

**Peer Leader Educational  
Intervention to Encourage  
Helmet Wearing:  
A Pilot Study**

**Prepared by the  
Centre for Health Promotion Research  
School of Public Health  
Curtin University of Technology**

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# **Peer Leader Educational Intervention to Encourage Helmet Wearing: A Pilot Study 2000**

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## 1.0 AIM AND OBJECTIVES

### 1.1 Aim

- To assess the feasibility of and then develop an innovative peer leader educational strategy designed to encourage the correct use of bicycle helmets, while simultaneously encouraging safer cycling behaviour.

### 1.2 Objectives

- To establish an advisory committee comprising key road safety (in particular bicycle safety) education stakeholders, to oversee the development of the peer led helmet education intervention project.
- To determine through focus group process procedures with 10 to 12 year old students:
  - how to effectively use school age peer leaders to encourage bicycle helmet use and other safer cycling behaviours;
  - their own and their families' knowledge of bicycle helmet use and other safer cycling behaviours;
  - the extent to which they perceive themselves as being capable of coping with peer pressure encouraging them not to wear helmets when cycling;
  - the proportion of whom intend to wear their helmets and wear them correctly when cycling; and
  - the proportion of friends and family of these children who encourage bicycle helmet use and other safer cycling behaviours.
- To develop school-based peer education cycling helmet strategies targeting children aged 10 to 12 year and their families.

## 2. PROGRESS (METHODOLOGY)

### 2.1 Advisory group

An advisory group of key stakeholders within the area of road safety, and in particular bicycle safety, was formed to act as consultants to the project (Table 1).

**Table 1. Advisory Group for The Helmet Project**

| <b>Name</b>                | <b>Organisation</b>   |
|----------------------------|---|
| Assoc. Prof Donna Cross    | Managing Director, Centre for Health Promotion Research                         |
| Jon Gibson                 | Senior Curriculum Officer – Health and Physical Education, Education Dept of WA |
| Jim Goble                  | Armadale Road Safety Centre   |
| Margaret Hall              | Centre for Health Promotion Research  |
| Assoc. Prof Peter Howat    | Dept of Health Promotion, Curtin University                                     |
| Helena Iredell             | Centre for Health Promotion Research  |
| Gary Kirby                 | Office of Road Safety   |
| Terry Lindley              | Bikewest  |
| Julie Parsons              | Roadwise  |
| Sallee Pettit              | Education Dept of WA  |
| Max Raper                  | Bike Ed Unit, WA Police Services  |
| Dr Tony Ryan               | Road watch  |
| Kerrin Sharp               | Main Roads WA   |
| Assoc. Prof Mark Stevenson | Dept of Epi & Biostats, Curtin University                                       |
| Franz Winkler              | Main Roads WA   |

Members of the advisory group were asked to provide examples of bicycle safety educational materials and feedback on instrumentation and the school-based intervention developed as part of The Helmet Project. An extensive literature review of published studies relating to road safety and bicycle helmets was conducted to assist with the development of project instrumentation and the intervention. A summary of this review is recorded in Appendix 1.

Resources were also requested from the following groups: Road and Traffic Authority Surrey Hills NSW; Department of Queensland Transport; Police Road Safety & Bike Ed Unit WA; Department of Main Roads Brisbane; Transport SA; Office of Road Safety SA; The Bicycle Section VicRoads Melbourne; Police Victoria; NRMA Road Safety Education Section Sydney; Road Safety Guide NSW; NRMA ACT; Road Safety Section, Commonwealth Department of Transport and Regional Services ACT; Australian College of Road Safety ACT; and Macquarie University College of Humanities and Social Sciences.

## **2.2 Focus groups**

### **2.2.1 Sample selection and recruitment**

The objective of the focus groups was to obtain information from school-aged children of the barriers and enablers to correct bicycle helmet use. This information was used to assist in the development of education materials for a whole school approach to bicycle safety in primary schools, and in particular, correct helmet use.

A convenience sample of two primary schools and their respective feeder secondary schools was chosen to participate in the focus groups. One primary school and its feeder secondary school represented students from a low socio-economic area and the other from a high socio-economic area. Principals for each of the schools were contacted to enlist their support for focus groups to be conducted within their school (Appendix 2). As all schools approached agreed to be involved in the project, a letter was sent to schools for distribution to parents of students who may be involved in the focus groups (Appendix 3).

Twenty focus groups were conducted in school hours during the health education classes. Students from Years 5 to 9 were stratified by gender in each school. A pre-requisite for inclusion in the focus group discussion was that students were able to ride a bicycle.

### **2.2.2 Student questionnaire**

A one page quantitative student questionnaire was developed to provide quantitative data relating to bicycle riding behaviours of students (Appendix 4). All students within the target group at each of the four schools were invited to complete a student questionnaire. Participants of focus groups were chosen at random from students who completed a questionnaire, with the only pre-requisite being the ability to ride a bicycle. Two single sex groups were chosen from each of the ten classrooms involved in the project (n=20 focus groups).

The student questionnaire was completed by 182 students to gauge the bicycle riding habits of children within the target group at each of the four schools. After the questionnaires were completed by class members, up to 12 students of each gender were chosen at random from bicycle riders. These students were then separated by gender into two groups and taken to different areas of the schools where the focus groups were conducted (see Table 2).

**Table 2. Respondents of quantitative questionnaire to gauge bicycle riding habits of students (by year grouping)**

| <b>Year grouping</b> | <b>Number of respondents</b> |
|----------------------|------------------------------|
| Year 5               | 50                           |
| Year 6               | 34                           |
| Year 7               | 39                           |
| Year 8               | 28                           |
| Year 9               | 31                           |
| Total                | 182                          |

### **2.2.3 Facilitator’s guide**

A facilitator’s guide was developed providing detailed instruction to facilitators and observers of the requirements for the conduct of a focus group. The instructions included: the student questionnaire; random selection of focus group participants; instructions to focus group participants related to the process and procedure of group discussion; confidentiality issues and how to facilitate the discussion without leading (Appendix 5).

### **2.2.4 Focus group questionnaire**

A focus group questionnaire was developed to provide facilitators with a series of questions related to bicycle helmet wearing. Areas of interest included: barriers and enablers to bicycle helmet wearing; what would encourage correct helmet use; how helmet design could be improved; and who they would like to assist with classroom helmet wearing activities (Appendix 5).

Other issues assessed included: the times when participants rode their bikes, places most often visited when riding, whether a helmet was worn, reasons why/why not helmets were worn when riding, what would encourage school-aged children to wear helmets, and what could be done to make helmets look better.

Years 5 and 6 were asked additional questions relating to whether they would or would not like peer-led helmet-related activities to be conducted in class by Year 7’s. They were also asked how they would choose Year 7 students to assist in peer led activities. Students were then asked to suggest other people whom they would like to assist with bicycle safety lessons in the classroom.

The questionnaire was sent to stakeholders within the area of education, road and bicycle safety for comment. It was then validated by peer review until consensus was reached. The final questionnaire was used by observers to assist with recording student responses during focus group discussion. It was also used to assist with the transcription of the audio tape of student discussion.

### 2.2.5 Piloting of instrumentation

Pilot testing of the student questionnaire, facilitators' guide and focus group questionnaire was conducted with Year 6 female students from one of the study schools. As no changes were made to the original guide and questionnaires, findings from the pilot test were included in the analysis.

### 2.3 Data collection

All members of classes (n=20) from which focus group participants were selected completed a one page quantitative questionnaire relating to bicycle riding and helmet behaviour. Focus group participants (12 boys and 12 girls) were then chosen at random from those students who indicated they could ride a bicycle. This was not possible in every school due to the time constraints of teaching staff, therefore teachers were given the option of randomly choosing up to 24 students (12 boys and 12 girls) from students who could ride a bicycle. Students selected then completed the quantitative questionnaire with project staff prior to commencing the focus group sessions. Groups were gender and age specific. A total of 182 quantitative questionnaires were completed by students. The twenty focus groups were conducted between the 14<sup>th</sup> and 24<sup>th</sup> June, 1999 by facilitators and observers accredited through the Centre for Health Promotion Research (see Table 3).

**Table 3. Schedule for facilitation of focus groups**

| Date    | School                   | Years  | Number of groups | Gender of focus groups | Total personnel required      |
|---------|--------------------------|--------|------------------|------------------------|-------------------------------|
| 14.6.99 | High Wycombe Primary     | Year 5 | 2                | 1 male/1female         | 1 supervisor                  |
|         |                          | Year 6 | 2                | 1 male/1female         | 3 facilitators                |
|         |                          | Year 7 | 2                | 1 male/1female         | 3 observers                   |
| 15.6.99 | Leeming Primary          | Year 5 | 2                | 1 male/1female         | 1 supervisor                  |
|         |                          | Year 6 | 2                | 1 male/1female         | 3 facilitators                |
|         |                          | Year 7 | 2                | 1 male/1female         | 3 observers                   |
| 21.6.99 | Leeming Senior High      | Year 8 | 2                | 1 male/1female         | 1 supervisor                  |
|         |                          | Year 9 | 2                | 1 male/1female         | 2 facilitators<br>2 observers |
| 21.6.99 | Forrestfield Senior High | Year 8 | 2                | 1 male/1female         | 1 supervisor                  |
|         |                          | Year 9 | 2                | 1 male/1female         | 2 facilitators<br>2 observers |

### 2.4 Focus group training

A total of 26 people were trained to facilitate the focus groups for this project. A half-day workshop was conducted to accredit all focus group personnel as both trained observers and facilitators. The workshop included theory and practicum components and covered the following areas:

- what focus groups are and why they are conducted;
- the advantages and disadvantages of focus groups;
- planning and instrument development;
- facilitator/moderator role;
- observers role;
- conducting focus groups;
- recruitment of focus group participants;
- data analysis
- reporting of findings; and
- practical sessions.

All focus group participants attained a level of competency sufficient to enable them to conduct focus groups on behalf of the project.

## **2.5 Conduction of focus groups**

The quality of focus groups was monitored continually via overt observation by the Project Coordinator. At least one experienced CHPR staff member was present at each school to provide additional support to focus group personnel if required. A facilitator's guide (Appendix 5) was provided to ensure all sessions were conducted in the same manner. The instructions were used by facilitators as a guide for students' discussion and by observers to assist with recording student responses.

With permission from school principals and participants, each session was audiotaped for accuracy of transcription and analysis. A trained observer was present at all sessions to record all discussion. All focus groups were lead by one of the twenty-six trained facilitators. Discussion was allowed to flow, however, facilitators were requested to ensure all focus group participants had an equal opportunity to participate in each facet of the discussion and that sessions were not dominated by one or more students.

## **2.6 Data entry, management and analysis**

### **2.6.1 Quantitative data**

Students' responses to the quantitative questionnaire were entered in a computer database using the Statistical Package for Social Sciences (SPSS, 1999) and analysed.

### **2.6.2 Qualitative data**

Immediately following each session, the facilitator and observer independently recorded as many responses to each focus group question as they could remember. The audiotape was then copied, the original and copy labelled accordingly, and the plastic tab removed from each tape to ensure they could not be recorded over. The copy was used by the facilitator and observer to transcribe all student responses.

A computer diskette of the transcription of the pilot test responses was provided to each group to assist with transcription. Completed transcriptions were requested within one week of the focus group being conducted. This instruction was adhered to by 19 of the 20 groups. The remaining transcription was received within three weeks of that focus group being held. The information from transcriptions (n=20) was then collated and thematically presented by year, school and gender to allow comparison between and within groups. The results are presented thematically and supported by direct quotes from focus group participants.

## **2.7 Development of intervention**

Findings from a literature review (Appendix 1), review of road safety resources and focus group results were used by curriculum writers to develop a peer-led intervention to encourage children to wear helmets when riding their bicycles. The intervention is based on a health promoting school model that involves students, parents, teachers and community members (including road safety stakeholders).



Social Cognitive Theory was used to emphasise the role of modelling, self-efficacy perceptions, reinforcement and social support to wear helmets. The Health Belief Model and the Theory of Reasoned Action were used to address students' subjective norms related to helmet wearing. The intervention utilises peer leaders as part of the educational intervention

### 3. RESULTS

#### 3.1 Results of student questionnaires

A total of 182 student questionnaires were completed by 123 (68%) primary and 69 (32%) secondary school students (see Table 4). Almost half of all respondents were male (46%, 84). Only one student had never ridden a bicycle. Fifty two percent (96) of respondents always wore a helmet when riding and a further 39% (71) sometimes wore a helmet when riding a bicycle. Almost 30% (54) of students rode their bicycles to school at least once per week. More females (48, 49%) than males (37, 44%) reported having ever ridden their bicycle to school. All respondents who reported riding to school on the day questionnaires were completed, wore their helmets when riding their bicycles (49, 50% females, 37, 47% males).

**Table 4. Respondents of quantitative questionnaire by school and age in years**

| Gender | AGE      | School |     |      |      | Total |
|--------|----------|--------|-----|------|------|-------|
|        |          | HWPS   | LPS | LSHS | FSHS |       |
| Male   | 9 years  | 5      | 3   |      |      | 8     |
|        | 10 years | 10     | 10  |      |      | 20    |
|        | 11 years | 10     | 3   |      |      | 13    |
|        | 12 years | 11     | 2   | 1    | 1    | 15    |
|        | 13 years | 1      |     | 8    | 11   | 20    |
|        | 14 years |        |     | 7    | 1    | 8     |
|        | Total    | 37     | 18  | 16   | 13   | 84    |
| Female | 9 years  | 4      | 5   |      |      | 9     |
|        | 10 years | 22     | 5   |      |      | 27    |
|        | 11 years | 14     | 7   |      |      | 21    |
|        | 12 years | 9      | 2   | 4    | 3    | 18    |
|        | 13 years |        |     | 8    | 6    | 14    |
|        | 14 years |        |     | 4    | 5    | 9     |
|        | Total    | 49     | 19  | 16   | 14   | 98    |

Key: HWPS – High Wycombe Primary School; LPS – Leeming Primary School;  
LSHS – Leeming Senior High School; FSHS – Forrestfield Senior High School

Half of the students (99, 54.4%) reported they always wore a helmet when riding outside school hours however, almost 10% (17) never wore a helmet when riding outside of school hours.

Results of student questionnaires are recorded in Appendix 7 of this report.

#### 3.2 Results from focus groups

A total of 20 focus groups were conducted within one high and one low socio-economic status primary school and their secondary feeder schools (see Table 5). Between 6 and 12 students were chosen for each group with an average of eight per group. Groups were stratified by age and gender from Years 5-9 (n=20). A prerequisite for inclusion in the focus groups was that all participants were able to ride a bicycle.

**Table 5. Details of focus groups for the Helmet Project**

| <b>School status</b> | <b>Low socio-economic status</b> |           | <b>High socio-economic status</b> |           | <b>Total</b> |
|----------------------|----------------------------------|-----------|-----------------------------------|-----------|--------------|
| School type          | Primary                          | Secondary | Primary                           | Secondary |              |
| Number               | 1                                | 1         | 1                                 | 1         | 4            |
| Focus groups         | 6                                | 4         | 6                                 | 4         | 20           |
| Students             | 72                               | 32        | 37                                | 27        | 168          |

Focus group results are presented thematically without weightings. Examples of students' responses, in their own words, are recorded in italics.

### **3.2.1 Places most often ridden to**

All groups indicated they rode their bicycle close to home. Other places they rode to were BMX tracks, familiar places, to school and for paper deliveries. One group reported they also used their bicycle for transportation.

*'through the bush'*

*'local shops'*

*'area around my house'*

### **3.2.2 Are helmets worn when riding to places most often visited?**

It appeared to depend upon where the participants were riding as to whether they wore their helmet when riding.

*'when I go up the road sometimes I do, but not always'*

*'if it's close to home'*

*'if I just ride around my cul-de-sac I don't'*

*'depends how far we go'*

*'it is not necessary to wear helmets when travelling short distances'*

*'I have to because I am not that steady'*

*'get grounded if I don't'*

### **3.2.3 Riding partners**

Participants from almost all of the groups rode with friends (17/20), on their own (16/20) or with their family (15/20).

### **3.2.4 Reasons why students the same age and gender as participants wear helmets**

The majority of primary school groups (11/12) thought students the same age and gender as them wore helmets for safety reasons or because their parents said they had to (8/12). Secondary students were more concerned with the legal aspects of helmet wearing (7/8) followed by safety issues (6/8) and at parents' insistence (5/8). There was little difference between genders or socio-economic groups.

*'maybe they feel more safe'*

*'because they don't want to get their name in the police book'*

*'if I didn't have my helmet it would of cracked my head open'*

*'so the police don't catch you, that's the only reason'*

*'if you stack it you're safe'*

*'otherwise get into trouble from mum'*

*'don't get killed, don't hurt their heads'*

*'if they get hit by a car it won't hurt as much'*

*'don't hurt themselves riding through the bush'*

### **3.2.4a Reasons why students the same age and gender as participants DO NOT wear helmets.**

The majority of groups (9/12 primary and 7/8 secondary) considered the look of the helmet as a reason for not wearing them. Almost half of the primary groups (5/12) and almost all the secondary groups (7/8) thought helmets were too uncomfortable to wear. There were no differences between genders and schools.

*'uncomfortable particularly when wearing helmet for a long time'*  
*'not cool'*  
*'don't look good'*  
*'clips pinch the skin under my chin sometimes and that hurts'*  
*'spiders get into lining'*  
*'doesn't fit right'*  
*'most people if they are careful, don't get hit by cars'*  
*'pointless to wear a helmet if I am only riding a short distance'*  
*'if I know the place where I am riding really well then I don't need to wear a helmet'*  
*'don't like the style'*

### **3.2.4b. Why do you wear a helmet?**

Almost all primary groups (10/12) and half of secondary groups (4/8) stated the reason why they wore helmets was for safety. Half of both the primary (6/12) and secondary (5/8) groups reported wearing their helmets because their parents said they had to.

*'reduce the chance of head injury'*  
*'it makes me safer'*  
*'my parents say I have to'*  
*'the law says I have to'*  
*'really expensive if you get hurt'*  
*'so you don't get in trouble with parents, police and/or teachers'*

### **3.2.4c Why don't you wear a helmet?**

There were a variety of answers from primary groups as to why they didn't wear helmets, with the most common being comfort, however, only one third mentioned this. Secondary groups mostly concurred (7/8) that they did not wear a helmet because of the way they looked.

*'uncool'*  
*'I get teased'*  
*'where hat instead'*  
*'looks goofy'*  
*'uncomfortable'*  
*'doesn't fit right'*  
*'don't want to be out of the group'*  
*'riding on grass'*  
*'I'm in a familiar area'*  
*'riding short distances'*

### **3.2.4d If your friends wore a helmet would you?**

Although many participants stated it would depend upon the circumstances, nearly every group (17/20) had participants who agreed they would wear a helmet if their friends did.

*'don't want to be different'*  
*'you don't get embarrassed if everyone is wearing one'*  
*'feel better about wearing a helmet'*  
*'feel left out if not wearing helmet, may be picked on'*

### **3.2.4e If older persons were wearing helmets would you?**

Three quarters of the groups had participants who would be influenced by older people wearing helmets. Of the five groups who did answer yes, four were boys (one Year 6, one Year 7 and both Year 9 groups). Although both the secondary groups had participants who would not wear a helmet simply because older persons said they were wearing them

*'wouldn't make much difference'*  
*'depends who the people are'*  
*'not many older people go to school on their bike'*  
*'no, it doesn't make a difference whether they would be older or not'*

### **3.2.5 What makes you not want to wear a helmet?**

Two thirds of primary groups (8/12) and half of secondary groups (5/8) did not wear helmets if they were riding close to home. Socio-economic status did not appear to influence this response. However, more boys (8/10) than girls (5/10) considered they did not need to wear a helmet when riding close to home.

*'riding close to home'*  
*'my parents don't care'*  
*'somebody teasing you'*  
*'if you really don't have time to put it on'*  
*'short distances if you're only a little way away'*  
*'my parents aren't looking'*  
*'people stare'*  
*'don't wear a helmet on the footpath'*  
*'take helmet off before I get to school so others don't see me wearing it'*

### **3.2.5a What are some of the reasons you wear a helmet?**

The most frequent answer given by groups (17/20) as to why participants wore a helmet, was for safety reasons. The next most common answer was as a requirement of parents (11/20). There were no gender differences across both answers and no differences across schools for safety or parental influence in secondary groups. Almost all groups (5/6) from schools with a lower socio-economic status cited parental influence as a reason to wear helmets, however, only participants from the two year 7 groups from schools in the higher socio-economic areas wore helmets because it was required by their parents.

*'you get brain damage if you don't wear it'*  
*'I don't want to hurt myself'*  
*'if my brother is riding on the road he has to wear a helmet, but if he's riding on the driveway or footpath, he doesn't have to'*  
*'my parents say I have to'*  
*'safety'*  
*'cops'*  
*'law'*

### **3.2.5b What are some of the reasons you don't wear a helmet?**

There were many reasons given why participants do not wear helmets with the most common response being teased if wearing a helmet (6/12 primary and 3/8 secondary). There were no significant differences between gender or schools.

*'don't like the colour'*  
*'get teased'*  
*'I have a dorky one from when I was 8 years old'*  
*'can't be bothered'*  
*'in case you see someone you like'*  
*'itchy'*  
*'annoying strap'*  
*'the pads inside come off'*  
*'it messes up my hair'*  
*'velcro stuff inside gets caught on my hair'*  
*'helmets are embarrassing and they don't look good on you'*  
*'can't fit it over my hair, have to change my hair style to wear it'*  
*'if roads aren't busy eg: at night when there aren't many cars around'*

### **3.2.5c What would encourage you to wear a helmet when riding a bicycle?**

Three quarters of primary groups (9/12) would wear a helmet if they or their friends were injured when riding without one, although this was not the case for secondary groups (2/8). Safety was another issue common to both groups (6/12 primary and 6/8 secondary).

*'warning from the police'*  
*'if they were more protective'*  
*'if someone got hurt because they weren't wearing their helmet'*  
*'seeing cute guys wear them'*  
*'seeing more people wear them'*  
*'seeing posters of good looking people in good sport or clothes shops wearing them, and looking good on them'*  
*'you don't get brain damage'*

### **3.2.6a If someone was giving you a hard time for wearing a helmet, what do you think they would be saying?**

Two issues were important to primary participants: being teased (9/12) and how they looked (8/12). Being teased was the only major issue for secondary groups (6/8).

*'call me a scab'*  
*'looks geeky'*  
*'tell me I am a nerd for wearing a helmet'*  
*'don't care'*  
*'blockhead'*  
*'wearing a helmet is not cool'*  
*'tease me about the colour'*  
*'call me a woose'*  
*'you look stupid in that helmet'*  
*'you're weird, why are you wearing that helmet, you look like a stupid idiot'*

### **3.2.6b How would you feel if someone was giving you a hard time for wearing a helmet?**

Primary groups thought they would be unhappy or upset (5/12) or want to retaliate if someone was giving them a hard time about wearing a helmet (7/12). Half of the secondary groups said they would ignore them (4/8).

*'I feel like getting off my bike and punching them'*  
*'you just ride into them if they tease you'*  
*'keep riding on, ignore them'*  
*'you feel embarrassed'*

### **3.2.6c What would you say to anyone giving you a hard time for wearing a helmet?**

Primary groups did not answer this question. Only one secondary group offered any suggestions: ignore them or take off your helmet.

### **3.2.6d What do you think would be going through your mind if anyone gave you a hard time for wearing a helmet?**

Groups offered several suggestions with the most common primary answer being to ignore them (3/12). Secondary groups said they would either retaliate (3/8) or take their helmet off (3/8). There appeared to be no pattern by gender or school.

*'I just want to take it off'*  
*'I just want to get off my bike and punch them'*  
*'I want to bash them'*  
*'feel scared'*  
*'want to get a cool helmet'*  
*'be the same as them so they won't tease you or give you a hard time'*  
*'I'm not taking the risk but they are'*  
*'get caught by police'*  
*'not for decoration but for safety of your head'*  
*'warn them that they could get hurt if they don't'*

### **3.2.6e Why do you think they may be giving you a hard time?**

Primary groups thought they may be given a hard time for wearing a helmet because of the way it looked (5/12). Secondary groups thought the offenders may be bored (6/8) or were bullies (4/8).

*'they are bored and have nothing better to do'*

*'they may be part of a bully gang'*

*'they don't like me'*

*'you look silly'*

### **3.2.6f. What could you do if someone was giving you a hard time for wearing a helmet?**

Both groups favoured ignoring them (7/12 primary and 6/8 secondary). Most of the primary groups (8/12) had participants who would leave and almost half (5/12) would tell those who were giving them a hard time that its safer to use helmets. Half of the secondary groups (4/8) would go and tell an older person.

### **3.2.7 What would encourage you to wear a helmet?**

Many suggestions were made by all groups. The following suggestions were made by primary groups: if they or their friends were injured (7/12); for safety (7/12); if they looked good (6/12) and television advertisements (5/12). If they looked better (5/8) and being injured or having a friend injured (4/8) would encourage secondary groups to wear a helmet.

*'if helmets looked good'*

*'safety'*

*'if I saw someone hurt when not wearing a helmet'*

*'when you get older you won't like the scabs so much'*

*'if parents bought better ones'*

*'more cool, fashionable, like a hat'*

*'show ads of people who have been injured'*

*'if a famous sports star wore one'*

*'if the price was cheaper'*

*'if a friend was injured and not wearing one'*

*'posters telling you to wear a helmet showing an injury'*

### **3.2.8 What does wearing a helmet correctly mean**

Participants in all groups seemed to know what wearing a helmet correctly meant.

*'straps done up at the front'*

*'done up underneath'*

*'wear it the right way, not back to front'*

*'so it faces the right way'*

*'flat on top of head'*

*'just above eyebrow at the front'*

*'firmly done up'*

### **3.2.9 If you could design a campaign to encourage helmet use, what would the content include?**

Half of both primary (7/12) and secondary (4/8) groups would use safety as a theme for their campaign. Use of television advertisements with dual screen injured/non-injured scenes was a popular choice by primary (5/12) and secondary (3/8) groups. The use of famous persons to promote helmet use was also favoured by both groups (4/12 primary and 4/8 secondary).

There were many other suggestions from all focus groups, however, there appeared to be no gender or school patterns.

*‘if they show a video of someone being hurt then say this could have been you’*  
*‘design a helmet with stuff on it you like’*  
*‘graphic video of injury’*  
*‘get a cool person to wear it’*  
*‘wear a helmet and save your brain’*  
*‘don’t be stupid, wear a helmet’*  
*‘have a drink bottle attached to your helmet’*  
*‘competitions’*  
*‘bike safety word sleuths’*  
*‘have a signature on it’*  
*‘survey on one page and a poster and competition on the other and your parents could help you fill out the competition’*  
*‘don’t worry about your hair, worry about your safety’*  
*‘the law says you have to wear a helmet’*

### **3.2.10 How could you make helmets look better?**

Half of the primary and secondary groups would change the style of existing helmets. Almost all primary groups (11/12) and nearly half of the secondary groups (3/8) had participants who would like to design their own helmet. Half of primary groups (5/12) would also like to be able to put stickers on their helmet or have drink bottles attached to their helmet (6/12).

*‘design them in a cap’*  
*‘signature on it’*  
*‘different designs for different age groups’*  
*‘clear, see-through helmet so people can’t see you wearing it’*  
*‘draw pictures on them’*  
*‘racing helmets’*  
*‘characters, pictures on them’*  
*‘more padding inside’*  
*changeable covers for your helmet’*  
*‘drink container attached’*



*Only Years 5 and 6 were asked the following questions.*

**3.2.11a Would you like Year 7's to assist with helmet lessons?**

There were mixed reactions to this question. Most respondents agreed it would be a good idea to try.

*'yes'*  
*'depends on the activities'*  
*'fun'*  
*'educational'*  
*'they are older and have more common sense'*

**3.2.11b Why would you like Year 7's to assist in class?**

Half of the groups (4/8) thought they would be a good example to younger students.

*'older and would be a good example to younger children'*  
*'they would know more people who have fallen off bikes and hurt themselves'*  
*'it would encourage others to wear their helmets, they could tell us stories and be a good example'*  
*'get out of school work'*  
*'might know good types of helmets – cool'*  
*'only if they did it in a play not talking'*

**3.2.11c Why wouldn't you like Year 7's to assist in class?**

Some reasons given were that they teased younger children, were boring, didn't wear helmets and they didn't associate with participants of these groups.

*'because it's the Year seven's that tease'*  
*'would prefer university students'*  
*'if they didn't wear helmets'*  
*'boring of they are only talking'*  
*'might not learn anything'*  
*'don't want older siblings'*  
*'depends if they were serious or not'*  
*'they are naughty'*

**3.2.11d If you did use Year 7's, how would you choose them?**

Almost half (3/8) thought those that set a good example should be chosen or all Year 7's should be tested and the best chosen to help.

*'sensible ones'*  
*'good one- if they rode and wore helmets'*  
*'give them a test'*  
*'could survey them to see who thought to was a good idea to wear helmets'*  
*'have a buddy system'*  
*'test all bike safety measures and they must get 100%'*  
*'vote/election, those with the most votes'*  
*'those that are the best example to other students'*  
*'random choice'*  
*'essay'*

### **3.2.11e Who else would you like to assist in class?**

Almost all groups (7/8) suggested parents who knew about bicycle safety should be asked to assist with classroom activities. Other suggestions included friends (3/8), someone who was injured riding a bicycle without a helmet (2/8) and another teacher (2/8).

*'police'*

*'bicycle shop owner who fixes bikes'*

*'a parent who knows about bicycle safety'*

*'an olympic cyclist'*

*'a cycle coach or bike trainer'*

*'someone who has been in a crash and tells you to wear a helmet so you don't end up like them'*

*'parents or grandparents'*

*'boy high schoolers'*

*'the people who make them'*

*'book buddies'*

*'stunt people'*

*'teachers'*

*'doctors'*

*'sports professionals'*

### **3.3 Development of a school-based peer led intervention**

The intervention has been developed based on the findings of the literature review, review of road safety resources and from findings from the focus groups for the longitudinal project recently funded by NH&MRC. A draft version of a bicycle safety, peer-led, classroom curriculum is contained in Appendix 8.

## **4. EFFECT OF RESEARCH ON PROFESSIONAL DEVELOPMENT**

This project provided training opportunities for a significant number of students at Curtin University. Twenty-six students gained accreditation in the facilitation and observation of focus groups through their involvement with this project. Many of these students were also able to gain valuable practical experience through the conduction focus groups for The Helmet Project.

At the completion of the project students were presented with a Certificate of Competencies in the Conduction of Focus Groups through the Centre for Health Promotion Research's Research Accreditation Competencies Program.

Results from this project will be used to direct the three-year NH&MRC funding School Bicycle Safety Project.

## **5. IMPLICATIONS FOR HEALTH PROMOTION/ LINKING RESEARCH TO HEALTH OUTCOMES**

Bicycling accounts for a significant proportion of injury-related morbidity in children. In Australia, the bicycle injury rate for children aged 0 to 14 years has been estimated as high as 41 per 10,000 per year (Nolan and Penny, 1992). Although this estimate includes hospital attendance for both on-road and off-road injuries it is likely to be conservative, as approximately 62% of on-road and 36% of off-road bicycle injuries are not reported (Ryan and Hendrie, 1994). In 1997 there were 738 hospital admissions and six deaths involving bicycle riders in Western Australia (Cercarelli, *et al.*, 1997). Children aged 6 to 11 years sustained 28% of these injuries and children aged 12 to 16 years sustained a further 32%. Compared to other states in 1996, WA had the highest proportion of cycling fatalities and head injury deaths (Federal Office of Road safety, 1997).

Fifty percent of bicycle-related injuries are a result of the cyclist colliding with either a moving or stationary motor vehicle, whilst the remaining injuries are due to the cyclist falling (Harbourview Injury Prevention and research Centre, 1996). Consistent with the characteristics of other unintentional injuries, males are over-represented in the bicycle injury rates (Van Schagen and Brookhuis, 1994). The injury rates are also greatest in children, particularly in the age group 10 to 14 years (Ashwell, Pinder and Thomson, 1996). This finding can be explained, in part, by the fact that this age group has the highest exposure to traffic using bicycles and their poorly developed perceptual skills. Skills such as distance-depth-cues and the ability to discern the speed of an approaching vehicle can take until age 11 to develop fully (Van Schagen and Brookhuis, 1994).

While fatalities from cycling injuries have generally decreased nationally, (80 in 1990 to 59 in 1994) the proportion of these deaths attributable to head injury has remained at 1990 rates. Further, head and other injuries from cycling have increased during this period from 19% to 38% (Federal Office of Road safety, 1997). Given the severity of injury sustained by bicyclists (ie: 100% of fatal and 67% of non-fatal bicycle injuries involve the head); and estimated potential years of life lost (PYLL = 43years) due to the young age of cyclists fatally injured, attention must focus on ensuring available preventive strategies (eg, helmet wearing, are effective and used (Ashwell, Pinder and Thomsaon, 1996).

A three-year National Health & Medical Research Centre grant was awarded to the Centre for Health Promotion Research to develop, implement and evaluate a whole-school road safety intervention including innovate classroom strategies, designed to encourage correct bicycle helmet use, whilst simultaneously encouraging safer road user behaviour.

The findings of The Helmet Project will be used to inform this new project which is entitled 'The School Bicycle Safety Project'. Information gleaned from focus groups conducted with students from Years 5-9 will be of particular assistance in ensuring that interventions developed are relevant to the target group.

## **6. COMMUNITY BENEFITS FROM THE RESEARCH**

The benefits from the research include the following:

- Provision of information through the conduction of focus groups with students from schools within the targeted age groups;
- Establishment of criteria by which to assess school-based bicycle safety intervention programs;
- By including students and teachers in the initial stages of this research project, findings will contribute to a better understanding of the reasons why children do/do not wear helmets when riding bicycles; and
- Findings of the project will provide positive steps that may be taken to encourage students to wear helmets while riding their bicycles.

Future benefits include:

- Improving schools' and the community's knowledge of bicycle safety and the importance of wearing a helmet correctly;
- Provision of a means of empowering teachers, parents and students to play an active role in the prevention and reduction of injury related to bicycle crashes;
- Provide a better understanding of effective means to influence the health behaviours of children at a particularly vulnerable age; and
- Ultimately, a reduction in morbidity and mortality related to head injury through bicycle crashes

## **7. PUBLICATIONS/DISSEMINATION**

The aim of this project was to assess the feasibility of and then develop an innovative peer leader educational strategy to encourage correct use of bicycle helmets. The findings of this project will be used to inform a three-year NH&MRC project which will develop and trial a school-based bicycle safety intervention. Strategies will include the use of peer leaders in the dissemination of information to younger students.

Findings from The Helmet Project will be disseminated to the four schools who were involved in the conduction of focus groups. As the project progresses into the three-year trial, conference presentations and journal articles will be the major vehicles for the dissemination of results from these studies. Findings from the Helmet Project will be published on the Centre for Health Promotion Research website and communicated personally to education and bicycle safety authorities. Educational resources will be distributed to schools throughout the Perth metropolitan area. The materials produced will be based on a whole-school approach and follow the Curriculum Framework therefore will provide a valuable additional to existing curriculum resources

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