New Zealand Women Drinking Drivers

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ABSTRACT

Comparison of data from two studies of fatal road accidents, an in-depth study for 1991 to 1993 and a study for 1986, shows that women drivers are becoming increasingly involved in these accidents in New Zealand. However, women drivers have different characteristics in their accidents from men. They do less drinking and driving or travelling at excessive speed than men, although young women drink and drive or speed more often than older women.

The important factors for accidents differ according to the age of the driver. Young women are more likely to have alcohol involvement or incompetence or inexperience as a factor, whereas older women are more likely to fail to give way. Many older women got their driver's licence late in life. Three-quarters of this group are not drinking drivers or speeding drivers.

Women involved in a fatal drink driving accident are much less likely than men to have a previous conviction for drink driving. Female drinking drivers in reported injury accidents increased between 1986 and 1992, whereas male drinking drivers decreased.

INTRODUCTION

John Bailey has studied road accident patterns including women's accidents for about 25 years. In 1988, he presented a paper on female drinking drivers in New Zealand at an international workshop on women drivers held in Sweden [Bailey, 1989]. His recent in-depth study of fatal accidents in the years 1991 to 1993 has provided a wealth of information on women's accidents not previously available in New Zealand [Bailey, 1995]. Another recent study has reported on travel patterns and accidents for young female drivers [Wylie, 1995].

This paper compares information available from these and other sources to yield information about trends for New Zealand women who drink and drive and have accidents.
METHOD

This study uses data taken from Bailey's 1986 [Bailey, 1993] and 1991-93 [Bailey, 1995] studies on fatal road accidents. The latter used data on 2400 drivers from ten data sources including official accident reports, post-mortem and hospital blood samples, breath test reports, Coroners' reports, and court records [Bailey, 1995]. These were matched through name and date of birth, death or accident. Fatal road accidents were used because they are better investigated and reported than other accidents.

Drivers included are all those involved in the fatal accidents who were considered to be at fault, i.e., who had a driver cause code recorded. (They were not necessarily killed in the accident.) Drinking drivers included in the study were those with a measured blood alcohol level (BAC) in excess of the legal limit for adults, 80 mg/100 ml (80 mg%). Sober drivers were those suspected by the enforcement officer to be sober and who did not have a positive blood alcohol level.

Information on women drivers

In 1990, 46% of licensed drivers were women [Land Transport Safety Authority, 1995]. However, men still do most of the driving. The percentage done by women has increased from 24% in 1976-1977 to 30% in 1989-1990. The proportion done by younger and older (over 44) women differs little (29% and 27%).

Table 1 presents information on some characteristics of the 450 drinking and 752 sober drivers considered to be at fault in their fatal road accidents between 1991 and 1993. Women comprised only 10% of the drinking drivers in these fatal accidents. The age distribution of women drivers aged over 25 was similar to that for men. A higher percentage of women drinking drivers had their accidents during the day. Their average blood alcohol level was similar to the men's. Women comprised 26% of the sober drivers. Fewer were travelling at excessive speed. 35% of the women drivers aged over 44 were non-drinking or non-speeding drivers. Sober women drivers' accidents occurred overwhelmingly during the day.

Table 1 also presents the same characteristics from the 1986 study.
Table 1: Characteristics of drivers at fault in fatal road accidents, 1986 and 1991-93 data

<table>
<thead>
<tr>
<th></th>
<th>drinking drivers</th>
<th></th>
<th>sober drivers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>female</td>
<td>male</td>
<td>female</td>
<td>male</td>
</tr>
<tr>
<td>Year(s)</td>
<td>86</td>
<td>91-93</td>
<td>86</td>
<td>91-93</td>
</tr>
<tr>
<td>Number</td>
<td>29</td>
<td>47</td>
<td>266</td>
<td>403</td>
</tr>
<tr>
<td>% total</td>
<td>10</td>
<td>10</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>% aged &lt;20</td>
<td>31</td>
<td>9</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>48</td>
<td>40</td>
<td>33</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>% at excess speed</td>
<td>31</td>
<td>38</td>
<td>38</td>
<td>54</td>
</tr>
<tr>
<td>% in 5 am - 6 pm</td>
<td>17</td>
<td>28</td>
<td>22</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>11</td>
<td>23</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>35</td>
<td>28</td>
<td>31</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>38</td>
<td>34</td>
<td>25</td>
<td>38</td>
</tr>
<tr>
<td>average BAC of &gt;50 mg%</td>
<td>142</td>
<td>175</td>
<td>165</td>
<td>172</td>
</tr>
</tbody>
</table>

* mn = midnight

In comparing the data for 1986 and 1991-93, the percentage of drinking drivers who were women has not changed, but the percentage for sober drivers has increased slightly. One large change has been an increase in the percentage of sober women drivers now considered to have been travelling at excessive speed in their accidents, from 10% to 21%. (The figure for men drivers has increased less.) A higher percentage of the drinking women are having their accidents during the day.

Since the number of female drivers involved in fatal road accidents is small, moderate changes in individual factors between the two studies may not be significant. Although there are deficiencies in the official data on reported injury accidents in the official file, insight into changes in some characteristics can be gained from the larger numbers in such data. Table 2 gives information from this file for 1986, 1992 and 1995 (the latest year data are available).
Table 2: Comparison of characteristics from drinking drivers involved in reported injury road accidents, 1986, 1992 and 1995 data

<table>
<thead>
<tr>
<th>Year</th>
<th>female</th>
<th></th>
<th>male</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>361</td>
<td>393</td>
<td>396</td>
<td>2737</td>
<td>2162</td>
<td>2001</td>
</tr>
<tr>
<td>% aged &lt;20</td>
<td>25.1</td>
<td>19.3</td>
<td>21.1</td>
<td>25.6</td>
<td>18.9</td>
<td>18.6</td>
</tr>
<tr>
<td>20-24</td>
<td>30.7</td>
<td>30.8</td>
<td>26.7</td>
<td>30.9</td>
<td>29.1</td>
<td>29.0</td>
</tr>
<tr>
<td>25-44</td>
<td>39.1</td>
<td>41.2</td>
<td>44.8</td>
<td>34.7</td>
<td>40.9</td>
<td>43.9</td>
</tr>
<tr>
<td>45-64</td>
<td>4.8</td>
<td>5.9</td>
<td>7.1</td>
<td>7.4</td>
<td>7.5</td>
<td>7.1</td>
</tr>
<tr>
<td>65+</td>
<td>0.3</td>
<td>1.0</td>
<td>0.3</td>
<td>1.1</td>
<td>1.6</td>
<td>1.4</td>
</tr>
<tr>
<td>% in 5 am - 6 pm</td>
<td>14.1</td>
<td>22.6</td>
<td>23.5</td>
<td>18.4</td>
<td>22.3</td>
<td>22.9</td>
</tr>
<tr>
<td>6 pm - 9 pm</td>
<td>20.8</td>
<td>16.8</td>
<td>15.4</td>
<td>21.9</td>
<td>19.3</td>
<td>19.8</td>
</tr>
<tr>
<td>9 pm - midnight</td>
<td>33.8</td>
<td>29.0</td>
<td>25.5</td>
<td>36.5</td>
<td>30.3</td>
<td>24.3</td>
</tr>
<tr>
<td>midnight - 5 am</td>
<td>31.3</td>
<td>31.6</td>
<td>35.6</td>
<td>23.2</td>
<td>28.0</td>
<td>33.0</td>
</tr>
</tbody>
</table>

Comparing with 1986, female drinking drivers increased by 9% in 1992 and 10% in 1995, whereas male drinking drivers decreased by 21% in 1992 and 27% in 1995. The proportion of both female and male drivers who were teenagers decreased, owing mainly to the introduction of the Graduated Drivers Licence Scheme in 1987. The proportion of female drinking drivers involved in accidents between 5 am and 6 pm increased more than that for males. There were decreases for both males and females between 9 pm and midnight, but increases between midnight and 5 am. This is probably a consequence of the longer opening hours for licensed premises allowed under the Sale of Liquor Act 1989.

What are the important factors in women's accidents? Table 3 gives this information.

Table 3: Driver factors for young and older females and older males, 1991-93 data

<table>
<thead>
<tr>
<th>Group</th>
<th>15-24 female</th>
<th>&gt;44 female</th>
<th>&gt;44 male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>97</td>
<td>76</td>
<td>207</td>
</tr>
<tr>
<td>Percent with factor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>alcohol</td>
<td>38</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>excess speed</td>
<td>25</td>
<td>15</td>
<td>19</td>
</tr>
<tr>
<td>failing to keep left</td>
<td>16</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>failing to give way/stop</td>
<td>17</td>
<td>50</td>
<td>29</td>
</tr>
<tr>
<td>didn't check</td>
<td>2</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>inexperience/incompetence</td>
<td>30</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>tired/fell asleep</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>inattentive</td>
<td>12</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>illness/eye sight</td>
<td>0</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>licensed after age 44</td>
<td>-</td>
<td>41</td>
<td>27</td>
</tr>
</tbody>
</table>
The factors important in accidents are clearly different for young and older women. For young women the major factors are in alcohol involvement or inexperience or incompetence, whereas for older women they are failing to give way or stop. Older people have problems with illness and eyesight.

The 1991-93 study shows that women in drink-driving accidents are much less likely to have prior convictions than men. Only 11% had a prior drinking and driving conviction compared to 42% of the men. In total, some 43% of these women had a traffic conviction before their accident compared to 71% of the men. Only 1% of the sober women had a prior drinking driving conviction compared with 14% for sober men.

DISCUSSION

Fewer women in accidents drink and drive or travel at excessive speed than the men. However, younger women drink and drive or speed more often than the older women. Wylie (1995) has noted that the most likely reason for the increase in drinking and driving by young women is an increase in the amount of driving and in the consumption of alcohol. She also suggested that young women may be driving after drinking sessions to protect male partners. Other important factors in the accidents of young women are incompetence or inexperience. This group needs to receive better driver training especially tailored to their needs.

Accidents involving older women (over 44) are more likely to result from errors in driving such as failing to keep left or failing to give way. Three-quarters of this group were not drinking drivers or speeding drivers. Many of these drivers got their driver's licence late in life, and none at age 15 or 16. They may therefore respond to suitable driver training.

Women involved in a drink driving accident are much less likely to have a previous conviction for drink driving. This may be because women drive less than men, or do less drinking and driving. Conviction may be a greater deterrent for women than for men.
REFERENCES


Wylie, S J (1995). Young Female Drivers in New Zealand. Accident Analysis and Prevention 27 (6), 797 -805