saw their child doing something risky (73.4% said 'Always'), setting a good example themselves (56.8% said 'Always') and telling them off afterwards if they saw their child doing something risky (62.8% said 'Always'). Two of these (the first and third) are reactive, i.e. they are responding to the child behaving inappropriately.

Table 3.20: Mean score of each method of teaching road safety		
Method (sorted by mean score)	Mean score	Median
Explain why it is unsafe if you see them doing something risky	4.58	5
Set good example	4.42	5
Tell child off afterwards if you see them doing something risky	4.30	5
Teach child when out	4.13	4
Explain why they should behave safely	4.02	4
Involve them in decisions about when it is safe to cross	3.97	4
Involve them in decisions about where it is safe to cross	3.84	4
Point out unsafe behaviour by others	3.64	4
Use of praise/rewards	3.56	4
Tell them about others getting injured/near-misses	3.49	3
Teach child when at home*	2.59	3
Use threats/punishments	2.37	2

* The questionnaire did not allow parents to score this option as 5 (Always) as it was felt this was unrealistic.

The more explicit teaching methods followed behind these, with 48.9% of parents saying that they always taught their child when out with them, 40.8% always explained why they should behave safely, 42.7% always involved them in decisions about when to cross, and 40.1% did so with regard to where to cross.

The methods that received the lowest scores included those which involved using other people as examples – pointing out people behaving unsafely and telling their child about others getting injured or near-misses.

The use of praise or reward was mixed, with just over a third saying they always used that method (36.5%). The least popular method was the use of threats or punishments, with only 13.1% saying they always did this and 40.1% never.

Additional comments

Additional comments made by parents provide further depth to the responses. However, this was optional and the number of parents who chose to add additional comments was comparatively low, hence the responses should not be interpreted quantitatively.

Television programmes (e.g. the news), advertisements, newspaper stories and personal experiences (friends, pets, etc.) were used by some parents as a way of teaching children about road safety and emphasising consequences. Some, however, said they were worried about doing this for young children as it may scare them. Similarly, pointing out unsafe behaviour by others made some parents apprehensive as they thought their child may be tempted to copy. Others said their children pointed this out to them.

Involving children in decisions about where and when to cross was seen by some as the best way of teaching their children. Some, however, felt that it was the parents

who should take control and not the children. One father said he had not thought of this but would do so from now on! Praise and reward also provoked a mixed response, with some parents feeling that their children were now too old or that it was inappropriate – children should not be praised for behaving safely, it should be regarded as normal.

The types of praise or reward used are summarised in Table 3.21 The most common type of praise was verbal, then food treats (e.g. sweets), other treats (e.g. a special outing) and star charts. Demonstrations of affection (e.g. a kiss or cuddle) also featured.

What type of praise or reward	Per cent
Verbal praise (say 'well done')	79.1
Food treats	8.7
Other treats	3.9
Star charts	3.4
Demonstrations of affection	2.7
Pocket money	1.9
Allowed out on own	0.3
Total (n = 588)	100.0

Threats and punishments were less commonly used than praise and reward. The categories mentioned are summarised in Table 3.22. By far the most common category was verbal criticism or telling off (62.6% of parents who used threats and punishments). Shouting and swearing was mentioned by 11.3% of these parents. Other types included removing privileges (e.g. having friends round), not being allowed out and being restrained (e.g. being made to hold hands or being put in a pushchair).

Type of threat or punishment	Per cent
Verbal criticism/telling off	62.6
Shouting/swearing	11.3
Removal of privileges	7.1
Not allowed out – grounded	6.5
Taking away items	2.8
Being made to hold hands	2.0
Naughty step	1.7
Physical punishment	1.7
Put in pushchair/reins on	1.4
Being made to do chores	1.1
Loss of pocket money	0.6
Sent to bed	0.6
Warning	0.3
Removal of star from chart	0.3
Total (n = 353)	100.0

Relationship with child’s age

The relationship between a child’s age and the methods parents use to teach them about road safety was explored by using a Spearman’s rho (non-parametric) correlation test. A statistically significant correlation was found between a child’s age and eight of the twelve methods of teaching road safety (see Table 3.23).

As age increased, parents were more likely to teach children at home, tell them about others getting injured or near-misses, point out unsafe behaviour by others and involve them in decisions about where it is safe to cross. They were less likely to teach the child when they are out, explain why they should behave safely, praise or reward them, or use threats or punishments.

There was no significant relationship between age and telling a child off afterwards, explaining why it was unsafe if they saw them doing something risky or setting a good example.

Table 3.23: Correlation coefficients for child’s age and methods of teaching road safety			
Method	Correlation coefficient	Significance (2-tailed)	Significant relationship?
Teach child when out	-0.220†	< 0.001	Yes – negative, low
Teach child when at home	0.065*	0.046	Yes – positive, slight
Explain why should behave safely	-0.078*	0.015	Yes – negative, slight
Tell them about others getting injured or near-misses	0.198†	< 0.001	Yes – positive, slight
Tell child off afterwards if see them doing something risky	0.000	998	No
Explain why unsafe if see them doing something risky	-0.033	0.299	No
Involve them in decisions about where safe to cross	0.065*	0.043	Yes – positive, slight
Involve them in decisions about when safe to cross	0.028	0.379	No
Use of praise/rewards	-0.189†	< 0.001	Yes – negative, slight
Use of threats/punishment	-0.104†	0.001	Yes – negative, slight
Setting a good example	0.007	0.836	No
Pointing out unsafe behaviour by others	0.202†	< 0.001	Yes – positive, low
* Correlation is significant at the 0.05 level (2-tailed). † Correlation is significant at the 0.01 level (2-tailed).			

Relationship with child's gender

The relationship between parents' use of the various teaching methods and the gender of the children was explored using the Mann Whitney U test. For almost all methods (11 out of 12) there was no significant difference between how parents approached teaching boys and girls. The only exception was teaching a child at home, where boys had a higher mean rank than girls, i.e. parents taught boys at home more than girls – see Table 3.24.

Table 3.24: Relationship between child's gender and methods of teaching road safety		
Method	Asymptotic significance (2-tailed)	Significant relationship? (mean rank)
Teach child when out	0.928	No Boys 491.76, girls 493.28
Teach child when at home	0.032*	Yes Boys 479.89, girls 461.00
Explain why should behave safely	0.300	No Boys 483.87, girls 501.60
Tell them about others getting injured or near-misses	0.765	No Boys 492.04, girls 486.82
Tell child off afterwards if see them doing something risky	0.477	No Boys 495.88, girls 484.81
Explain why unsafe if see them doing something risky	0.805	No Boys 491.68, girls 488.22
Involve them in decisions about where safe to cross	0.243	No Boys 502.31, girls 482.12
Involve them in decisions about when safe to cross	0.143	No Boys 504.19, girls 479.12
Use of praise/rewards	0.143	No Boys 500.93, girls 475.44
Use of threats/punishments	0.143	No Boys 494.79, girls 469.58
Setting a good example	0.782	No Boys 485.65, girls 481.24
Pointing out unsafe behaviour by others	0.745	No Boys 491.76, girls 486.08
* Significant at the 0.05 level (2-tailed).		

To investigate whether there was a significant difference between boys and girls in relation to how often all the methods of teaching road safety were used, a total score was calculated for each respondent by adding together the scores for each of the 12 methods. An independent *t*-test was then performed comparing the boys' mean total

score with that of the girls. No significant difference was found: $t = 0.608$ ($p = 0.543$). Boys had a mean score of 45.05, girls 44.70.

Relationship with birth order

There were 711 first-born children in the sample with a mean age of 7.98. Subsequent children (those born second or after) numbered 274 and had a mean age of 9.73. As there was a big age disparity between the two groups, for comparative purposes a single age band of 8–11-year-olds was selected.

A Mann Whitney test was then performed on this sub-set to examine the relationship between how often parents used each of the various teaching methods with the two groups (i.e. first born and subsequent children). This found that there were no significant differences between how often each of the methods was used and the birth order of the child (see Table 3.25).

Table 3.25: Relationship between birth order and methods of teaching road safety (8–11-year-olds only)		
Method	Asymptotic significance (2-tailed)	Significant relationship? (mean rank)
Teach child when out	0.641	No First born 137.31, subsequent 132.81
Teach child when at home	0.422	No First born 134.30, subsequent 126.34
Why should behave safely	0.838	No First born 135.92, subsequent 137.91
Others injured/near-misses	0.328	No First born 133.14, subsequent 142.94
Tell child off afterwards	0.319	No First born 133.49, subsequent 142.10
Explain why unsafe	0.492	No First born 137.60, subsequent 132.11
Decisions about where safe	0.722	No First born 134.97, subsequent 138.49
Decisions about when safe	0.090	No First born 131.65, subsequent 148.35
Use of praise/rewards	0.954	No First born 135.17, subsequent 134.59
Use threats/punishments	0.851	No First born 134.55, subsequent 132.67
Set good example	0.828	No First born 133.91, subsequent 135.95
Point out unsafe behaviour	0.337	No First born 132.72, subsequent 142.35

As before, in order to investigate whether there was a significant difference between the two groups in relation to how often all the methods of teaching road safety were used, a total score was calculated for each respondent by adding together the scores for each of the 12 methods. An independent *t*-test was then performed comparing the first-born children with subsequent children (for 8–11-year-olds). No significant difference was found: $t = -0.379$ ($p = 0.705$). The mean score for first born was 46.18, for subsequent children it was 46.52.

The same tests were repeated for children aged between 12 and 16. Again, no significant differences were found between any of the 12 variables and birth order. In the case of 5–7-year-olds, however, there was a significant difference between the groups in relation to setting a good example ($p = 0.015$). The mean score for first-born children was 90.70 and for subsequent children it was 109.58. Parents were more likely to set a good example with second-born and subsequent children. Explaining why they should behave safely also shows a noticeable but not significant difference ($p = 0.053$), with the mean score for the first-born 92.31 and for subsequent children 108.82.

Relationship with parents' gender

The relationship between parents' gender and the methods they used to teach their children about road safety was investigated by using a Mann Whitney test.

For 9 out of 12 methods there was a significant difference between male and female parents in how often each method was used. Females had a higher mean score than males for each of these nine methods, i.e. they reported using them more often. The only methods where there was no significant difference between male and female parents were explaining why behaviour was unsafe if they saw their child doing something risky, the use of praise or rewards and threats or punishments (see Table 3.26).

Table 3.26: Relationship between parental gender and methods of teaching road safety		
Method	Asymptotic significance (2-tailed)	Significant relationship? (mean rank)
Teach child when out	0.004*	Yes Males 458.61, females 514.34
Teach child when at home	0.040*	Yes Males 457.58, females 498.05
Explain why should behave safely	< 0.001†	Yes Males 434.73, females 522.73
Tell them about others getting injured or near-misses	< 0.001†	Yes Males 437.31, females 517.73
<i>(continued)</i>		

Table 3.26: (continued)		
Method	Asymptotic significance (2-tailed)	Significant relationship? (mean rank)
Tell child off afterwards if see doing something risky	0.006†	Yes Males 461.48, females 510.65
Explain why unsafe if see them doing something risky	0.250	No Males 483.67, females 502.25
Involve them in decisions about where safe to cross	< 0.001†	No Males 436.95, females 521.84
Involve them in decisions about when safe to cross	< 0.001†	Yes Males 437.13, females 521.25
Use of praise/rewards	0.127	No Males 473.31, females 503.90
Use of threats/punishment	0.461	No Males 499.77, females 485.22
Setting a good example	< 0.001†	Yes Males 407.99, females 520.00
Pointing out unsafe behaviour by others	< 0.001†	Yes Males 418.94, females 522.98
* significant at the 0.05 level (2-tailed). † significant at the 0.01 level (2-tailed).		

Adding together the scores for all of the methods and then performing an independent test found that there was a significant difference between male and female parents: $t = -3.924$ ($p = < 0.001$). Female parents had a mean score of 45.51 compared with 42.99 for male parents. Overall, mothers provide road safety education of some form more often than fathers.

Relationship with parents' ethnicity

To investigate whether there was a significant relationship between ethnicity and the methods of teaching road safety used by parents, the sample was split into two groups. One group consisted of those who categorised themselves as White British (numbering 888), the other consisted of the remainder of the sample (numbering 112). It was not possible to examine by individual ethnic groups as there were insufficient numbers for meaningful results to be derived.

There was considerable similarity in the approaches used by different ethnic groups. For 11 out of the 12 methods of teaching road safety, a Mann Whitney test found there to be no statistically significant difference between White British parents and other ethnic groups (see Table 3.27). The only exception was involving children in decisions about where it was safe to cross the road. White British parents were

found to use this method significantly more than other groups ($p = 0.037$). However, it is important to recognise the wide diversity among those who categorise themselves as anything other than White British.

Table 3.27: Relationship between ethnicity and methods of teaching road safety

Method	Asymptotic significance (2-tailed)	Significant relationship? (mean rank)
Teach child when out	0.815	No White British 499.2, BME† 492.95
Teach child when at home	0.457	No White British 483.68, BME 503.79
Explain why should behave safely	0.947	No White British 498.30, BME 500.09
Tell them about others getting injured or near-misses	0.431	No White British 497.97, BME 476.13
Tell child off afterwards if see them doing something risky	0.601	No White British mean score of 497.95, BME 484.84
Explain why unsafe if see them doing something risky	0.413	No White British 493.98, BME 512.33
Involve them in decisions about where safe to cross	0.037*	Yes White British 504.94, BME 447.67.
Involve them in decisions about when safe to cross	0.120	No White British 502.77, BME 460.36
Use of praise/rewards	0.876	No White British 494.01, BME 498.31
Use of threats/punishments	0.068	No White British 481.95, BME 532.45
Setting a good example	0.868	No White British 489.06, BME 493.00
Pointing out unsafe behaviour by others	0.882	No White British 494.96, BME 490.80
* Significant at the 0.05 level (2-tailed). † BME = Black and minority ethnic.		

As before, to determine whether there was a significant difference between White British and Black and minority ethnic (BME) parents in relation to how often all methods of teaching road safety were used, a total score (for all 12 methods) was calculated for each respondent. An independent t -test revealed that there was no significant difference between White British parents compared with other ethnic groups: $t = -0.079$ ($p = 0.937$). The mean for White British parents was 44.82 and 44.89 for other ethnic groups.

Relationship with access to a car or van

Parents who had access to a car totalled 808, those who did not 195. These two groups were compared using a Mann Whitney test. This found that, for eight out of the twelve methods, there was a significant difference between the groups of parents. For all of these eight methods, those without access to a car or van had a higher mean score than those who did have access, i.e. they used the method significantly more often. The only methods where there was no significant difference were the more reactive methods (involving responding to children being seen doing something risky), setting a good example and using threats or punishments (see Table 3.28).

Table 3.28: Relationship between access to a car or van and methods of teaching road safety		
Method	Asymptotic significance (2-tailed)	Significant relationship? (mean rank)
Teach child when out	< 0.001*	Yes No car or van 570.49, have car or van 483.01
Teach child when at home	0.003*	Yes No car or van 539.23, have car or van 474.88
Explain why should behave safely	< 0.001*	Yes No car or van 564.13, have car or van 484.54
Tell them about others getting injured or near-misses	< 0.001*	Yes No car or van 574.11, have car or van 478.40
Tell child off afterwards if see them doing something risky	0.384	No No car or van 511.91, have car or van 494.63
Explain why unsafe if see them doing something risky	0.375	No No car or van 484.80, have car or van 500.56
Involve them in decisions about where safe to cross	< 0.001*	Yes No car or van 567.92, have car or van 483.63
Involve them in decisions about when safe to cross	< 0.001*	Yes No car or van 568.54, have car or van 482.95
Use of praise/rewards	0.002*	Yes No car or van 551.95, have car or van 482.38
Use of threats/punishments	0.164	No No car or van 513.33, have car or van 483.05
Setting a good example	0.279	No No car or van 508.63, have car or van 486.71
Pointing out unsafe behaviour by others	< 0.001*	Yes No car or van 564.56, Have car or van 479.52
* Significant at the 0.01 level (2-tailed).		

Some caution is required in relation to making any causal inferences about this association as confounding may exist. As noted above, there is a strong correlation between access to a car or van and the area where people live (see Section 3.3.2.1). Urban parents were less likely to have a car than rural parents. The extra diligence that parents without access to a car or van seem to exhibit could possibly be attributable to the environment in which they live rather than car access per se.

Summing all the methods together and then performing an independent *t*-test found that there was a significance difference between these two groups: $t = -4.236$ ($p = <0.001$). Those with access to a car had a mean score of 44.25, those without 47.22.

Area type

The survey data were split into respondents living in urban, suburban and rural areas (see Table 3.29). A chi-square test was then performed to see whether or not there was a significant difference between how often each method was taught and the area type. This found that there was only a significant relationship between the area parents lived in and one method – that of teaching a child when at home (chi-square 16.423, $p = 0.012$). Urban parents seemed more likely to teach their children at home ‘a lot’, whereas rural parents appeared less likely.

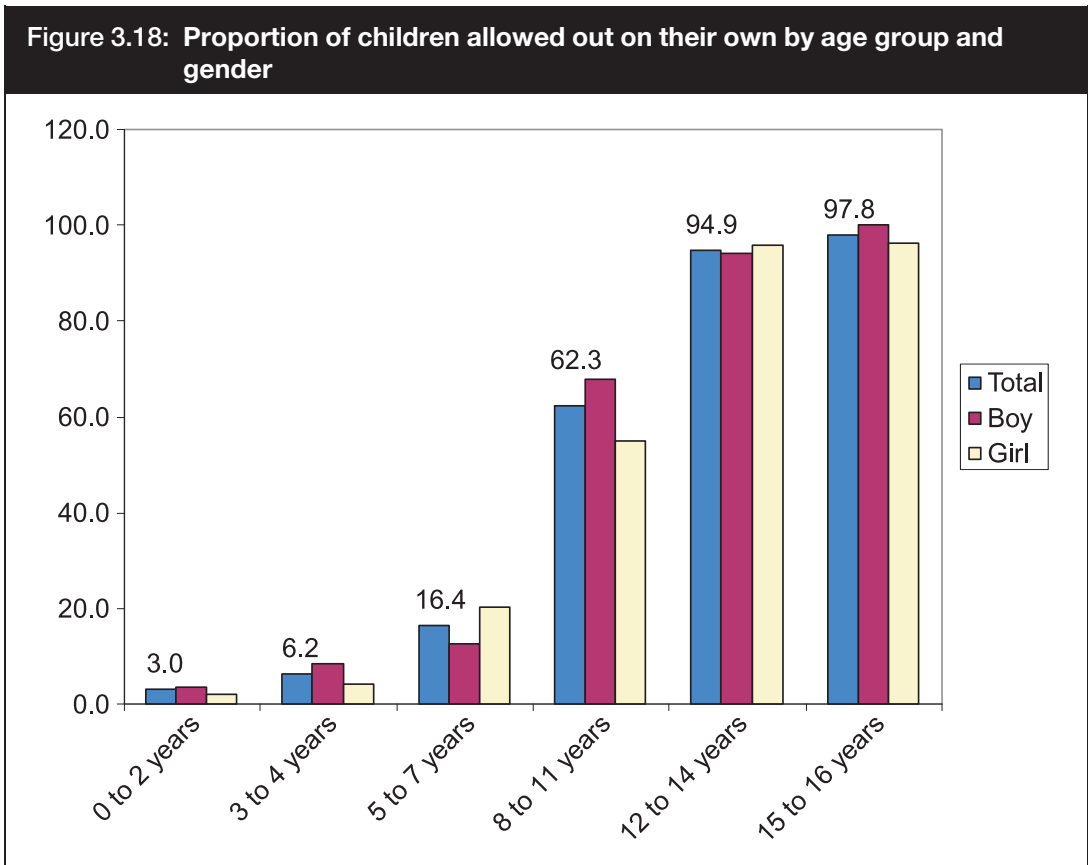
Method	Asymptotic significance (2-tailed)	Significant Relationship?
Teach child when out	0.952	No
Teach child when at home	0.012	Yes – see above
Explain why should behave safely	0.358	No
Tell them about others getting injured or near-misses	0.519	No
Tell child off afterwards if see them doing something risky	0.594	No
Explain why unsafe if see them doing something risky	0.751	No
Involve them in decisions about where safe to cross	0.455	No
Involve them in decisions about when safe to cross	0.412	No
Use of praise/rewards	0.273	No
Use of threats/punishments	0.113	No
Setting a good example	0.375	No*
Pointing out unsafe behaviour by others	0.776	No

*20% or more of the cells had an expected count of less than five. Therefore, the results should be treated with caution.

3.3.2.5 Letting children out on their own

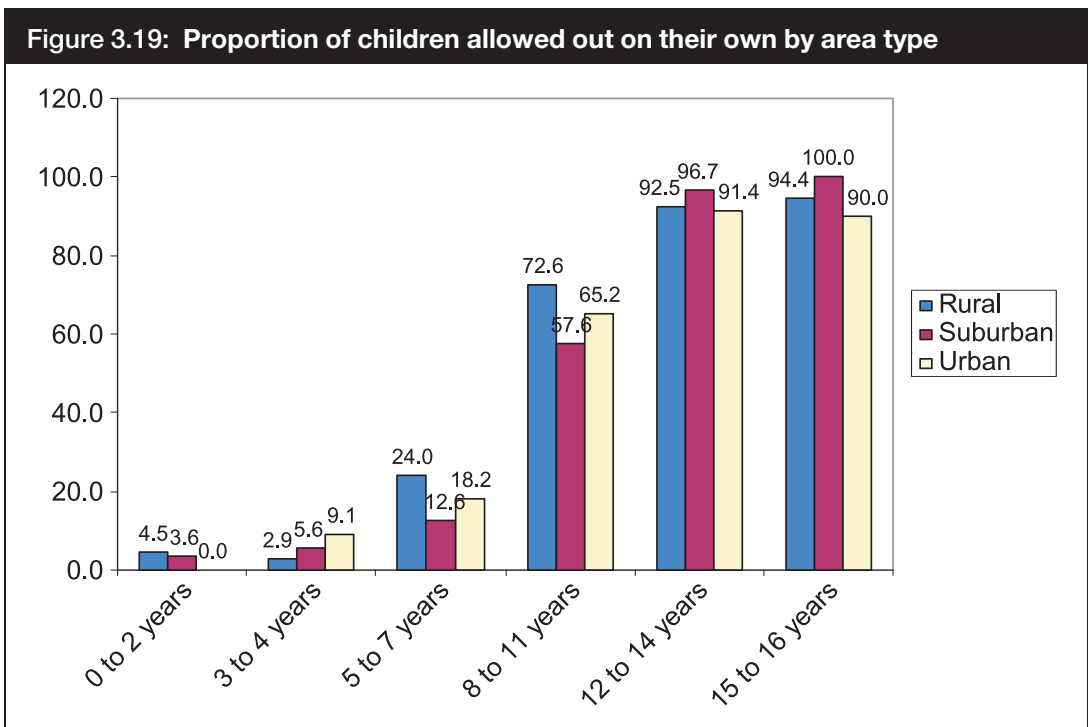
Relationship with age and gender

The proportion of children allowed out on their own by age group is shown in Figure 3.18. There are no significant differences between the different genders of the children in each age group.



Relationship with area type

Figure 3.19 shows the percentage of each age group allowed out alone by area type. More urban 3–4-year-olds appear to be allowed out alone than those from other areas, but from age 5–11 the figures were higher for rural children. From the age of 12 onwards, both urban and rural children had similar levels of being allowed out,



with suburban children slightly more likely to be let out alone. The limited number of rural children means that sub-groups by age are small – the results therefore should be treated with caution.

Relationship with sample characteristics

To investigate the differences between certain sample characteristics and whether children are let out alone, 7-year-olds and under (numbering 423) and 10-year-olds and under (numbering 620) were examined as separate groups. Chi-square tests were performed to investigate potential differences between groups and the results are shown in Table 3.30.

Characteristic	Different groups	Asymptotic significance (2-sided)	
		7-year-olds and under (<i>n</i> = 423)	10-year-olds and under (<i>n</i> = 620)
Ethnicity	White British and BME (all non-White British)	0.399	0.673
Parent's gender	Male and female	0.054	0.023*
Child's gender	Boys and girls	0.529	0.042*
Access to a car/van	Those who have access to a car and those who do not	0.692	0.918
Area type	Three groups: urban, suburban and rural	0.396	0.201
Number of adults in house	Single parent and those with at least two parents	0.654	0.824
Birth order	First born and subsequent children	0.008†	0.072

Note, the result for ethnicity must be treated with caution as one cell had a count of less than five.
 * Significant at the 0.05 level.
 † Significant at the 0.01 level.

There was no significant difference in whether or not children aged 7 and under or 10 and under are let out alone based on parents' ethnicity, access to a car or van, area type or the number of adults in a house.

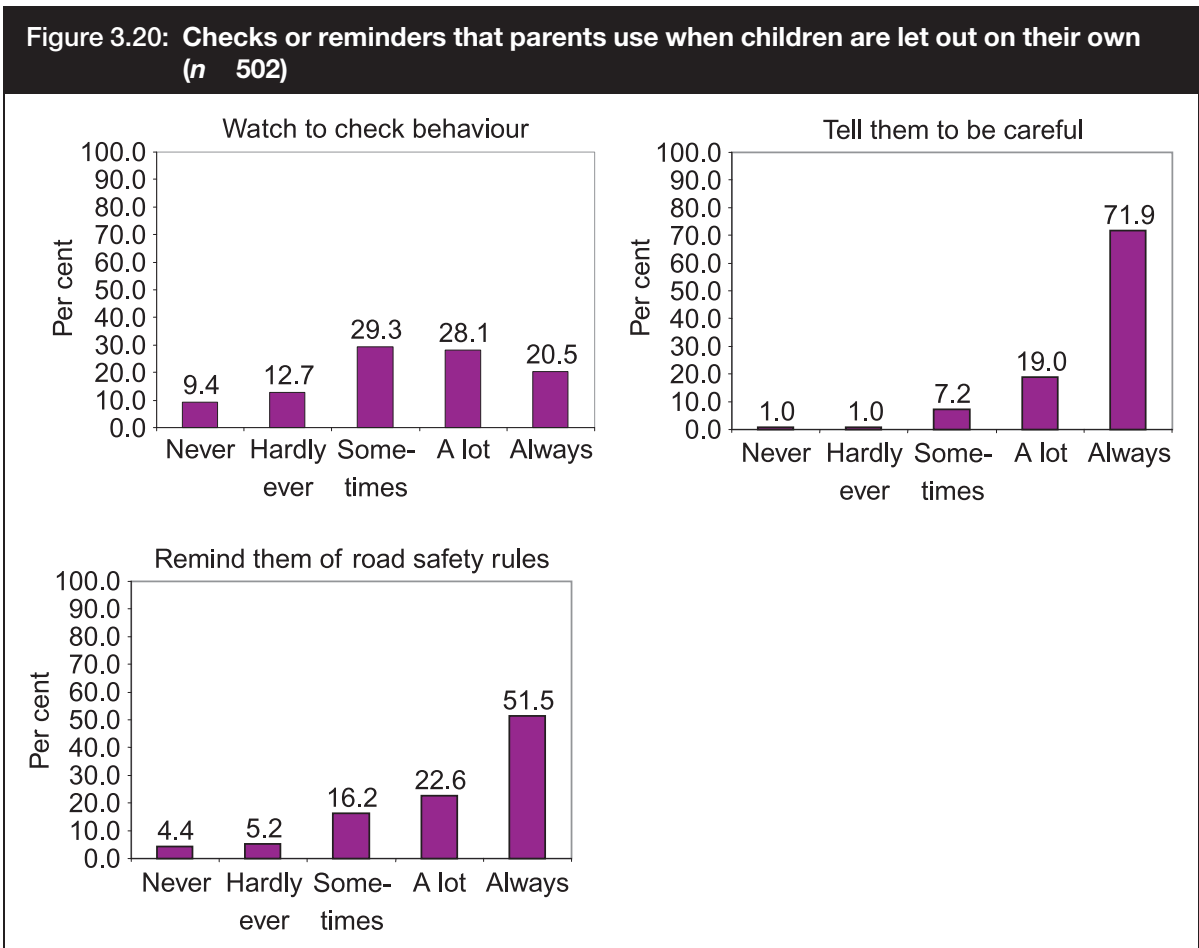
However, there was a significant relationship between parental gender and whether or not 10-year-olds and under are allowed out alone. Fathers were more likely than mothers to let their children out alone. Similarly, boys aged 10 years old and under were more likely to be let out alone than girls. For 7-year-olds and under, the only

significant relationship was with birth order. First-born children appeared less likely to be let out alone than those born subsequently.

Checks and reminders that parents use when their children are going out alone³

The most common type of check or reminder when children are going out on their own was that of telling them to be careful (72% of parents said they did this always), then reminding them of road safety rules (51.5% said they did this always) and then watching to check their behaviour (20.5% said they did this always) (see Table 3.31 and Figure 3.20).

Checks/reminders	Mean	Median
Tell them to be careful	4.60	5
Remind them of road safety rules	4.12	5
Watch to check behaviour	3.38	3



³ All data for the remainder of this section relate only to those parents who said they did let their children out on their own.

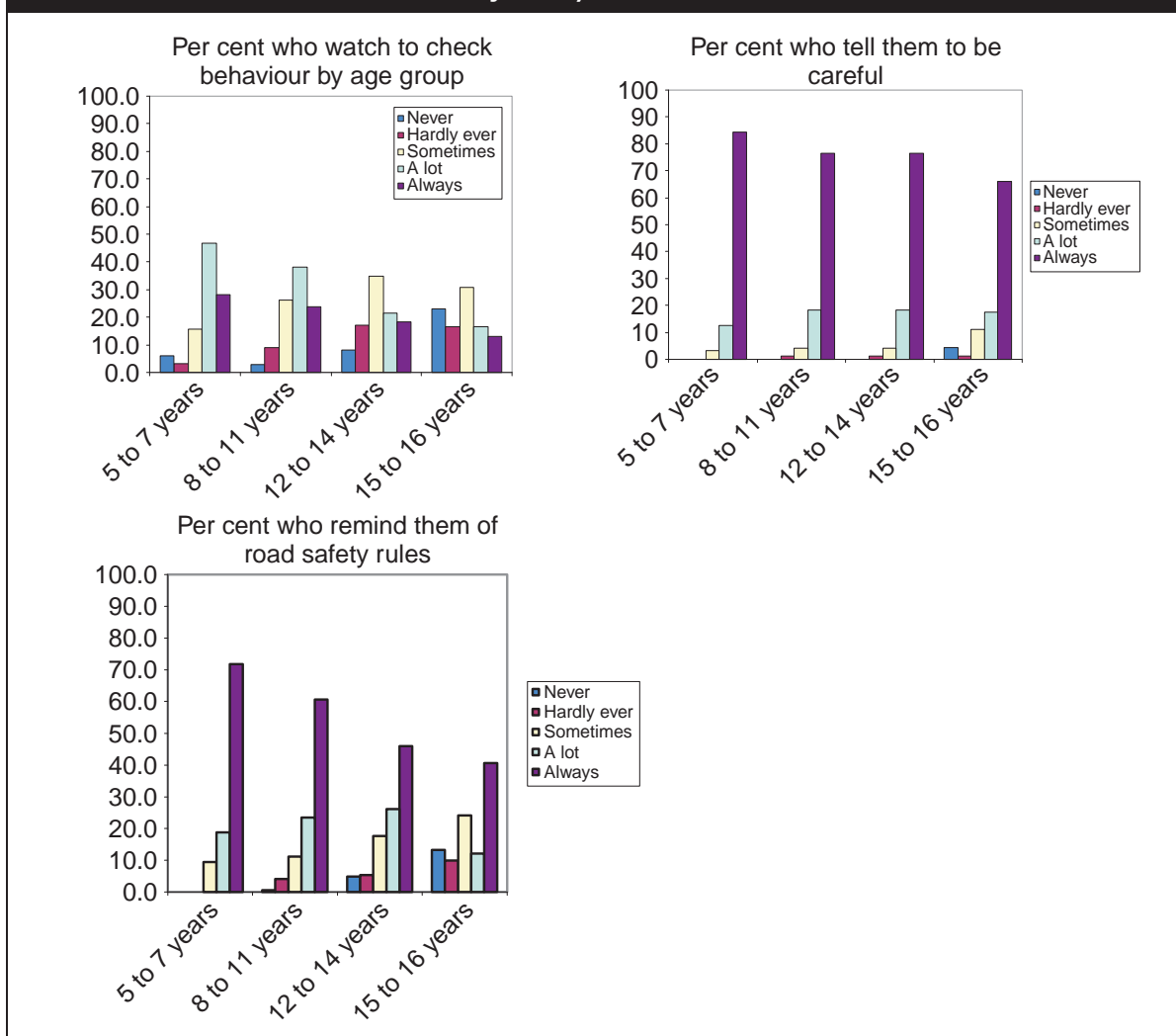
Age of child

The relationship between a child's age and the different methods parents use to check they are behaving safely on the roads when they go out alone was examined by using a Spearman's rho correlation test. This found that there was a significant negative relationship between age and all three of the methods examined; as age increased, therefore, parents were less likely to watch to check behaviour, tell them to be careful or remind them of road safety rules (see Table 3.32). This is demonstrated graphically in Figure 3.21.

Table 3.32: Relationship between a child's age and methods of teaching them about road safety when out on their own (n = 502)			
Method	Correlation coefficient	p value	Significant relationship?
Watch to check behaviour	-0.303*	< 0.001	Yes – negative, low
Tell them to be careful	-0.131*	0.004	Yes – negative, slight
Remind them of road safety rules	-0.244*	< 0.001	Yes – negative, low

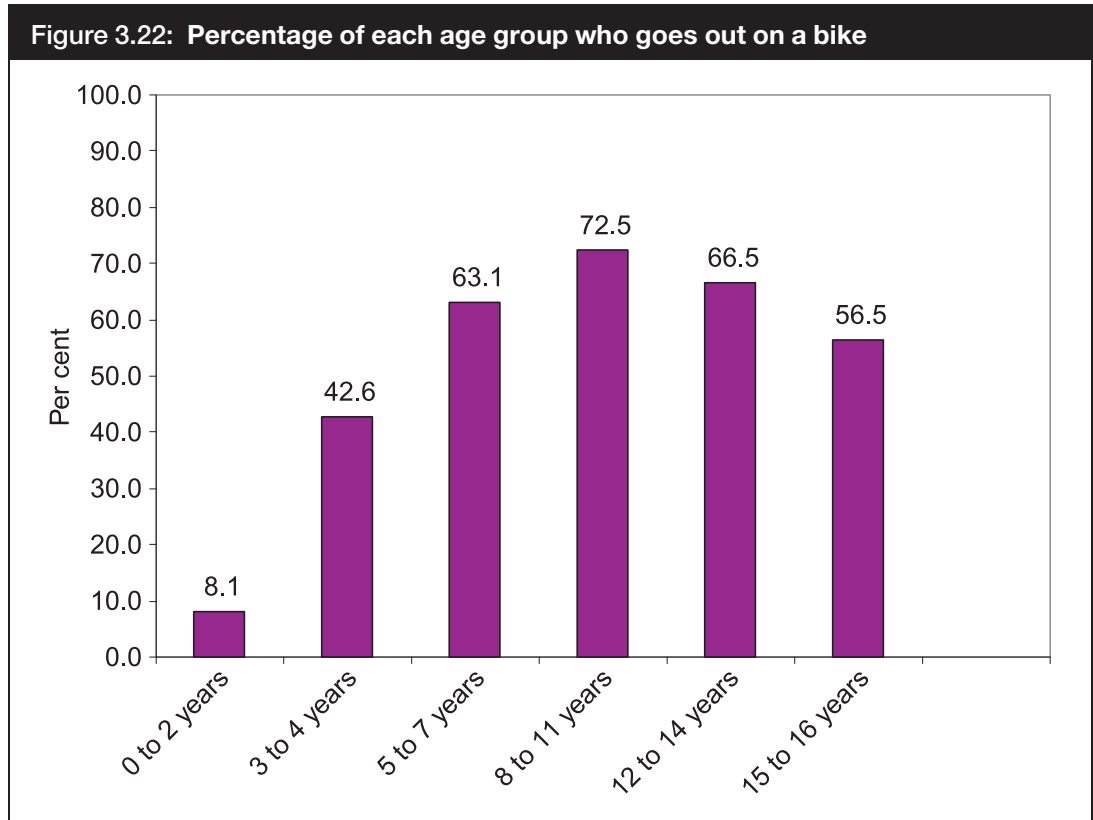
* Correlation is significant at the 0.01 level (2-tailed).

Figure 3.21: Relationship between a child's age and methods of teaching them about road safety when out on their own (n = 502) (children aged up to four were excluded as the numbers were very small)



3.3.2.6 Going out on a bike

Overall, 585 parents reported allowing their child to go out on a bike. The mean age of these children was 9.44 and the most common age was 11. Figure 3.22 shows that going out on a bike increased until the age group of 8 to 11 years and then decreased.



Relationship between going out on a bike and other characteristics

To explore the relationship between whether or not children went out on a bike and various other characteristics, a series of chi-square tests were performed (see Table 3.33).

These revealed a statistically significant relationship between going out on a bike and a child’s gender and also access to a car or van. Boys were more likely than girls to be allowed out on a bike. In addition, those whose parents had access to a car or van were more likely to go out on a bike.

Characteristic	Different groups	Asymptotic significance (2-sided)	Significant difference?
Ethnicity*	White British and BME (all non-White British)	0.065	No
Parent's gender	Male and female	0.095	No
Child's gender	Boys and girls	0.010*	Yes Boys more likely to go out on bike than girls
Access to a car/van	Those who have access to a car and those who do not	< 0.001†	Yes Those whose parents have access to a car/van, more likely to go out on bike
Area type	Urban, suburban, rural	0.119	No
Number of adults in house	Single parent and those with at least two parents	0.735	No
* Significant at the 0.05 level (2-tailed). † Significant at the 0.01 level (2-tailed).			

3.3.2.7 How parents try to keep their children safe when going out on a bike

For those parents whose children went out on a bike (*n* = 585), the most common way of trying to keep them safe was to encourage pavement cycling (54.7% said they always did this), then to make sure they wear a cycle helmet (59% said they always did this), then accompanying them on foot (25.4% said they always did this) and, finally, accompanying them on a bike (9.9% said they always did this). Just over a third (38.1%) of children were always accompanied by an adult when out on a bike (see Table 3.34).

Methods (sorted by mean rank)	Mean	Median
Encourage pavement cycling	3.99	5
Make sure they wear cycle helmet	3.90	5
Accompany on foot	3.08	3
Accompany on bike	2.45	3

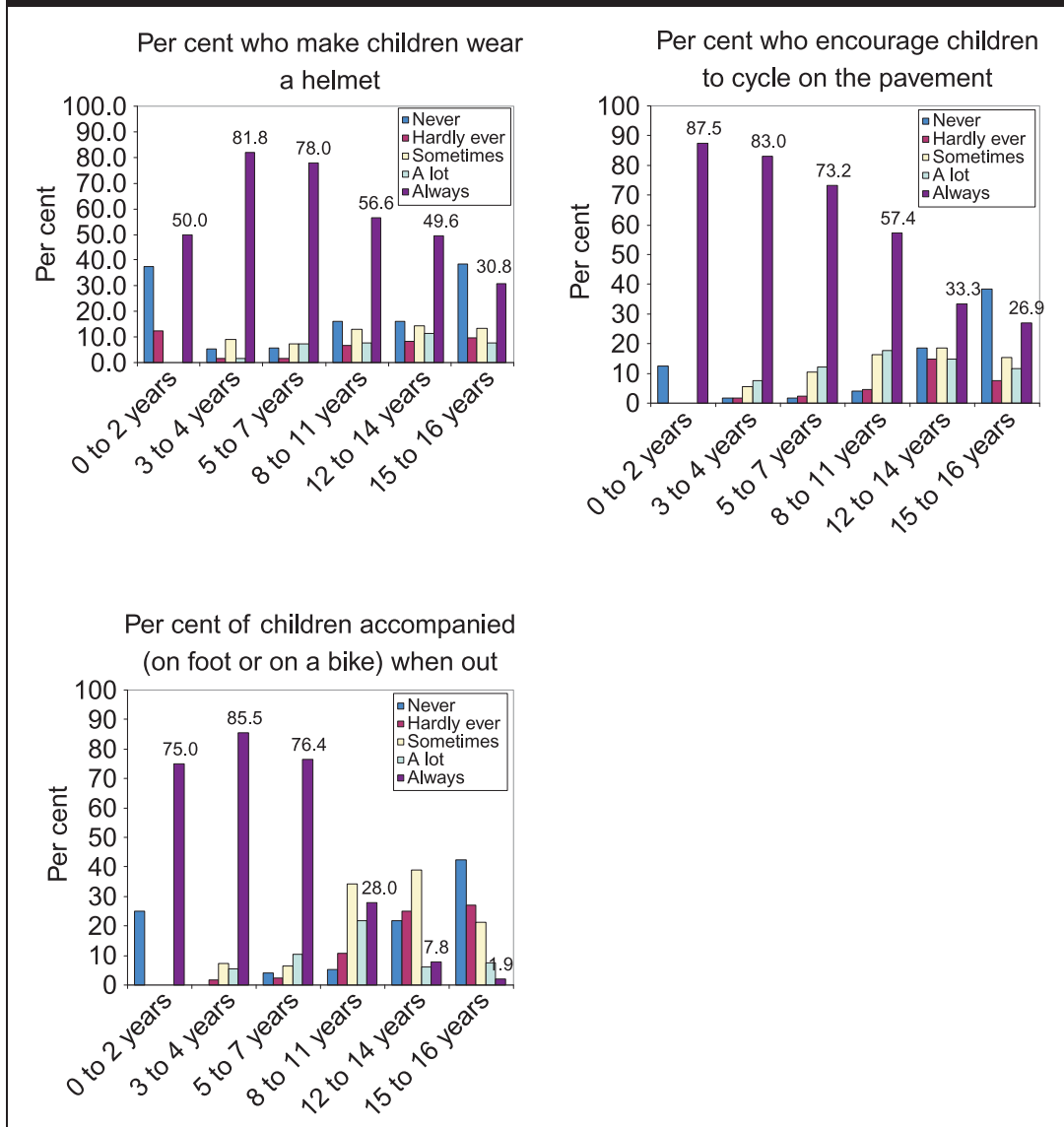
By age of child

The relationship between the age of the child and the methods used to keep them safe when they are out on their bike was investigated by using the Spearman’s rho correlation test. The results (shown in Table 3.35) demonstrate that there was a significant negative correlation between age and all the cited methods. Older children were less likely to be made to wear a helmet, be encouraged to cycle on a pavement or be accompanied while out. This is also demonstrated graphically in Figure 3.23.

Table 3.35: Relationship between the age of a child and how parents try to keep them safe when they are out on a bike			
Method	Correlation coefficient	Significance	Significant relationship?
Make sure they wear a cycle helmet	-0.295(*)	0.000*	Yes – negative, low
Encourage them to cycle on the pavement	-0.425(*)	0.000*	Yes – negative, moderate
Accompany on a bike themselves	-0.088(†)	-0.037†	Yes – negative, slight
Accompany on foot themselves	-0.593(*)	0.000*	Yes – negative, moderate
How often is child accompanied by an adult when on bike	-0.651(*)	0.000*	Yes – negative, moderate
* Significant at the 0.01 level (2-tailed). † Significant at the 0.05 level (2-tailed).			

Figure 3.23 shows a substantial decrease in parents making their children wear cycle helmets from the age of seven and encouraging cycling on the pavement from the age of 11. Less than a third of children are always made to wear a helmet once they are aged 15 to 16. Levels of accompaniment also decrease dramatically with age – 76% of 5–7-year-olds were always accompanied compared with only 7.8% of 12–14-year-olds.

Figure 3.23: How often parents use various methods of keeping their children safe when out on a bike



3.3.2.8 Driving children in a car

Over three-quarters of respondents (76.3%), equating to 768 parents, said they drove their child in a car. The relationship between car use and other characteristics is shown in Table 3.36.

Chi-square analyses showed a number of significant relationships. Males were more likely to drive their children than females. Two (or more) adult households were more likely to drive their child than single-parent families. This was also true for those living in rural areas compared with urban areas. Children, unsurprisingly, were also more likely to be driven if their parents had access to a car/van.

Table 3.36: Relationship between whether child is driven in a car and other characteristics			
Characteristic	Different groups	Asymptotic significance (2-sided)	Significant difference?
Ethnicity*	White British and BME (all non-White British)	0.585	No
Parent's gender	Male and female	< 0.001†	Yes
Child's gender	Boys and girls	0.212	No
Access to a car/van	Those who have access to a car and those who do not	< 0.001†	Yes
Area type	Three groups: urban, rural and suburban	< 0.001*	Yes
Number of adults in house	Single parent and those with at least two parents	< 0.001†	Yes
* Significant at the 0.05 level (2-tailed). † Significant at the 0.01 level (2-tailed).			

3.3.2.9 Teaching children about road safety while driving in a car ($n = 768$)⁴

The most common methods of ‘teaching’ children about road safety while they were being driven in a car was ensuring they wore a seat belt (98.4% said they always did this), then setting a good example as a safe and careful driver (64.2% said they always did) and then pointing out unsafe acts by others (48% said they always did this) (see Table 3.37).

Table 3.37: Methods of teaching children about road safety while being driven in a car		
Method (sorted by mean score)	Mean	Median
Ensure seat-belt use	4.98	5
Set a good example as safe driver	4.54	5
Point out unsafe acts	4.01	4

Age

It was found by using the Spearman's rho correlation test that there was a positive significant relationship between the age of the child and pointing out unsafe behaviour by others – older children were more likely to have unsafe behaviour pointed out to them than younger children. There was no significant relationship between a child's age and setting a good example or making sure they wore seat belts (see Table 3.38).

⁴ For this next section, only children who are driven in a car are included.

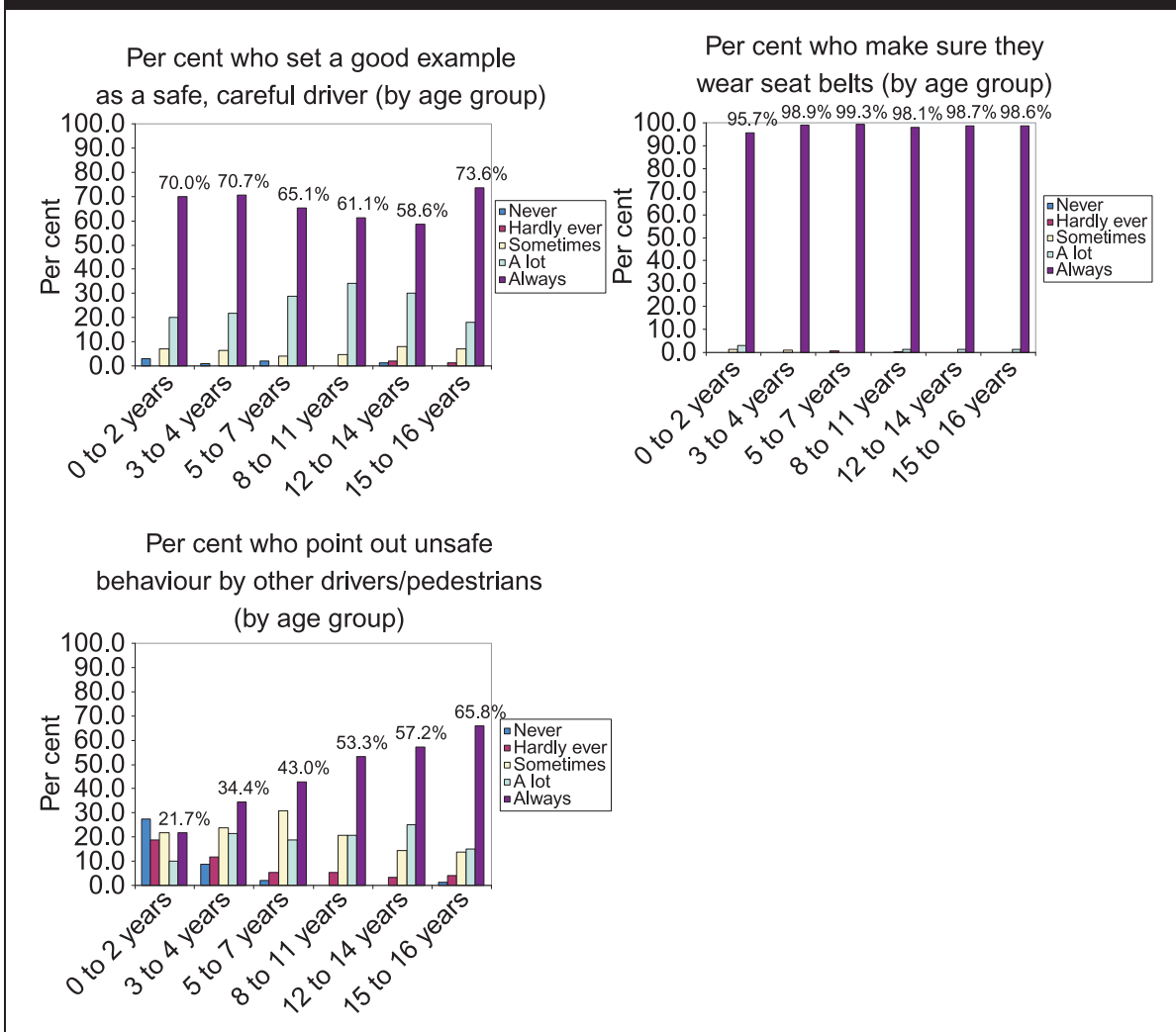
Table 3.38: Relationship between age of a child and methods of teaching children about road safety while being driven in a car

Method	Correlation coefficient	Significance	Significant relationship?
Set a good example as a safe, careful driver	-0.034	0.348	No
Make sure they wear seat belts	0.026	0.471	No
Point out unsafe behaviour by other drivers/pedestrians	0.313(*)	< 0.001*	Yes – positive, low

* Significant at the 0.01 level (2-tailed).

Figure 3.24 shows this more fully. Being made to wear a seat belt appears to remain consistent with age, but older children are more likely to have unsafe behaviour pointed out to them. Setting a good example fluctuates slightly with age – decreasing until 12 to 14, but then increasing at age 15 to 16. While this survey has

Figure 3.24: Percentage of parents using a variety of methods to teach their children about road safety while driving (by age group)



not looked at the reasons for this, it could be because parents are starting to prepare their children for driving themselves.

Other characteristics

The relationship between the methods parents use to teach their children about road safety while driving them in a car and various other characteristics (parental ethnicity and gender plus the child’s gender) was investigated by using a Mann Whitney test (see Table 3.39). There was no significant relationship between how often each of the three methods were used and the gender of the child.

There was a significant difference in making sure children wear their seat belts between different ethnic groups. White British parents were more likely to make their children wear seat belts than other ethnic groups ($p = 0.012$). There was no significant difference in ‘setting a good example’ and ‘pointing out unsafe behaviour by others’.

There was also a significant difference between fathers and mothers in ‘setting a good example’ and ‘pointing out unsafe behaviour by others’. Females used both methods significantly more than males. There was no significant difference between male and female parents in reporting whether they ensured their children wore a seat belt.

Table 3.39: Relationship between methods that parents use to teach their children about road safety while driving them in a car and other characteristics			
	Asymptotic significance (2-tailed)		
Method	Child’s gender	Ethnicity	Parental gender
Set a good example as a safe, careful driver	0.983	0.550	< 0.001†
Make sure they wear seat belts	0.991	0.012*	0.103
Point out unsafe behaviour by others	0.616	0.433	< 0.001†
* Significant at the 0.05 level. † Significant at the 0.01 level			

3.3.2.10 Perceived effectiveness of different methods of teaching road safety

Parents were asked to rate how effective they perceived each method of teaching road safety. They were asked to score each method as either ‘Very effective’ (coded as 5), ‘Quite effective’ (coded as 4), ‘Not very effective’ (coded as 3), ‘Not at all effective’ (coded as 2) or ‘Don’t know’ (coded as 1). For comparative purposes, a mean score was used to rank them (with the ‘Don’t know’ answers excluded).

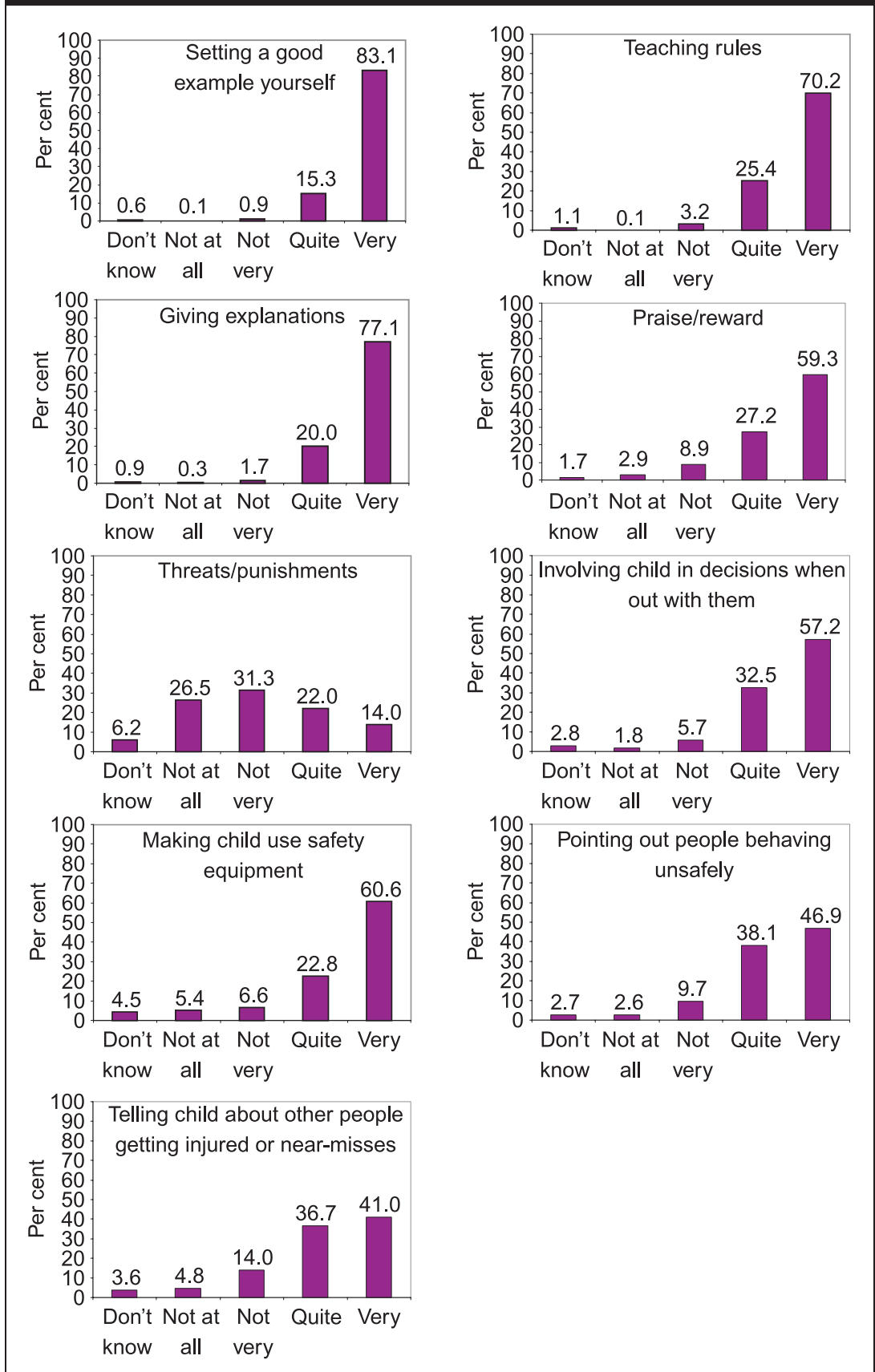
Table 3.40: Perceived effectiveness of each method of teaching road safety		
Methods sorted by mean rank	Mean	Median
Setting a good example	4.83	5.00
Giving explanations	4.75	5.00
Teaching rules	4.68	5.00
Involving child in decisions	4.49	5.00
Praise/reward	4.45	5.00
Using safety equipment	4.45	5.00
Pointing out unsafe acts	4.33	4.00
Telling them about others injured/near-miss	4.18	4.00
Threats/punish	3.25	3.00

Table 3.40 and Figure 3.25 reveal that parents felt that the most effective method for teaching their children road safety was by setting a good example themselves (83% thought this was very effective). This was followed by giving explanations, teaching them rules and involving them in decisions. Praise or reward and using safety equipment were perceived as slightly less effective, with a proportion of parents (27% and 23% respectively) thinking they were only quite effective. Using others as examples (by pointing out unsafe acts or telling their children about others being injured or near-misses) were seen as less effective (47% and 41% respectively thought they were very effective). Using threats or punishments was perceived as the least effective, with 58% saying this was either not very effective or not at all effective.

Additional comments

Some respondents provided additional comments. A few commented that safety equipment would be effective, but they had difficulties making their child use it. Pointing out unsafe behaviour provoked a mixed response with some parents worried that their child might think it is ‘cool’ and copy it. Telling them about others getting injured was seen by some as making children more careful but others were worried it would scare or upset their child. Teaching rules was perceived to be effective, but only if they were enforced by both parents.

Figure 3.25: Perceived effectiveness of each method of teaching road safety



Age

The relationship between the perceived effectiveness of the various methods and a child's age was investigated by using Spearman's rho correlation test (see Table 3.41). The 'Don't knows' were excluded from this analysis.

There was a significant negative relationship between a child's age and teaching rules, giving explanations, praise/reward, involving child in decisions and making them use safety equipment. Parents perceived, therefore, that for older children these methods are less effective. There was a significant positive relationship between a child's age and pointing out people who are behaving unsafely and telling a child about others getting injured or near-misses. Parents perceive, therefore, that for older children these methods are more effective.

Table 3.41: Relationship between a child's age and effectiveness of road safety teaching methods.			
Method	Correlation coefficient	Significance (2-tailed)	Significant relationship?
Setting a good example	-0.062	0.052	No
Teaching rules	-0.082†	0.010	Yes – negative, slight
Giving explanations	-0.072*	0.025	Yes – negative, slight
Praise/rewards	-0.208†	< 0.001	Yes – negative, low
Threats/punishments	-0.062	0.061	No
Involving child in decisions about crossing when out with them	-0.131†	< 0.001	Yes – negative, slight
Making your child use safety equipment	-0.211†	< 0.001	Yes – negative, low
Pointing out people who are behaving unsafely when you are out with your child	0.095†	0.003	Yes – positive, slight
Telling your child about other people getting injured or near-misses	0.176†	< 0.001	Yes – positive, slight
* Correlation is significant at the 0.05 level (2-tailed). † Correlation is significant at the 0.01 level (2-tailed).			

Other characteristics

The relationship between how effective methods were perceived to be and other characteristics was investigated by using a Mann Whitney test for each variable (see Table 3.42). There was a significant relationship between the gender of the parent and seven of the nine variables relating to perceived effectiveness. For all of these, the rank mean score was higher for female respondents than male respondents, i.e. mothers saw them as more effective than fathers did.

Four of the variables had a significant relationship with the ethnicity of the parents – White British parents were likely to perceive that setting a good example, involving the child in decisions and pointing out unsafe acts by others were more effective.

Table 3.42: Relationship between perceived effectiveness of the methods to teach road safety and other characteristics				
Method	Asymptotic significance (2-tailed) – with mean rank where significant			
	Parental gender	Parental ethnicity	Child's gender	Access to a car or van
Good example	< 0.001† Males 460.21, females 509.91	0.008† White British 500.98, BME 452.52	0.041* Boys 476.92, girls 500.67	0.386
Teaching rules	< 0.001† Males 443.63, females 511.73	0.045* White British 487.50, BME 533.00	0.225	0.262
Explanations	0.008† Males 464.68, females 504.32	0.431	0.068	0.761
Praise/reward	< 0.001† Males 435.01, females 509.26	0.945	0.119	0.425
Threats/punish	0.232	0.456	0.014* Boys 477.40, girls 436.10	0.158
Involve in decisions	0.040* Males 456.16, females 492.94	0.020* White British 488.48, BME 430.73	0.587	0.168
Safety equipment	0.131	0.860	0.381	0.312
Point out unsafe acts	< 0.001† Males 417.57, females 508.71	0.048* White British 489.77, BME 438.61	0.791	0.011* Access to car 526.93, without 474.77
Others injured/ near-miss	0.002† Males 432.61, females 491.46	0.430	0.798	0.002† Access to car 528.88, without 463.14
* Significant at the 0.05 level (2-tailed). † Significant at the 0.01 level (2-tailed).				

BME parents were more likely to perceive that teaching rules was an effective method.

Two of the variables had a significant relationship with the gender of the child. Setting a good example was perceived as more effective for girls than boys. Using threats/punishments was perceived as more effective for the boys in the survey.

Parents who had access to a car or van were likely to perceive telling children about others getting injured/near-misses or pointing out unsafe acts as more effective compared with those without access to a car or van.

3.3.2.11 Challenges for parents in teaching their children about road safety

Parents were asked how much of a challenge six potential difficulties were when teaching their children about road safety. They scored these from being a very big challenge (5), quite big (4), a little (3), not at all (2) or do not know (1). Do not know responses have been included in the bar graphs in Figure 3.26 but are excluded from the mean calculations and correlation tests.

Table 3.43 shows that the largest perceived challenge was that of getting their child interested in road safety. This was followed by environmental issues – roads and traffic being so complicated and being too busy. Personal factors, for example not having time, materials or a lack of knowledge, were ranked lowest in relation to being a challenge. Of note is the fact that the median scores were fairly low generally. Even for the greatest challenge, the median was three, i.e. it was a little challenge. Similarly, not knowing what to tell them was, for the majority, not a challenge at all. Parents therefore seem to perceive that they do have sufficient materials and knowledge when teaching their children about road safety.

Table 3.43: Challenges to teaching children about road safety		
Challenges (sorted by mean)	Mean	Median
Interest in road safety	3.20	3.00
Roads and traffic so complicated	2.90	3.00
Roads too busy	2.80	2.00
Not having time/too busy	2.77	2.00
Not having materials	2.66	2.00
Not knowing what to tell them	2.37	2.00

Age

Spearman's rho correlation test was used to investigate whether there was a significant relationship between the child's age and the challenges parents face when teaching them about road safety. Table 3.44 shows these results. Not knowing what to tell them to do, not having any suitable materials, roads being too busy and roads/traffic being so complicated were a greater challenge for parents of younger children.

Table 3.44: Relationship between challenges of teaching road safety and child's age			
Challenge	Correlation coefficient	Significance (2-tailed)	Significant relationship?
Getting child interested in road safety	0.031	0.346	No
Not having time/being too busy	-0.033	0.318	No
Not knowing what to tell them to do	-0.073*	0.025	Yes – negative, slight
Not having any suitable materials	-0.169†	< 0.001	Yes – negative, slight
Roads being too busy	-0.176†	< 0.001	Yes – negative, slight
Roads and traffic being so complicated these days	-0.105†	0.001	Yes – negative, slight
* Correlation is significant at the 0.05 level (2-tailed). † Correlation is significant at the 0.01 level (2-tailed).			

Figure 3.26 demonstrates this graphically. Getting a child interested in road safety remains reasonably constant across the age groups – 37% of parents of 3–4-year-olds said it was not a problem at all and 31% of parents of 15–16-year-olds. Not knowing what to tell them to do was a challenge (quite or very big totalled) for nearly 10% of parents of 3–4-year-olds but only 4.4% of parents of 15–16-year-olds.

Other characteristics

The relationship between the challenges parents face and various other characteristics was investigated by using a Mann Whitney test for each variable (see Table 3.45). There was a significant relationship between the gender of the parent and the challenge of getting their child interested in road safety and not having time or being too busy. In both cases, males found them to be more of a challenge than females. However, there were no significant differences in relation to ethnicity, child's gender or having one or more adults in the household with regard to the challenges parents face in teaching their children about road safety.

Owing to the different age profiles of first-born versus subsequent children (discussed earlier), comparisons were carried out for different age bands – children aged five and under ($n = 294$) and then for those seven and under ($n = 423$). A Mann Whitney test was used to compare first-born and subsequent children. This found that for five-year-olds and under there was a significant relationship between birth order and the challenges of getting children interested in road safety, roads being too busy, and roads and traffic being so complicated. For seven-year-olds and under there was a significant relationship with not having suitable materials and roads being too busy. In all of these cases, it was more of a challenge for the first-born than the subsequent children (see Table 3.46).

Figure 3.26: How big various challenges are in teaching children road safety (by age group)

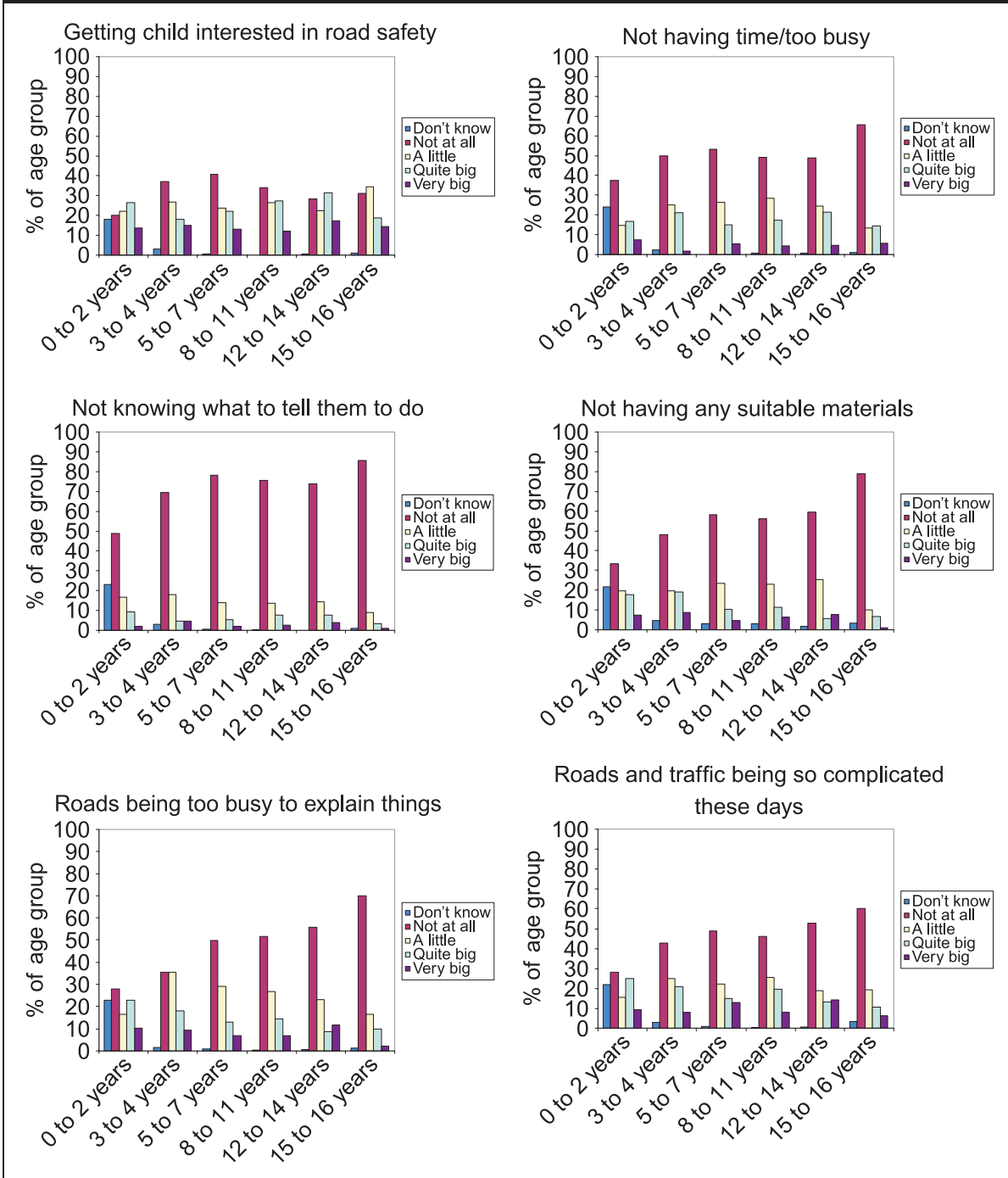


Table 3.45: Relationship between challenges facing parents teaching road safety and other characteristics

Challenge	Asymptotic significance (2-tailed) – with mean rank where significant			
	Parental gender	Parental ethnicity	Child's gender	Number of adults in house
Interest in road safety	0.036* Males 516.11, females 474.76	0.944	0.276	0.674
Not having time/ too busy	0.002† Males 523.41, females 465.93	0.132	0.728	0.278
Not knowing what to tell them	0.800	0.273	0.479	0.638
Not having suitable materials	0.153	0.353	0.254	0.543
Roads too busy	0.442	0.130	0.053	0.193
Roads and traffic too complicated	0.206	0.068	0.434	0.120

* Significant at the 0.05 level (2-tailed).
† Significant at the 0.01 level (2-tailed).

Table 3.46: Relationship between birth order and challenges facing parents when teaching their children about road safety

Challenges	Asymptotic significance (2-tailed)	
	Children aged 5 and under (n = 294)	Children aged 7 and under (n = 423)
Interest in road safety	0.024* Higher score for first-born than subsequent	0.365
Not having time/too busy	0.883	0.632
Not knowing what to tell them	0.297	0.175
Not having materials	0.078	0.037* Higher score for first-born than subsequent
Roads too busy	0.004† Higher score for first-born than subsequent	< 0.001† Higher score for first-born than subsequent
Roads and traffic complicated	0.044* Higher score for first-born than subsequent	0.089

* Significant at the 0.05 level (2-tailed).
† Significant at the 0.01 level (2-tailed).

3.3.2.12 Summary

Box 3.6: Summary of key points – survey

- Most parents start teaching their children about road safety when young (mean age 2.6 years) and 58.8% intend never to stop, although one in ten do stop between the ages of 12 and 14.
- Most commonly used methods reported by parents for teaching their children about road safety are:
 - explaining why it was unsafe if they saw their child doing something risky; and
 - setting a good example themselves.
- The methods used least are:
 - the use of threats or punishments; and
 - telling their child about others getting injured or near-misses.
- The most effective methods are felt to be:
 - setting a good example;
 - giving explanations; and
 - teaching rules.
- The least effective methods are felt to be:
 - using threats and punishments; and
 - telling them about others being injured or near-misses.
- Mother and fathers:
 - Mothers provide road safety education significantly more often than fathers, and had greater faith in its effectiveness.
 - Fathers allow their children to go out alone more than mothers.
 - Mothers report setting a good example as a safe/careful driver and pointing out unsafe behaviours by others significantly more often than fathers.
 - Fathers find getting their child interested in road safety and not having time or being too busy significantly more of a challenge than mothers.
- Ethnicity:
 - There is no significant relationship between ethnicity and the teaching methods that parents used other than White British parents involve children in decisions about where it was safe to cross the road significantly more often than other ethnic groups combined.
 - In relation to effectiveness, White British respondents rate 'setting a good example', 'involving children in decisions' and 'pointing out unsafe behaviour' significantly more highly than other ethnic groups. Conversely, the other ethnic groups combined rated the effectiveness of 'teaching rules' more highly.
- Car ownership/use:
 - Car ownership and children being driven in a car are highest in rural areas and lowest in urban. Parents who do not have a car appear to be more

Box 3.6 (continued)

proactive in teaching their children about road safety than those who do not have a car.

- For those who own a car or van, almost all respondents claim to always ensure that their child wears a seat belt while in the car. Nearly two-thirds always try to set a good example as a safe and careful driver.
- Child's age:
 - Parents of older children are significantly more likely than parents of younger children to teach them at home, tell them about others getting injured or near-misses, point out unsafe behaviour by others and involve them in decisions about where it is safe to cross.
 - The methods that are rated more effective for younger children include teaching rules, giving explanations, praise/reward, involving the child in decisions and making them use safety equipment. For older children, pointing out people who are behaving unsafely and telling the child about others getting injured or near-misses are perceived to be more effective.
 - Parents are less likely to remind older children about road safety when they go out on their own and are also less likely to check on their behaviour.
 - When travelling by car, parents of older children are more likely than those of younger children to point out unsafe behaviour.
- Child's gender:
 - There is very little difference between boys and girls in the methods used apart from boys being significantly more likely than girls to be taught at home.
 - The different approaches to road safety education are felt to be equally effective for girls and boys except for 'setting a good example', which was rated significantly more effective for girls, and 'threats/punishments', which was more effective for boys.
 - Boys are allowed out on their own more than girls and are more likely to be allowed out on a bike.
- Birth order:
 - This appears to have little effect other than first-born children under the age of seven being less likely to be allowed out on their own.
 - First-time parents see getting children's interest and having suitable materials for teaching about road safety as more challenging.
- Challenges to teaching about road safety:
 - The biggest perceived challenge to teaching children about road safety is getting children interested, followed by environmental factors such as roads being busy and complicated.
 - Various issues are perceived to be a greater challenge for parents of younger children, such as having the suitable materials and knowing what to tell young children and also the complexity and density of traffic.

4 SYNTHESIS AND DISCUSSION

This section draws together the findings of the various phases of the study.

4.1 Perception of risk

4.1.1 *Children/young people*

From primary school upwards, children were very aware of the road environment and the risk to themselves. For young primary school aged children, this risk was undifferentiated and attributed to traffic generally. By the end of primary school and into secondary school age, driver behaviour was seen as a major risk, particularly when it is:

- unpredictable;
- irresponsible;
- illegal;
- aggressive; and
- intimidating.

Some teenagers commented on the aggressive approach of drivers towards them as pedestrians.

Young primary school aged children saw parents as being responsible for keeping them safe. They also included road-crossing patrols, traffic lights and crossings. For very young children, the distinction between fantasy and reality can be blurred, leading to misplaced faith in fantasy figures to keep them safe.

As children matured they began to appreciate their own involvement in using crossings, looking out for traffic and behaving appropriately. By secondary school age, young people clearly acknowledged the contribution of their own behaviour to potential collisions or near-misses and recognised that they are easily distracted when with friends or using MP3 players or mobile phones. However, at the same time, they still saw drivers as being responsible for avoiding pedestrians. Furthermore, some young people had a sense of personal invulnerability. This manifested itself simply in a lack of attention to risk or in deliberate risk-taking and sensation-seeking. Being able to handle or cope with risk was associated with maturity. By mid-teens some young people were developing a greater sense of personal responsibility. They reflected that, in their early teens, they often took 'stupid risks' but that they were now more sensible. However, luck was still held to play a part in whether they got away with taking risks and, for some (albeit a minority), sensation-seeking was still an issue. Over and above deliberate sensation-seeking, they also acknowledged that when they first went out on their own, they

lacked skills in making fine judgements about safe gaps in traffic and went from being overcautious at first to taking too many risks until they progressively refined their judgement. There was a considerable amount of experience of injury and near-misses, both direct and vicarious, among secondary school aged children.

Being in a group conferred a sense of ‘safety in numbers’, yet at the same time was associated with paying less attention to traffic. Depending on the composition of the group, it could either have a positive or negative influence on their behaviour. Young people also reported that they tended to behave more sensibly when they were responsible for looking after younger siblings.

It is important to recognise that, for many young people, the risk of injury from cars is only one of a number of often competing risks they have to deal with when out on the roads. These include loss of face with peers by appearing to be careful, taking risks to avoid being late and stepping into the road to avoid potentially confrontational situations.

4.1.2 *Parents*

Parents saw the level of risk children encounter on the roads as different from when they were young themselves. The roads were now seen to be busier generally and, in rural areas, speed and the unpredictability of traffic were also an issue. Road layouts can be highly complex and difficult for pedestrians to navigate. Designated crossings are sometimes inconveniently sited, too small to accommodate groups of parents and children and insufficient in number, especially in suburban areas. Driver behaviour, including that of other parents, was felt to be inconsiderate or irresponsible, putting children at risk by parking inappropriately and drivers taking short cuts through residential areas.

Parents recognised that, although children may know what to do, they may lack skill in judgement. Some children were judged to be more sensible than others, but this was felt to be more to do with the personality of the child rather than other factors such as gender and even age. Of major concern was the ‘attitude’ of some teenagers that other road users should avoid them. Peer influence was also an important factor, although there was some ambivalence here. On the one hand, being in a group was felt to be a distraction, along with using mobile phones and MP3 players. On the other hand, it offered protection in relation to personal safety and the risk of being attacked.

Many of these issues surfaced in Platt *et al.*'s (2003) study that included a survey and focus groups with parents of older primary school aged children. These parents identified children's actions, the actions of other road users and the road environment as the main dangers facing their children. However, like the parents in this study, they also included other personal safety issues, such as ‘stranger danger’, as relevant to them, despite the road safety focus.

4.2 How parents enable children to cope with risk

4.2.1 Pedestrian

The overriding concern for parents is to protect their children from harm. There is therefore some potential conflict between protecting children and giving them the independence and practical experience of using roads that parents claim to have had themselves. Parents' concerns about road safety tended to merge with personal safety more generally. Parents acknowledged that using cars to transport children 'safely' gives them very little opportunity to develop their own road sense. They did not, however, recognise that reduced exposure to traffic as a pedestrian not only affects a child's skill development, but also a parent's awareness of the child's behaviour and road use capability, as highlighted in the European Commission funded Rose 25 report *Good Practice Guide on Road Safety Education Targeted at Young People* (European Commission, 2005).

For pre-school and early primary age children, control was the main priority, initially physical and then verbal. As children's ability to cope on the roads increases, looser forms of control and accompaniment are used until children are allowed to go out on their own. For many parents, the decision to relinquish control was almost intuitive. Some, however, formally checked whether their child could cope – either overtly, covertly to avoid embarrassing the child, or by using members of the wider community to keep an eye on them (including school-crossing patrol personnel). The transition to secondary school was a key event in relation to independent travel to school.

Platt *et al.* (2003; p. 68) found that parents, but also young people, recognised the transfer from primary to secondary school was the 'next stage of growing up', but despite identifying issues concerning personal responsibility and independence, road safety and travel were not specifically considered as a concern. This finding was reflected by some parents in this study who recognised, retrospectively, that they had failed to anticipate travel to secondary school and had not properly prepared their children. Young people too felt that they lacked skill in judging safe gaps in traffic when they first used roads alone.

In relation to teaching children about road safety, the peak age for starting was between two and three years, although almost 20% left it until four years or older. 'Drilling it in' through the repetition of patterns of behaviour and the rules for crossing roads was felt to be essential by parents. However, they tended to emphasise the cognitive aspects of learning with comparatively little attention to understanding or skill development. The focus was on easier to manage situations rather than the complexity of modern roads and traffic. The rules also tended to be 'generic' and it was rare for parents to talk with their children about specific local hazards. While parents claimed to provide explanations, these focused on consequences, especially for older children, rather than mechanisms and

understanding traffic. Young people’s views were that parents do not give adequate explanations.

Parents’ approaches varied with the age of their child. With younger children they were significantly more likely to explain why they should behave safely, use praise or rewards and threats and punishment, and teach them when out on the roads. In contrast for older children, they were significantly more likely to teach them at home, involve them in decisions about where to cross, point out unsafe behaviours by others and tell them about people getting injured or near-misses.

Parents usually did not have a consciously thought out strategy for teaching their children about road safety. Their approach was often patchy and unplanned. The messages that parents conveyed to their children were usually those they learned themselves when young and therefore were not always entirely up to date or relevant to modern traffic situations. Further, for teenage children, appearing out of date in this way may add to the difficulty of taking seriously what parents have to say. Parents often resorted to vague advice to be careful or ‘not mess around’.

The Rose 25 report defines road safety education as incorporating knowledge, skills and attitude (European Commission, 2005). Over and above the lack of attention to skills development, parents paid little explicit attention to the development of positive attitudes towards safety generally, and road safety in particular. Attempts to motivate children tended to involve the use of either examples of injury and scare tactics or positive incentives. Generally motivation was not linked to developing a sense of responsibility and maturity.

Parents recognised that the example they set has an important effect and generally claimed to be a good role model. It is clear that much of young people’s learning takes place through observation. However, young people felt that parents, and indeed other adults, provide an inconsistent role model. The quality of the role model also deteriorates as children get older. Further, the observation revealed that parents’ behaviour may take the form of a highly adapted response to a specific traffic situation which, although appropriate within a specific context, may not be conventional. While the rationale for this may be clear to parents, they rarely articulated their thinking to the children they accompany. The lack of a consistent or easily comprehensible parental role model undermines road safety education. Tolmie *et al.* (2006) are clear to point out that parental norms are a strong influence on the road use behaviour of young people, and the Rose 25 report sums up the impact of poor parental role models, stating:

RSE [road safety education] interventions – due to the limited scope – can never counterbalance all false behaviour patterns children have imitated from their parents. (European Commission, 2005; p. 273).

Overall, parents tended to focus on their child's behaviour and enabling them to cope with risk rather than becoming involved as activists themselves in efforts to reduce the level of risk young people are exposed to in their local environment.

4.2.2 *Car passenger*

In relation to travel by car, most parents claimed to make their children use a seat belt. However, according to the children, many parents do not check that they are doing so. Furthermore, parents may not always use a seat belt themselves. Children, therefore, often received mixed messages from fathers and mothers and the wider family, including siblings. Children were aware that some parents only insist on seat-belt use for certain types of journey and as young as five could comment upon situations when they do not need to wear one.

There were few references to parents talking about traffic when in the car and helping young people to understand traffic from the driver's perspective either generally or more specifically as pre-driver preparation. Parents did little explicitly in relation to pre-driver education, other than some road sign recognition.

4.2.3 *Cyclist*

Echoing the Department for Transport report *Young People and Transport: Their Needs and Requirements* (Department for Transport, 2006), parents were generally apprehensive about children going out on bikes. For younger children and those living in inner-city areas, cycling on the road was discouraged. In all areas children were often told to dismount and walk when they come to busy junctions. The emphasis in teaching was very much on how to handle the bike rather than how to cope with traffic, although some parents taught their children about hand signals. However, apart from very young children who cycle on the pavement, there was very little parental accompaniment and opportunity to learn by example or from roadside instruction. Learning to ride a bike, therefore, appears to be different from learning about pedestrian behaviour or even how to drive a car. Fathers had a more prominent role in teaching children to cycle than they appeared to have in pedestrian training. Responsibility for learning how to cycle was often delegated to 'cycling proficiency' schemes. Such cycle training schemes were also felt to raise young people's traffic awareness more generally. Parents tried to get children to use helmets, but eventually accepted that it is a losing battle.

4.3 **Effectiveness**

4.3.1 *Children's and young people's views*

All age groups recognised the importance of physical control for young children and even for older age groups in situations of high risk. However, they also felt that explanations should be given so that children understand the reasons for this.

Knowing the rules about road safety was held to be essential, but parents need to know what these are if they are to teach them properly. Again, explanations are needed and the opportunity to practise, starting with simple road-crossing tasks in quiet familiar situations, progressing to more complex tasks in busier and less familiar environments. There was a view that learning and skill development take place best at the roadside and by involving children and young people in decision-making while still being appropriately supervised. However, some teaching away from the road environment was also felt to be useful.

The example that parents set was recognised by young people as an important influence on their behaviour. However, they were aware of inconsistency between what parents say and what they do, in the behaviour of individual parents over time, between different parents and among other influential adults. This undermined efforts to educate young people in road safety and conveyed the subtle message that maturity is associated with less need to be careful. Equally, the poor example set by other adults did not encourage young people to adhere to the rules, for example crossing before the lights change. The Rose 25 report (European Commission, 2005) proposals include interventions to improve the modelling influence of parents when out on the road.

As well as inconsistency, other things that young people felt did not work included shouting – except in response to an emergency – nagging, empty threats and vague advice to be careful.

Incentives and rewards were felt to have some use, as were punishments. The threat for older children of having to go back to being accompanied was seen as a major deterrent! There was a considerable amount of status associated with being allowed out unaccompanied. Young people felt that this should be earned by proving that they could behave responsibly. Equally, it could be taken away if they did not behave appropriately.

Young people accepted that it is very difficult for parents to get through to teenagers. This difficulty is further compounded because they also see road safety as a subject only related to primary school children, an issue also identified by Tolmie *et al.* (2006). The challenge is to keep the message relevant to them. Appreciating the consequences of injury was felt to be important for all children – in general terms when young and more specifically when older. Loss of life opportunity was thought to be of greater concern for some teenagers than the possibility of injury or even death. Examples that they could identify with and/or were local were felt to be much more powerful than more general examples. For teenagers, the shock of hearing about a local incident had some effect on their behaviour, but only in the short term.

4.3.2 *Parents' views*

The survey revealed that parents felt the most effective ways of teaching road safety are by setting a good example, giving explanations and teaching rules followed by involving children in decisions. Prioritising cognitive approaches over more experiential approaches conflicts with the perceived wisdom that involvement is required to develop understanding, encapsulated in the Confucian maxim 'I hear and I forget. I see and I remember. I do and I understand'. Furthermore, practical experience is essential for skills development.

There was considerable agreement between parents' and children's views about what is effective in relation to road safety education. Both felt that it is important to start young and teach the rules. The supervision of children and gradually giving them more responsibility for decision making were thought to be effective along with some roadside instruction. A lighter, fun approach was felt to be more relevant for younger children, with more serious emphasis on consequences for older children. The use of shock tactics was thought to get the attention of this older group and influence their behaviour in the short term, especially when they could relate to the examples used. Overall, telling children about injuries or near-misses and pointing out unsafe behaviour by others were felt to be more effective for older rather than younger children. Teaching rules, giving explanations, praise and rewards, involving children in decisions and making them use safety equipment were significantly more effective for the young. Parents recognised that shouting and nagging do not work, but some felt that they had no other option with teenage groups. Similarly, although vague admonition to be careful was unlikely to be effective, parents felt that it was an almost instinctive reaction on their part.

The main area of disagreement was in relation to the use of incentives. While young people could see a role for incentives, parents were more dismissive. Nonetheless, over half still used praise or rewards 'a lot' or 'always'.

Parents were aware of their influence as role models, but, as with other aspects of road safety education, their actual behaviour did not always match up to the ideal.

4.4 **Responsibility for providing road safety education**

There was no question that most parents saw themselves as having primary responsibility for teaching their children to be safe on the roads, although many parents did recognise the input of other agencies such as schools, road safety officers and the police in encouraging safe road use. These findings are reflected in the research carried out by ODS Ltd with Market Research UK Ltd (2004), which found that most parents saw themselves as having the main responsibility for children's road safety education, with others feeling the responsibility was a combined effort of parents, school and the police, and a small number seeing schools as predominantly responsible.

Despite identifying other road safety education providers, many parents were not clear as to the exact nature and content of the provision. Schools were the setting where parents thought most external road safety education took place and where more could be done. The other provision frequently referred to by parents was cycle training (commonly referred to as ‘cycling proficiency’). As previously mentioned, this was an area where parents often delegated the responsibility for teaching their children to be safer cyclists.

Parents also saw the media as playing a part in educating children, particularly through road safety campaigns, such as the Green Cross Code and THINK!, which raised awareness of road safety issues, carried important messages and provided opportunities for discussion.

4.5 Scope for improvement

Parents need to be more familiar with current road safety messages to ensure that what they teach their children is suited to contemporary traffic situations. They appear to have misplaced confidence in knowing what to tell their children. Furthermore, parents could be made more aware of what schools and other providers of road safety education are doing so that there is consistency of approach and so parents can reinforce the learning their children acquire from other sources. Involving parents in the road safety education provided by schools and initiatives such as Kerbcraft would be a means of achieving this.

Adults, including parents, do not provide a consistent role model, either by ignoring road safety messages or by adapting them to suit specific local circumstances. The role model presented by parents, and indeed all adults, could be better and more consistent. Parents could also verbalise their thinking processes, and explain their reasons when they adapt road safety rules so that children can make more sense of what they are doing. Generally, other than verbal instruction about what to do, there was little communication between parents and children about traffic and road crossing. Parents appear not to be making use of the opportunities presented during normal travel to talk about and develop understanding of traffic and road situations, as also noted by Zeedyk and Kelly (2003)..

Children could be more actively involved in road use decisions and be provided with the opportunity to develop their skills while still supervised by parents. Choosing appropriate crossing places and judging safe distances between traffic for crossing are particularly important in this regard. Parents would still have the ultimate control in relation to safety, but the feedback they provide will help children to refine their skills. Overall, children need better preparation for independent travel and using public transport, and such an approach would contribute to this. It is also important that parents do not assume that their child has the capacity to cope on their own, but assess their level of ‘traffic maturity’ (MacGregor *et al.*, 1999; p. 32).

Parents could consistently enforce the use of safety equipment such as seat belts and cycle helmets. Wearing high-visibility clothing only emerged as an issue in rural areas and could be given more attention in other areas as well.

In relation to cycling, attention should be given to learning how to cope with traffic and not just handling a bike. The parents' role could be strengthened here or, alternatively, children could be sent on cycle training schemes in areas where these are provided.

For parents not fully exploiting the opportunities presented by everyday travel to educate children, these lessons can also be applied to car journeys as well as to pedestrian journeys. Seat-belt use aside, safe car travel and pre-driver training receive little attention from parents, despite the potential for educating children and young people about traffic, the road environment, driver behaviour and responsible car use when together in the car. This could be of particular importance for children who travel predominantly in cars, or young people preparing to travel independently or learning to drive.

Encouraging teenagers to take road safety seriously is undoubtedly challenging. The message needs to be kept relevant and start from the basis that they already know a lot. The emphasis needs to be on developing a sense of responsibility and the motivation to take appropriate care when using the roads. There are opportunities to make links with other issues considered relevant for this age group, such as being influenced by peers, behaviour in groups, and alcohol and drug use.

Rather than focussing exclusively on children's behaviour, parents could additionally take a more proactive role in campaigning to tackle specific hazards within their local area. The Audit Commission's 'Changing Lanes' report (Audit Commission, 2007) emphasises the importance of partnership working and engaging the public to influence the behaviour of road users for the better. Through initiatives that encourage collaboration and participation, parents could have a vital role in providing local knowledge, influencing vulnerable groups, such as child pedestrians, and reaching out to the wider community.

4.6 Specific issues

4.6.1 *Urban/rural*

Young people living in rural areas identified cars travelling at speed and appearing out of nowhere to be a particular risk. The absence of pavements in some areas was also a problem. Despite the higher density of traffic in urban areas, it was seen as more regulated, with the exception of joy riding and police chases. However, there was little adaptation of the road safety education provided by parents to respond to these differences.

Rural teenagers felt that they lacked the experience of going out in urban environments when young and that this initially disadvantaged them in coping in busy situations. However, they felt that they soon caught up.

In relation to being allowed out alone, London children seemed to be the last to be allowed to travel independently. Other inner-city children were the first, followed by rural and suburban children who, once they were allowed out, seemed to have more freedom.

4.6.2 *Car ownership*

People living in urban areas were significantly less likely to have access to a car or van and were also less likely to transport their children by car than those living in rural areas. Parents who do not have access to a car or van proactively taught their children about road safety more frequently than parents who have a car and they appear to be more diligent in preparing their children to cope with traffic.

4.6.3 *Gender*

Mothers, overall, seem to take on most of the responsibility for teaching their children about pedestrian road safety, with a statistically significant higher total score for the frequency of using the various methods explored in the survey. Mothers also have significantly more faith in the effectiveness of road safety education than fathers. Nonetheless, some fathers took an active role. For cycling, the situation seems to be reversed, with fathers playing the main role. Boys are also significantly more likely to go out on a bike than girls.

There was no major difference in the way parents approached road safety education, with girls and boys in either the qualitative or quantitative elements of the study, other than teaching boys more at home than girls, which may be a consequence of the fact that boys tend to be allowed out alone more. Parents were adamant that the child's personality is a more important factor. However, in relation to perceptions about effectiveness, setting a good example was rated significantly higher for girls than boys, and threats and punishment was higher for boys.

Notwithstanding the similarity of approach used with boys and girls, there is evidence that boys experience more injury on the road (Department for Transport, 2000; Department for Transport, 2006a).

4.6.4 *Ethnicity*

The qualitative component of the study revealed no difference between ethnic groups in the way they approach teaching children how to use roads safely. Family size and urban location seemed to be the overriding factors. However, the survey showed some small, but significant, differences. There was more involvement of

children in making decisions about where it is safe to cross among White British respondents. In relation to perceptions about effectiveness, Black and minority ethnic (BME) groups were more likely to feel that teaching rules is effective, whereas White British groups were more likely than BME groups to see involving children in decisions, setting a good example and pointing out unsafe acts by others as being effective. BME groups were also significantly less likely to make children use seat belts than White British groups. A comparison of the approaches used by BME and non-BME parents in the Neighbourhood Road Safety Initiative (NRSI) and other local authority areas found no substantial difference between the two groups (Woodall *et al.*, 2007).

4.7 Support for parents

The main challenges for parents when teaching children about road safety are getting their children interested and the level of risk with which they have to enable their children to cope. Parents were generally very confident in their ability to teach their children about road safety. At the same time, they were not aware that the messages they used were often inconsistent with current practice, but based on what they had learnt as children themselves. The Rose 25 report (European Commission, 2005) highlights parents as a special target group in its policy recommendations for good practice in road safety education for young people. The report suggests that, in terms of informing parents, appropriate communication design and timing is vital, and that information distribution should occur from very early in the child's life, utilising maternity and post-natal services initially.

Parents felt that their task would be easier if there were efforts to reduce the level of risk their children are exposed to. On the one hand, the environment could be improved by providing more crossing opportunities, located in convenient places. Road layouts could also prioritise pedestrians rather than cars. On the other hand, driver behaviour could be improved by having appropriate speed limits and more rigorous control of speeding in residential areas and near schools. The pedestrian perspective, and particularly that of the child pedestrian, could also be included in driver training.

Parents were not always aware of what their children are taught in schools and when teaching about road safety takes place. Closer liaison between the school and the home would ensure children are receiving consistent messages and parents can provide ongoing reinforcement of school-based road safety education.

Parents felt that the media have a role in educating children about road safety and also opening up opportunities for parents to talk to their children. However, they also felt that the media could be used more effectively, for example using story lines in soap operas and linking into modern technology through, for example, internet campaigns. Print material, which children bring home, was felt to be useful and

should be printed in dual languages in areas where there is a large proportion of non-English speaking parents.

Although parents saw themselves as primarily responsible for enabling their children to learn how to use roads safely, they tended to approach this independently. They also tended to operate in isolation from other agencies with little awareness of their respective contributions. Comprehensive local strategies could involve parents to develop a more coordinated approach.

5 CONCLUSIONS AND RECOMMENDATIONS

Parents are very aware of the risk from traffic that their children face and feel that this is now greater than when they were children themselves. Their overriding concern is to protect their children and their emphasis, with young children and in high-risk situations, is on control and supervision. Explicit attempts to teach children about road safety tend to draw on what parents learned as children themselves and may not be consistent with current messages or appropriate to the complexity of modern traffic. Furthermore, the focus is on the cognitive aspects of learning – telling children what to do, rather than on understanding, skill development, motivation and developing a sense of responsibility. Teaching is often at a general level, with little regard to identifying and coping with specific local hazards.

Much of children's learning takes place through observation and parents are an important role model in this regard, both for pedestrian behaviour and also through the example they set as drivers. However, from the perspective of young people, parents, and other adults, are inconsistent or poor role models. Parents often adapt their road use behaviour in response to specific traffic situations, but the rationale behind this behaviour is not always made clear to children and young people, leading to confusion as to what is appropriate safe road use behaviour and what is not.

Learning about cycling seems to be different from pedestrian and driver behaviour in that there is much less opportunity for observational learning. Although parents are involved in teaching children how to ride a bike, they are not very active in teaching children how to cope with traffic and tend to discourage them from cycling in traffic. With regard to car safety, parents claim to insist on seat-belt use, but do not always enforce it. Little consideration is given to pre-driver training, or the use of car journeys to raise children's awareness about traffic and the road environment to complement other pedestrian, cycling or car-use education.

Parents generally feel quite confident about teaching their children about road safety. However, children and young people identify considerable scope for improvement. Few parents have a conscious thought-out strategy for teaching their children about road safety. There are also few links with other providers of road safety education and low levels of awareness about what they are doing. Parents also tend to see their role exclusively as enabling their children to cope with risk rather than taking action to reduce the level of risk that their children are exposed to.

5.1 Implications for policy and practice

Parents should be supported by a range of professionals involved in parenting education when developing their strategy for teaching about road safety and

identifying age-appropriate content and methods. This could start at ante-natal classes and later involve health visitors and Sure Start Children’s Centres. Road safety should also feature in the professional training of relevant staff, including the Early Years Workforce, and could be incorporated into the ‘Extended School’ provision.

Parents should be encouraged to make greater use of the opportunities presented when out with their children to teach them about road safety. In particular, they need to verbalise the rationale underpinning their own road use decisions and give young people the opportunity to practise making decisions while still being supervised.

Parents and other adults should be made aware of their effect on children when they are poor role models as pedestrians, cyclists and car users with regard to road safety. Media campaigns are an option for achieving this aim.

Agencies involved in road safety should work in partnership with parents to draw on their knowledge of the local situation and their children’s needs. Involvement in such partnerships would also serve to raise parents’ awareness of their own role in relation to other providers of road safety education.

Road safety initiatives at the local level should actively involve parents. This would ensure consistency, provide ongoing reinforcement of messages and, at the same time, keep parents up to date.

Secondary schools should play a more positive part in road safety education. Risk, the way young people respond to risk and the development of personal responsibility could be considered generally within PSHE and Citizenship, and be applied to a range of topics including road safety. Although primary schools tend to address road safety more frequently, this is not the case for all schools and there is scope to ensure more consistency.

The use of peer-education approaches – for same age groups and also using older children to teach younger children – could be considered. This could potentially benefit peer leaders as well as those being taught.

Road safety is a health and safety issue for a number of part-time jobs that young people may take, for example newspaper delivery. Consideration of road safety could be included in induction and training.

Legislation regarding the use of safety equipment, such as cycling helmets, could be considered. Young people should also be made aware of the implications for themselves of current legislation on seat-belt use.

Cycle-training schemes have an important role to play in helping young people learn to cycle in traffic and also, more generally, understand traffic. Provision could be extended to ensure that all young people have access to such schemes.

Schemes providing subsidised, or loans of, safety equipment such as cycling helmets could be considered, especially in areas where there are high levels of deprivation.

Over and above ensuring seat-belt use, parents and other adults should be made aware of the role they can play during car journeys in raising awareness about road safety generally and in pre-driver education.

5.2 Recommendations for further research

Peers clearly have an important influence on young people's behaviour on the roads. This could be explored more fully along with the potential for harnessing positive peer-influence on road safety – as pedestrians, cyclists and new drivers.

Similarly, siblings have a role in accompanying children and are influential in conveying messages about behaviour on the roads, both positive and negative. Furthermore, young people report that they behave more sensibly when taking responsibility for younger siblings. Understanding this interaction more fully may open up further opportunities for developing road safety initiatives which might be of benefit to both the older sibling and those they are looking after.

While a number of young people feel that their inexperience leads them to take risks, others appear to take risks consciously and deliberately as a form of sensation-seeking. Further understanding of the way young people identify and respond to risk, both generally and in the specific context of road safety, could usefully inform the development of interventions for the early to mid-teen age range.

Road safety is not given high priority within secondary schools, and primary schools vary considerably in the attention they give to it. Some further exploration of this is warranted to give greater insight into how schools prioritise issues.

6 ACKNOWLEDGEMENTS

The research team would like acknowledge and sincerely thank everybody who has been involved in this project. These include the following:

- The members of the project management and steering group for their advice, direction and encouragement at all stages of the research: Deirdre O'Reilly, Simon Maxwell, Charlotte Bradford and Andrew Colski of the Department for Transport, and Professor Elizabeth Towner, University of the West of England.
- The following people for their support, advice and assistance during the project: Rebecca Prosser, Road Safety Promotion Unit, Leeds City Council; David Lindsay and the Road Safety Team, North Yorkshire County Council; Stan Milewski and the Road Safety Team, Warwickshire County Council; Peter Wilson and the Road Safety Unit, Westminster City Council; Frances Chapman, Faculty of Health, Leeds Metropolitan University; Davina Hartley, NRSI, Bradford; Dr Miles Tight, Institute for Transport Studies, University of Leeds; all the staff at The Project, West Yorkshire Youth Association; John Mee, Richard Perkin and Rachel Jane Allen at the Alive and Kicking Theatre Company; Rosemarie Simmons and staff at Surrey Social Market Research Ltd, University of Surrey; and Professor Rachael Dixey, Marianne Kennedy, Dr Diane Lowcock, Gary Raine and Joy Walker from the Centre for Health Promotion Research, Leeds Metropolitan University.
- The following schools and organisations, with particular thanks to all the headteachers, managers and staff who were so generous with their time, resources and support, and to all the parents, children and young people who participated and made such a valuable contribution to the research: Bankside Primary School, Leeds; Barlby High School, Selby; Colchester County High School for Girls, Colchester; Cross Flatts Park Primary School, Leeds; Embsay CE Primary School, Skipton; Hamilton Community College, Leicester; Mirfield Free Grammar and Sixth Form, Mirfield; North Leamington Community School and Arts College, Leamington Spa; Parkside School, Bradford; Seamer and Irton Community Primary School, Scarborough; South Leeds High School, Leeds; St Mary of the Angels RC Primary School, Westminster; St Nicholas' Catholic Primary School, Leeds; St Patrick's Catholic Primary School, Leamington Spa; St Saviour's CE Primary School, Westminster; the members of Youth on Health, Leeds; Victoria Primary School, Leeds; Woodkirk High Specialist Science School, Leeds; Wykeham CE Primary School, Scarborough; and all the participating Sure Start Centres and Programmes.
- All other parents who took part in the focus groups and the survey.
- The police forces who gave advice and support for the roadside observations from: West Yorkshire Police; the Metropolitan Police; North Yorkshire Police; and Warwickshire Police.

- All the organisations who allowed us to conduct the survey on their premises: GNER; Virgin Trains; Brunswick Shopping Centre, Scarborough; Crystal Peaks Shopping Centre, Sheffield; Headrow Shopping Centre, Leeds; Leeds Bus Station; Leeds Train Station; Merrion Centre, Leeds; The Pallasades Shopping Centre, Birmingham; St Johns Shopping Centre, Leeds; The Galleria, Hatfield; The Triangle, Manchester; and The Victoria Quarter, Leeds.

7 REFERENCES

- Accidental Injury Task Force (2002) *Preventing Accidental Injury: Priorities for Action*. London: Department of Health.
- Audit Commission (2007) *Changing Lanes Evolving Roles in Road Safety*. London: Audit Commission.
- Backett-Milburn, K. and McKie, L. (1999) A critical appraisal of the draw and write technique. *Health Education Research*, 14(3), 387–398.
- Bandura, A. (1986) *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs: Prentice Hall.
- Cattan, M., Green, J., Newell, C., Ayrton, R. and Walker, J. (2008) *Child–Parent Interaction in Relation to Road Safety Education: Part 1 – A Critical Literature Review*. Road Safety Research Report No. 101. London: Department for Transport.
- Christie, N., Cairns, S., Ward, H. and Towner, E. (2004) *Children’s Traffic Safety: International Lessons for the UK*. London: Department for Transport.
- Denscombe, M. (1998) *The Good Research Guide*. Buckingham: Open University Press.
- Denzin, N. K. (1970) *The Research Act in Sociology*. London: Butterworths.
- Department for Transport (undated) *The Step Forward Guidelines*. London: Department for Transport. www.dft.gov.uk/stellent/groups/dft_rdsafety/documents/page/dft_rdsafety_504522-09.hcsp (accessed 9 January 2007).
- Department for Transport (2000) *Child Development and the Aims of Road Safety Education (No. 1)*. London: Department for Transport.
- Department for Transport (2002) *Child Road Safety Achieving the 2010 Targets*. London: Department for Transport.
- Department for Transport (2003) *THINK! Advice – Cyclists*. London: Department for Transport. www.thinkroadsafety.gov.uk/advice/cycling.htm (accessed 26 April 2005).
- Department for Transport (2004a) *Road Casualties English Local Authority Tables – Casualties by Severity, Child KSI and All Ages, 2003*. London: The Stationery Office. www.dft.gov.uk/stellent/groups/dft_transstats/documents/page/dft_transstats_027428.hcsp (accessed 5 April 2005).
- Department for Transport (2004b) *Road Casualties Great Britain 2003 – Annual Report*. London: The Stationery Office. www.dft.gov.uk/stellent/groups/dft_transstats/documents/page/dft_transstats_031683.pdf (accessed 1 April 2005).

- Department for Transport (2005a) *Focus on Personal Travel*. London: The Stationary Office. www.dft.gov.uk/stellent/groups/dft_transstats/documents/downloadable/dft_transstats_037493.pdf (accessed 6 October 2005).
- Department for Transport (2005b) *Arrive Alive: Cycling – Keeping Safe*. London: Department for Transport. www.thinkroadsafety.gov.uk/arrivealive/cyclingkeepsafe.htm (accessed 26 April 2005).
- Department for Transport (2005c) *Road Casualties Great Britain 2004 – Charts*. London: The Stationary Office. www.dft.gov.uk/stellent/groups/dft_transstats/documents/page/dft_transstats_041280.hcsp#P50_2431 (accessed 6 October 2005).
- Department for Transport (2006) *Young People and Transport: Their Needs and Requirements*. London: Department for Transport. www.dft.gov.uk/pgr/inclusion/childrenandyoungpeople/youngpeopleandtransporttheir1186 (accessed on 5 February 2006).
- Department for Transport (2007) *Road Casualties Great Britain 2006 – Annual Report*. London: The Stationary Office. www.dft.gov.uk/162259/162469/221412/221549/227755/rcgb2006v1.pdf (accessed 12 April 2008).
- Department of Health (2004) *National Service Framework for Children, Young People and Maternity Services*. London: HMSO.
- Department of the Environment, Transport and the Regions (2000) *Tomorrow's Roads – Safer for Everyone. The Government's Road Safety Strategy and Casualty Reduction Targets for 2010*. London: DETR.
- DiGuseppi, C., Roberts, I. and Li, L. (1997) Influence of changing travel patterns on child death rates from injury: trend analysis. *British Medical Journal*, 314, 710–713.
- European Commission (2005) *Rose 25: Inventory and Compiling of an Inventory of a European Good Practice Guide on Road Safety Education Targeted at Young People*. Brussels: European Commission.
- Greig, A. and Taylor, J. (1999) *Doing Research with Children*. London: Sage.
- Guba, E. G. and Lincoln, Y. S. (1989) *Fourth Generation Evaluation*. San Francisco: Jossey-Bass.
- Homan, R. (1991) *The Ethics of Social Research*. London: Longman.
- Johansson, B. and Drott, P. (2001) Informal parental traffic education and children's bicycling behaviour. *Uppsala Journal of Medical Science*, 106, 133–144.
- Kitzinger, J. (1996) Introducing focus groups. In N. Mays and C. Pope (eds), *Qualitative Research in Health Care*. London: British Medical Journal Publishing Group.

- MacGregor, C., Smiley, A. and Dunk, W. (1999) Identifying gaps in child pedestrian safety. Comparing what children do with what parents teach. *Transportation Research Record*, 1674(99-0724), 32–40.
- Mahon, A., Glendinning, C., Clarke, K. and Craig, G. (1996) Researching children: methods and ethics. *Children and Society*, 10, 145–154.
- Mays, N. and Pope, C. (1995) Observational methods in health care settings. *British Medical Journal*, 311, 82–84.
- McQueen, D. (1986) Health education research: the problem of linkages. *Health Education Research*, 1(4), 289–294.
- Mehl, G., Stimson, G. V., Leanne Riley, L. and Ball, A. (2002) *Youth Tobacco – Rapid Assessment and Response Guide, Version 1.0*. Geneva: World Health Organization.
- Michel, L. and West, P. (1996) Peer pressure to smoke: the meaning depends on the method. *Health Education Research*, 11(1), 39–49.
- Milburn, K., Fraser, E., Secker, J. and Pavis, S. (1995) Combining methods in health promotion research: some consideration about appropriate use. *Health Education Journal*, 54, 347–356.
- Miller, J. A., Austin, J. and Rohn, D. (2004) Teaching pedestrian safety skills to children. *Environment and Behaviour*, 36(3), 368–385.
- Millward, L., Morgan, A. and Kelly, M. (2003) *Prevention and Reduction of Accidental Injury in Children and Older People*. London: Health Development Agency.
- Morrongiello, B. A. and Major, K. (2002) Influence of safety gear on parental perceptions of injury risk and tolerance for children’s risk taking. *Injury Prevention*, 8(1), 27–31.
- Morrow, V. and Richards, M. (1996) The ethics of social research with children: an overview. *Children and Society*, 10, 90–105.
- Nic Gabhainn, S. and Kelleher, C. (2002) The sensitivity of the draw and write technique. *Health Education*, 102(2), 68–75.
- ODS Ltd with Market Research UK Ltd (2004) *Parental Attitudes to Road Safety Education*. Edinburgh: Scottish Executive Social Research.
- Office for Economic Co-operation and Development (OECD) (2004) *Keeping Children Safe in Traffic*. Paris: OECD.
- Office for National Statistics (ONS) (2003a) *Ethnicity – population size*. London: The Stationery Office. www.statistics.gov.uk/cci/nugget.asp?id=273 (accessed 8 April 2008).

- Office for National Statistics (ONS) (2003b) *Census 2001 – United Kingdom*. London: The Stationery Office. www.statistics.gov.uk/census2001/profiles/UK-A.asp (accessed 2 April 2008).
- Office for National Statistics (ONS) (2003c) *Census 2001 – Families of England and Wales*. London: The Stationery Office. www.statistics.gov.uk/census2001/profiles/commentaries/family.asp (accessed 2 April 2008).
- Office for National Statistics (ONS) (2003d) *Census 2001. Westminster*. London: The Stationery Office. <http://www.statistics.gov.uk/census2001/profiles/00BK-A.asp> (accessed 4 April 2005).
- Office for National Statistics (ONS) (2003e) *Census 2001. Leeds*. London: The Stationery Office. www.statistics.gov.uk/census2001/profiles/00DA-A.asp (accessed 4 April 2005).
- Office for National Statistics (ONS) (2003f) *Census 2001. North Yorkshire*. London: The Stationery Office. <http://www.statistics.gov.uk/census2001/profiles/36-A.asp> (accessed 4 April 2005).
- Office for National Statistics (ONS) (2003g) *Census 2001. Warwick*. London: The Stationery Office. www.statistics.gov.uk/census2001/profiles/44UF-A.asp (accessed 4 April 2005).
- Office of National Statistics (ONS) (2005) *National Statistics*. London: The Stationery Office. www.statistics.gov.uk/ (accessed 5 April 2005).
- Office of the Deputy Prime Minister (ODPM) (2000) *Indices of Deprivation 2000: Ward Indices*. London: The Stationery Office. www.odpm.gov.uk/stellent/groups/odpm_urbanpolicy/documents/page/odpm_urbpol_608140.hcsp (accessed 5 April 2005).
- Office of the Deputy Prime Minister (ODPM) (2003) *English Indices of Deprivation 2004 (revised)*. London: The Stationery Office. www.odpm.gov.uk/stellent/groups/odpm_urbanpolicy/documents/page/odpm_urbpol_029534.pdf (accessed on 1 April 2005).
- Oliver, P. (2003) *The Student's Guide to Research Ethics*. Maidenhead: Open University Press.
- Platt, C. V., Clayton, A. B., Pringle, S. M., Butler, G. and Colgan, M. A. (2003) *Road Safety Education for Children Transferring from Primary to Secondary School*. London: Department for Transport.
- Pope, C., Ziebland, S. and Mays, N. (2000) Qualitative research in health care: analysing qualitative data. *British Medical Journal*, 320, 114–116.
- Pridmore, P. (1996) Visualising health: exploring perceptions of children using the draw and write method promotion and education. *Promotion and Education*, 3(4), 11–15.

- Punch, K. F. (2003) *Survey Research*. London: Sage.
- Ritchie, J. and Spencer, L. (2002) Qualitative data analysis for applied policy research. In M. Huberman and M. Miles (eds), *The Qualitative Researcher's Companion*. London: Sage.
- Robson, C. (2002) *Real World Research*, 2nd edn. Oxford: Blackwell Publishers Ltd.
- Royal Society for the Prevention of Accidents (RoSPA) (2005) *Road Safety Information – Carrying Children on Bicycles*. Birmingham: RoSPA.
www.rospa.com/roadsafety/advice/cycling/carrying_children.htm (accessed 26 April 2005).
- Sonkin, B., Edwards, P., Roberts, I. and Green, J. (2006) Walking, cycling and transport safety: an analysis of child road deaths. *Journal of the Royal Society of Medicine*, 99, 402–405.
- Thomas, N. and O’Kane, C. (1998) The ethics of participatory research with children. *Children and Society*, 12, 336–348.
- Thomson, J. A., Ampofo-Boateng, K., Grieve, R., Pitcairn, T. K. and Demetre, J. D. (1998) The effectiveness of parents in promoting the development of road crossing skills in young children. *British Journal of Educational Psychology*, 68(4), 475–491.
- Thomson, J. A. (2002) *Kerbcraft: Smart Strategies for Pedestrian Safety*. London: Department for Transport Local Government and the Regions.
- Tilford, S. and Delaney, F. G. (1992) Qualitative research in health education. *Health Education Research*, 7(4), 451–455.
- Tolmie, A., Thomson, J., O’Conner, R., Foot, H., Karagiannidou, E., Banks, M., O’Donnell, C. and Savary, P. (2006) *The Role of Skills, Attitudes and Perceived Behavioural Control in the Pedestrian Decision-Making of Adolescents Aged 11–15 Years*. Road Safety Research Report No. 68. London: Department for Transport.
- Towner, E., Dowswell, T., Errington, G., Burkes, M. and Towner, J. (2005) *Injuries in Children Aged 0–14 Years, and Inequalities*. London: Health Development Agency.
- Towner, E., Dowswell, T., MacKereth, C. and Jarvis, S. (2001) *What Works in Preventing Unintentional Injuries in Children and Young Adolescents?* London: Health Development Agency.
- West, R., Sammons, P. and West A. (1993) Effects of a traffic club on road safety knowledge and self-reported behaviour of young children and their parents. *Accident Analysis and Prevention*, 25(5), 609–618.
- Why Cycle (2005) *Cycling with Children*. www.whycycle.co.uk/children.htm (accessed 26 April 2006).

- Williams, T., Wetton, N. and Moon, A. (1989a) *A Picture of Health*. London: HEA.
- Williams, T., Wetton, N. and Moon, A. (1989b) *A Way In: Five Key Areas of Health Education*. London: HEA.
- Wood, S., Thornton, S., Arundell, E. and Graupner, L. (2003) *Bringing Children into the Social Contract of Road Use: Final Report*. London: Department for Transport.
- Woodall, J., Green, J., Newell, C., Woodward, J. and Ayrton, R. (2007) *Keeping Children Safe on the Roads – Learning from Communities*. Leeds: Leeds Metropolitan University.
- Zeedyk, S. and Kelly, L. (2003) Behavioural observations of adult–child pairs at pedestrian crossings. *Accident Analysis and Prevention*, 35, 771–776.
- Zeedyk, S. and Wallace, L. (2003) Tackling children’s road safety through edutainment: an evaluation of effectiveness. *Health Education Research*, 18(4), 493–505.

APPENDIX 1

Characteristics of the main study areas

	Area, region and county			
	Westminster	Leeds (Inner-city urban and suburban)	North Yorkshire	Warwick
	London	Yorkshire and Humberside	Yorkshire and Humberside	Midlands
	Greater London	West Yorkshire	North Yorkshire	Warwickshire
Population, 2001 Census (ONS, 2003d, e, f, g)	181,286	715,402	569,660	125,931
Population 0–15 years, 2001 Census (ONS, 2003d, e, f, g)	24,474	143,091	109,528	22,984
Percentage of 0–15-year-olds of whole population (ONS, 2003d, e, f, g)	13.5%	19.8%	19.2%	18.25%
Indices of Deprivation (average) (ODPM, 2003)	31.68	27.68	13.09 (Selby)	12.56
Rank position (average) of Indices of Deprivation/352 (ODPM, 2003)	39	68	239 (Selby)	250
Percentage of largest ethnic groups in area, 2001 census (ONS, 2003d, e, f, g)	White 73% Other 4% Black African 3.7% Indian 3.1%	White 91.8% Pakistani 2.1% Indian 1.7%	White 98.9% Chinese 0.2%	White 92.9% Indian 4.1%
Number of child road casualties – killed or seriously injured, 2003 (Department of Transport, 2004a)	17 in Westminster	57 in Leeds	59 in North Yorkshire	41 in Warwickshire
County and unitary authority level – number of child pedestrian casualties killed or seriously injured, 2003 (Department of Transport, 2004b)	322 in Greater London	136 in West Yorkshire	23 in North Yorkshire	22 In Warwickshire
County and unitary authority level – all child pedestrian casualties, 2003 (Department of Transport, 2004b)	1,632 in Greater London	679 in West Yorkshire	117 in North Yorkshire	64 in Warwickshire
County and unitary authority level – all road casualties, all ages and road user types, 2003 (Department of Transport, 2004b)	38,477 in Greater London	12,804 in West Yorkshire	4,467 in North Yorkshire	2,965 in Warwickshire

APPENDIX 2

Details of the 30 observation sites




Site name	Ethnicity summary (ONS, 2005)	Rank of Index of Deprivation – national out of 8,414 ward level (ODPM, 2000)	Rank of Index of Deprivation – national out of 8,14 ward level (ODPM, 2000)	Urban	Suburban	Rural	A road	B Road	Unclassified	No designated crossings	Zebra crossing	Light-controlled crossing	Junction without designated crossing	Junction with designated crossing	Other	No.	
Westminster 1	White 71.98%, Mixed 2.81%, Asian or Asian British 11.96%, Black or Black British 3.49%, Chinese or other ethnic group 9.76%	6,472	5,173	X				X			X					12	
Westminster 2	White 82.29%, Mixed 3.78%, Asian or Asian British 5.83%, Black or Black British 4.01%, Chinese or other ethnic group 4.09%	2,509	4,335	X			X					X				11	
Westminster 3				X			X							X			11
Westminster 4				X				X						X			
Westminster 5	White 57.69%, Mixed 6.45%, Asian or Asian British 8.51%, Black or Black British 22.42%, Chinese or other ethnic group 4.93%	2,936	2,254	X			X				X				X Pedestrian refuge	22	
Westminster 6	White 55.90%, Mixed 5.97%, Asian or Asian British 11.43%, Black or Black British 21.84%, Chinese or other ethnic group 4.85%	553	407	X			X			X						8	
Leeds urban 1	White 59.65%, Asian or Asian British 28.3%, Black or Black British 6.43%, Mixed 3.37%, Other ethnic groups 1.55%, Chinese 0.7%	429	267	X			X						X			11	
Leeds urban 2				X				X			X						22
Leeds urban 3				X				X					X				
Leeds urban 4	White 91.79%, Asian or Asian British 5.3%, Black or Black British 0.76%, Mixed 1.58%, Other ethnic groups 0.21%, Chinese 0.36%	1,660	1,250	X			X								X Pedestrian refuge	5	
Leeds urban 5	White 84.54%, Asian or Asian British 11.52%, Black or Black British 1.55%, Mixed 1.55%, Other ethnic groups 0.39%, Chinese 0.45%	378	363	X					X				X Pedestrian refuge and car park			16	
Leeds urban 6	White 91.79%, Asian or Asian British 5.3%, Black or Black British 0.76%, Mixed 1.58%, Other ethnic groups 0.21%, Chinese 0.36%	429	267	X			X	X						X		16	
Leeds suburban 1	White 85.68%, Asian or Asian British 9.1%, Black or Black British 1.65%, Mixed 1.98%, Other ethnic groups 0.46%, Chinese 1.15%	4,388	1,297		X		X							X		30	
Leeds suburban 2					X		X					X					21
Leeds suburban 3					X			X								X Pedestrian refuge	
Leeds suburban 4	White 93.96%, Asian or Asian British 3.45%, Black or Black British 0.44%, Mixed 1.07%, Other ethnic groups 0.64%, Chinese 0.43%	5,672	4,742		X				X				X			9	
Leeds suburban 5					X				X		X						15
Leeds suburban 6	White 84.05%, Asian or Asian British 10.32%, Black or Black British 2.38%, Mixed 2.18%, Chinese 0.56%, Other ethnic groups 0.51%	5,699	4,755		X			X		X	X					25	

Warwick 1	White 90.4%, Asian or Asian British 7.1%, Black or Black British 0.37%, Mixed 1.28%, Chinese or other ethnic groups 0.7%	6,407	6,685	X												X				9
Warwick 2				X																3
Warwick 3				X												X				4
Warwick 4	White 95.51%, Asian or Asian British 2.3%, Black or Black British 0.42%, Mixed 1.13%, Chinese or other ethnic groups 0.64%	3,819	2,483	X														X	Lay-by	18
Warwick 5	White 93.5%, Asian or Asian British 4.0%, Black or Black British 0.4%, Mixed 1.4%, Chinese or other ethnic group 0.7%	4,943	4,223		X											X				6
Warwick 6					X															12
North Yorks 1	White 99.1%, Other ethnic groups 0.9%	4,054	5,681				Village			X							X			9
North Yorks 2	White 99.5%, Other ethnic groups 0.5%	1,894	1,572				Town and fringe			X									X	13
North Yorks 3							Village			X										1
North Yorks 4	White 99.9%	6,214	6,271				Village			X								X		7
North Yorks 5	White 99.3%, Other ethnic groups 0.7%	7,352	7,922				Village			X							X			6
North Yorks 6	White 99.5%, Other ethnic groups 0.5%	1,894	1,572				Town and fringe										X		Pedestrian refuge	25

APPENDIX 3

Child–parent pedestrian (and car use) observation recording schedule

Controlled crossings – human, zebra, pelican, puffin, toucan

Type: _____	Stop at kerbside?	HH ?	Activate crossing control (except zebra)?	Zebra only – wait for traffic to stop?	Other crossings – wait for control to cue crossing?	Use crossing appropriately?	Levels of parental control Child no:	Levels of engagement in road crossing
Parent							1 ←————→	p  c
Parent to child							2 ←————→	p  c
Child							3 ←————→	p  c

Field notes

Sketch route taken

APPENDIX 4

Child–parent pedestrian (and bus use) observation recording schedule

Parent/s	Possible other relationship to child		Free hands	Distracting factors		Pace –		Other – <i>pushchairs, walking aids etc.</i>	
M/F	Eth.	*Sibling/grandparent/other:				Hurried/brisk/smart/relaxed/dawdling			
Bus use	Safe parking/position of bus?		Super low floor/easy access bus?	Parent supervises/assists		Evidence/no evidence of safety 'education'/modelling safe behaviour on/off bus			
Leaving									
Getting in									

Child-parent interaction *Walking/cycling/other:		Holding hands	Position of child to parent	Parent aware of child's activity?	Obstacles/ hazards encountered	Response to obstacles/hazards	Level of parental control Physical (P) & Verbal (V)	Levels of parent/child engagement
Parent		*Yes No Intermitt.	N/A	N/A		*None Appropriate Inappropriate	N/A	N/A
Child 1		*Yes No Intermitt.	*In front/behind At side – in/out			*None Appropriate Inappropriate	Max control	Parent Child
Age	M/F Eth:						No visible control	
Child 2		*Yes No Intermitt.	*In front/behind At side – in/out			*None Appropriate Inappropriate	Max control	Parent Child
Age	M/F Eth:						Nb visible control	
Child 3		*Yes No Intermitt.	*In front/behind At side – in/out			*None Appropriate Inappropriate	Max control	Parent Child
Age	M/F Eth:						Nb visible control	




Road crossing (uncontrolled)

Simple road crossing	Safe crossing place?	If unsafe move to safer place?	Stop at kerbside?	HH ?	Look – R, L, R?	Give cue to move?	Step into road when no traffic coming?	Crossing straight over?	Appropriate pace?	Space on other side?	Levels of parental control Child no:	Levels of engagement in road crossing
Parent											1	p c
Parent to child											2	p c
Child/ren											3	p c

Crossing between parked cars.	Safe crossing place?	If unsafe move to safer place?	Stop at kerbside?	HH ?	Check parked cars?	Walk to edge of car on left and stop?	Look – R, L, R?	Give cue to move?	If OK cross?	Appropriate pace?	Space on other side?	Levels of parental control Child no:	Levels of engagement in road crossing
Parent												1	p c
Parent to child												2	p c
Child/ren												3	p c

Crossing at junctions.	Safe crossing place?	If unsafe move to safer place?	Stop at kerbside?	HH ?	Look – R, L, R and behind?	Any obstructions to view?	If so move?	Look again?	If OK cross?	Appropriate pace?	Space on other side?	Levels of parental control Child no:	Levels of engagement in road crossing
Parent												1	p c
Parent to child												2	p c
Child/ren												3	p c

Controlled crossings – human, zebra, pelican, puffin, toucan

Type: _____	Stop at kerbside?	HH ?	Activate crossing control (except zebra)?	Zebra only – wait for traffic to stop?	Other crossings – wait for control to cue crossing?	Use crossing appropriately?	Levels of parental control Child no:	Levels of engagement in road crossing
Parent							1 ← →	p  c
Parent to child							2 ← →	p  c
Child							3 ← →	p  c

Field notes

Sketch route taken

APPENDIX 5

Child–parent cycling observation recording schedule

Field notes

Sketch route taken

APPENDIX 6

Summary of the observation fieldwork

Site name	Urban	Suburban	Rural	A road	B Road	Unclassified	No designated crossings	Zebra crossing	Light-controlled crossing	Junction without designated crossing	Junction with designated crossing	Other	Term time	Vacation	Weekend	Weather	Light conditions	Road conditions
Westminster 1	X				X			X					X			Cold, fine	Bright	Dry
Westminster 2	X			X					X				X			Cold, fine	Sun setting	Dry
Westminster 3	X			X							X		X			Cold, fine	Bright	Dry
Westminster 4	X					X				X			X			Cold, fine	Bright	Dry
Westminster 5	X			X				X				X Pedestrian refuge	X			Cold, fine	Dull	Dry
Westminster 6	X			X			X						X			Cold, fine	Sun setting	Dry
Leeds urban 1	X			X						X			X			Overcast	Dull	Damp
Leeds urban 2	X				X		X						X			Rain	Dull	Wet
Leeds urban 3	X					X			X				X (s) X (w)			Overcast, sun (s) Cold, fine (w)	Dull (s) Bright (w)	Dry
Leeds urban 4	X			X								X Pedestrian refuge			X	Sunny	Bright	Dry
Leeds urban 5	X					X				X Pedestrian refuge and car park					X	Sunny	Bright	Dry
Leeds urban 6	X			X X							X			X		Overcast	Dull	Damp
Leeds suburban 1		X		X							X		X (s) X (w)			Overcast (s) Overcast, cold (w)	Dull (s) Dull (w)	Damp (S) Damp (w)
Leeds suburban 2		X		X					X					X		Bright, rain overcast	Bright, dull	Dry, wet
Leeds suburban 3		X			X							X Pedestrian refuge	X			Overcast, rain	Dull	Dry, wet
Leeds suburban 4		X				X				X			X			Bright, overcast	Bright, dull	Dry
Leeds suburban 5		X				X		X					X			Heavy rain	Poor visibility	Wet ++
Leeds suburban 6		X			X		X	X						X		Squally showers	Bright	Wet +

Warwick 1	X			X					X					X		Heavy rain	Dull	Wet
Warwick 2	X			X			X							X		Rain	Dull	Wet
Warwick 3	X			X				X						X		Overcast	Dull	Wet
Warwick 4	X				X					X			X Lay-by	X		Overcast	Dull	Damp, wet
Warwick 5		X				X				X				X		Sunny	Bright	Dry
Warwick 6		X		X							X			X		Sunny	Bright	Dry
North Yorks 1			Village		X				X					X		Overcast	Dull	Damp
North Yorks 2			Town and fringe	X								X Level crossing		X		Sunny	Bright	Dry
North Yorks 3			Village	X						X				X		Sunny	Bright	Dry
North Yorks 4			Village	X		X				X				X		Overcast, windy	Dull	Dry
North Yorks 5			Village			X	X							X		Sunny	Bright	Dry
North Yorks 6			Town and fringe			X					X Pedestrian refuge				X	Sunny	Bright	Dry

Key
 S = summer
 W = winter

APPENDIX 7

Focus group discussion with young people – interview schedule

Introduction:

- What do you see as risky situations when you are out on the roads/on the roads?
- What do young people your age do that might be risky?
 - When you are alone?
 - With others
 - with peers?
 - with parents?
 - with younger children?
- How do you cope with these risks?
- Whose responsibility is it to deal with risk?
 - Now?
 - When you were younger?
- Let's think back to how you learnt to cope ...

Draw time line



1) **Very young**

What did your parents do to keep you safe?

What did your parents tell you to keep you safe? Where/when?

What kind of example did they set you?

What worked well for you?

What didn't work?

Say/do/example set – what is relative importance of each?

APPENDIX 8

Focus group discussion with parents, round 1 – interview schedule

- Staff introduction.
- Participants asked to introduce themselves and say how many children they have and what ages the children are.

Here the group splits into sub-groups

- 1) What do you see as the risks for children when they are out and about in the following situations?
 - And what do you do to protect your children from such things?
 - Detail photos featuring different scenarios

(Consider issues around:
Control
Education)

- If it has not already been discussed, explore cycling and in-car behaviour here.

Group back together

- 2) What do you think are the most difficult and risky situations for children on the roads?
 - On the pavements/on the roads?
 - Crossing roads?
- 3) How do you decide how much control of your child you need to have when you are out with them?
 - How far do you let your children go away from your side?
 - walking along a quiet road?
 - walking along a busy road?
 - crossing over the road?
- 4) How do you prepare your child to use the roads on their own?
 - As pedestrians } How do you know they are ready?
 - As cyclists }
 - Travelling in cars [In preparation to drive – older secondary only]

APPENDIX 9

Focus group discussions with parents, round 2 – interview schedule

- 1) How do you teach your children about road safety?
 - What methods do you use?
- 2) As a parent – what do you think are the most effective ways to help your children **learn** how to be safe on the roads?
 - What methods do you think are least effective?
 - Do you think certain methods are more effective for teaching boys about road safety than girls – and vice versa?

- 3) Would you say there are differences in how men and women teach their children about road safety?

- 4) **Present findings from the participative work with children – ways they think children should be taught to be safe on the roads**

* Please note – these findings will differ depending on whether the parents have predominantly primary aged or secondary aged children and the area (urban, suburban, rural) that they live in.

For example: children fed back that the following were ways they thought were effective methods to teach road safety education:

- Learning the 'rules' of road crossing.
- Parents being a good role model.
- Being told what to do when they are out on the roads – having explanations.
- Use of incentives.
- Being told about consequences of bad road-safety behaviour.
- Being encouraged to start making independent road-crossing decisions – initially supervised.

For example: children fed back that the following were ways they thought were less effective methods to teach road safety:

- Nagging.
- Shouting.
- Vague advice to be careful.

- 5) How effective do you think you are at teaching your children to be safe road users?
- 6) What do you think are the particular challenges for parents trying to help their children learn to be safe road users?
 - How do you deal with these challenges?

APPENDIX 10

Survey of parents – questionnaire

Reference: Site: _____ No: _____ Researcher: _____



Office Use Only

Date: _____

1. How many children do you have?

1

2. How old are they and are they a boy or girl?
 a.years b. Boy¹ Girl²
 a.years b. Boy¹ Girl²
 a.years b. Boy¹ Girl²
 a.years b. Boy¹ Girl²

2 cont	a	b	2	a	b

3.a Have you started teaching your child/ren about road safety yet? Yes¹ No⁰
If yes, at what age did you start teaching your child/ren about road safety? age

3.b Was this Before they started walking¹
 When they started walking²
 After they started walking³

4. At what age did you – or would you – intend to stop?

5. Thinking about your^a year old^b boy¹ or girl² (^c order) – how often do you use the following to help **THIS** child learn how to use roads safely?

3a
age
3b
4.
5a

6. How often do you ...	Always ⁵	A lot ⁴	Someti mes ³	Hardly ever ²	Never ¹
a. Teach your child the rules for using roads safely when out with them?					
b. Teach your child the rules for using roads safely when you are at home?					
c. Explain to your child why they should behave safely on the roads?					
d. Tell your child about other people getting injured or near-misses?					
e. If you see your child doing something risky – tell your child off afterwards?					
f. Explain why it was unsafe if you have seen your child doing something risky?					
g. Involve your child in decisions about where it is safe to cross roads?					
h. Involve your child in decisions about when it is safe to cross roads?					
i. Use praise/ rewards if your child behaves well when out on the roads? What type					
j. Use threats/ punishment if your child doesn't behave properly when out on the roads? What type					
k. Set a good example yourself?					
l. Point out people who are behaving unsafely when you are out with your child?					

6a
6b
6c
6d
6e
6f
6g
6h
6i
type

6j
type

6k
6l

- b. What age category are you in?
 20 or under¹ 21–30² 31–40³ 41–50⁴ over 50⁵
- c. To which of these ethnic groups do you consider you belong? **SHOW LIST**
 Other – please state
- d. Are you employed full-time¹ employed part-time² student³
 unemployed⁴ not seeking work or homemaker⁵ retired⁶
- e. How many adults are there in your household?
- f. Do you have access to a car or van? yes¹ no⁰
- g. How busy is traffic around where you live?
 very busy⁴ quite busy³ not very busy² quiet¹
- h. What type of area do you live in?
 city centre¹ town centre² village³
 outskirts of city⁴ outskirts of town⁵ rural⁶
- i. Do you live in
 North East England¹ Yorkshire and the Humber⁵ North West England⁹
 East Midlands² East⁶ West Midlands¹⁰
 South East³ London⁷ South West¹¹
 Scotland⁴ Wales⁸ Other¹²

12b	
12c	
Other	
12d	
12e	
12f	
12g	
12h	
12i	