

Changes in risky driving behaviour among young adults

Dorothy Begg & John Langley
Injury Prevention Research Unit, University of Otago.

Abstract

The objective of this study was to determine whether there was a change in the prevalence of risky driving and thrill-seeking behaviour among a cohort of young adults from age 21 to 26 years. This study was part of the Dunedin Multidisciplinary Health and Development Study, which is a longitudinal study of a birth cohort. At 21 and 26 years of age, data were sought on the prevalence of a range of risky driving behaviours (e.g. driving after drinking, driving after using marijuana, driving fast just for the thrill of it, taking deliberate risks for fun) and thrill seeking behaviours (bungy-jumping, sky diving, white water rafting, hang-gliding, roller coaster ride). At both ages, 936 members of the cohort were administered a face-to-face interview, using a structured questionnaire that included items on these behaviours. The results showed that, at both ages, risky driving was a predominantly a male activity, but by 26 years of age many males had "matured-out" of these behaviours. At the same time, the desire to take part in thrill-seeking increased among the males. Among the females, there were few significant changes between ages 21 and 26 years but at both ages the prevalence of risky driving and thrill-seeking was relatively low.

The results from this study confirm that risky driving behaviour is predominantly a young male activity. Given that young drivers are also relatively inexperienced, this study provides good evidence why road safety interventions for risky driving behaviour should target young male drivers.

Key words: young adults, risky driving, thrill seeking

Introduction

Although in recent years there has been some improvement in the traffic crash injury problem among young adults in New Zealand, it remains a leading cause of death or serious injury among this age group (1-4). Also, young people are over-represented in the official police statistics. For example, in 1998, 15-24 year olds were involved in 28% (n=141) of the fatal motor vehicle traffic crashes (5), yet they represented less than 15% of the population (6). When travel exposure is taken into consideration, the crash fatality rate for 15-24 year olds is nearly twice as high as the 25-34 year olds, and three times higher than that for the 35-44 year olds (7). This shows that young adults in New Zealand have a much higher risk of being killed on the road, than do older road users.

Many factors are thought to contribute to this over-representation of young people in the traffic crash statistics. These include inexperience and inattention, poor risk/hazard perception, impulsivity, and a propensity for thrill-seeking, sensation seeking, and risk taking behaviour, including risky driving behaviours such as driving at excessive speed, dangerous overtaking, close following, driving after drinking, or driving after using drugs (8, 9). These behaviours are considered to be part of a syndrome of behaviours, that have been variously referred to as "problem behaviours" (10) or "reckless behaviours" (11, 12). It is considered that young people engage in these behaviours to attain adult-like status, and once they are adults the need for these behaviours fades. There is some evidence, however, that driving-related recklessness such as speeding and driving under the influence of alcohol does not necessarily decline among young adults, whereas other reckless behaviours such as drug use, shoplifting, and vandalism do (13). Arnett considered that this may be due to the level of social stigma attached to these behaviours with speeding and drink-driving carrying less social stigma than shoplifting or vandalism.

A previous study has shown a relatively high prevalence of some risky driving behaviours among 21 year olds, especially males, in New Zealand (14). These behaviours included driving after drinking, driving after using marijuana, driving fast for thrills, driving over 120 kph, and following closely behind slower drivers. Given that crash risk decreases as age increases, and that these risky driving behaviours contribute to

increased crash risk, then it would be expected that by 26 years of age, there would be a significant decrease in the prevalence of these risky driving behaviour among these young people.

The aims of the present study were to

1. examine the change in the prevalence of risky driving behaviours at ages 21 and 26 years, and
2. examine changes in the propensity for taking part in thrill-seeking behaviours at ages 21 and 26 years.

Method

This study was part of the Dunedin Multidisciplinary Health and Development Study, which is a longitudinal study of a cohort (n=1037) born between April 1, 1972 and March 31, 1973, at the only obstetric hospital in Dunedin, New Zealand. Since age three years, the members of this cohort have been assessed every two years up to 15 years of age, and then again at 18, 21 and 26 years. At age 21, 950 (93%) and age 26, 969 (96%) of those alive at the time of the assessment took part in the research presented here.

At the age 21 and age 26 assessments, an interview on risky driving behaviours was included. To examine these behaviours overtime, many of the same questions were included in both interviews. The questions related to any driving within two hours of drinking alcohol, driving when they had perhaps had too much to drink to be able to drive safely, and driving within two hours of using marijuana. The questions on risky driving practices sought information on how often they: drove fast just for the thrill of it; took some risks when driving to make driving more fun; drove faster than 120 kph on the open road; overtook when there was a solid yellow line on their side of the road; sped up if someone was trying to pass them; followed very closely behind slower drivers. For the analyses the responses "often" and "fairly often" were combined into the "yes" group, and the "occasionally", "rarely", and "never" responses the "no" group.

Questions were also asked to gauge the study members' propensity to engage in thrill-seeking behaviour. They were asked to assume that if they were given a free ticket to take part in various thrill-seeking experiences, how likely it would be for them to take advantage of this free opportunity to: bungee jump, sky dive, go white water rafting, hang-gliding, or for a roller coaster ride. Those that responded "very likely" were classified as the "Yes" group, and the "quite likely", "somewhat likely", "not very likely", "not at all likely" as the "No" group.

McNemar's Chi square test for paired samples was used to compare the age 21 and age 26 results.

Results

Of the study members that participated in the age 21 and age 26 assessments, 936 (92%) took part at both interviews. This included 476 males and 460 females. Given the substantial differences in driving behaviour between males and females, the following results are all presented by gender (15).

The prevalence of risky driving and thrill seeking behaviour is presented in Table 1 for the males, and Table 2 for the females. The no/no category represents those that responded no at 21 and 26; yes/yes is yes at both ages; no/yes is no at 21 and yes at 26; yes/no is yes at 21 and no at 26.

The results in Table 1 show that among the males there was a highly significant change in the prevalence of most risky driving behaviours between ages 21 and 26 years, except driving after using marijuana and taking risks when driving to make driving more fun. Except for driving after drinking (any alcohol) the yes/no group had a higher proportion than the no/yes group. This indicates a significant decrease in risky driving behaviour from age 21 to age 26 years. For the thrill-seeking activities there was also a significant change from age 21 to 26, but for each of these activities the change showed a higher proportion saying Yes@ at age 26 than at 21. This indicates an increased likelihood of taking part in these activities. .

As shown in Table 2, among the females, the prevalence of each of these behaviours was lower than among the males. For the females, there was a significant increase in the proportion that reported driving after drinking at age 26 compared to 21, but a decrease in the proportion that drove fast for the thrill of it at 26 than at 21. There were no significant changes for any of the other driving behaviours or thrill-seeking activities.

Conclusion

The results from this study show that the young males were more likely to engage in a range of risky driving behaviours at age 21 years, than at 26 years. This suggests that for many young people, risky driving behaviour may be part of a developmental stage, and that as adulthood approaches a significant number will “mature-out” of these high-risk activities. It seems quite likely that this change in behaviour makes an important contribution to the decrease in crash risk among young males aged in their mid-twenties. Although there were few significant changes among the females from 21 to 26 years, the prevalence of risky driving behaviours among the females was much lower than for the males, which may help explain their lower crash risk at both ages.

In the present study one of the few behaviours that had a higher prevalence at age 26 compared to age 21 was driving within two hours of drinking alcohol. This question did not account for the quantity of alcohol consumed, and when this was taken into consideration (driving after drinking too much to be able to drive safely) there was a significant decrease at 26 compared with 21. This suggests that, while these young adults were prepared to drive after drinking, it appeared that they were choosing to drive within relatively safe alcohol limits, and had “matured out” of the riskier behaviour of driving after drinking a quantity of alcohol that may have impaired their driving ability.

The results from this study also provided evidence of a decrease in other risky driving behaviour among the males although behaviours related to speed were still quite common. Also, there was a significant increase in the desire to engage in thrill seeking activities among the males. This latter finding may be due in part to the nature of the thrill-seeking activities included in this study. All of these activities are actively promoted by the “adventure tourism” industry, and they are relatively safe. There is no social stigma attached to participation, indeed most people would consider participation to be socially admirable. The increase in desire to take part in these activities, as shown by many of the males in this study, may not necessarily indicate immaturity or an increased propensity for risk-taking.

The results from this study confirm that risky driving behaviour is predominantly a male activity, but also that, as they assume adult status, the majority of males will outgrow the need to engage in these behaviours. Road safety interventions for risky driving behaviours, therefore, should target younger drivers who are more likely than older drivers to engage in risky driving behaviours. This, combined with their relative inexperience at driving, must be important factors contributing to the high crash risk among young drivers.

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Table 1
 Number and percentage that engaged in risky driving practices and were very likely to take part in thrill seeking behaviour at ages 21 and 26 years, males only

Risky driving practices	No /No		Yes /Yes		No /Yes		Yes /No		χ ²	p-value
	n	%	n	%	n	%	n	%		
Have driven within 2 hours of drinking alcohol in past 30 days	95	24	135	33	108	27	66	16	10	0.002
Drive after drinking perhaps too much to drive safely in past 30 days	302	75	17	4	25	6	60	15	14	<0.001
Drive within two hours of using marijuana in past 30 days	270	67	68	17	35	9	32	8	0.1	0.714
Often or fairly often drive fast just for the thrill of it	347	73	35	7	25	5	69	15	21	<0.001
Often or fairly often take some risks when driving to make driving more fun	419	88	7	1	19	4	31	7	2.9	0.090
Often or fairly often drive faster than 120 kph on the open road	266	56	80	17	51	11	79	17	6	0.014
Thrill seeking behaviours										
Very likely to go:										
Bungy jumping	129	27	222	47	79	17	46	10	8.7	0.003
White water rafting	99	21	251	53	73	15	53	11	3.1	0.075
Hang-gliding	211	44	138	29	81	17	46	10	9.6	0.002
for a roller coaster ride	53	11	312	66	71	15	40	8	8.7	0.003
sky diving	163	34	187	39	81	17	45	9	10	0.001

McNemar's Chi-square

Table 2

Number and percentage that engaged in risky driving practices and were very likely to take part in thrill seeking behaviour at ages 21 and 26 years, for **females only**

Risky driving practices	No /No		Yes /Yes		No /Yes		Yes /No		χ ²	p-value
	n	%	n	%	n	%	n	%		
Have driven within 2 hours of drinking alcohol in past 30 days	140	40	61	18	95	27	50	14	14	<0.001
Drive after drinking perhaps too much to drive safely in past 30 days	310	90	6	2	10	3	20	6	3.3	0.068
Drive within two hours of using marijuana in past 30 days	301	87	13	4	15	4	17	5	0.1	0.724
Often or fairly often drive fast just for the thrill of it	432	94	3	1	7	2	18	4	4.8	0.028
Often or fairly often take some risks when driving to make driving more fun	392	85	11	2	28	6	29	6	0.1	0.895
Often or fairly often drive faster than 120 kph on the open road	336	73	30	7	42	9	52	11	1.1	0.302
Thrill seeking behaviours										
Very likely to go:										
Bungy jumping	263	57	107	23	42	9	48	10	0.4	0.527
White water rafting	208	45	140	30	47	10	65	14	2.9	0.089
Hang-gliding	293	64	69	15	51	11	47	10	0.2	0.686
for a roller coaster ride	120	26	237	52	54	12	49	11	0.2	0.622
sky diving	285	62	95	21	47	10	33	7	2.5	0.118

McNemar's Chi-square