The Drinking Driver: A Personality Profile

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It is well established that individuals with elevated blood alcohol levels (BAL) are overrepresented in road accidents.\textsuperscript{5, 17} The large body of research examining characteristics of persons convicted of drink-driving offences has centred on sociological aspects examining such variables as age, sex, marital status, education and occupation.\textsuperscript{2, 15, 25, 31} Only a few studies have included examination of personality characteristics.\textsuperscript{23, 28, 29}

Relationships between personality characteristics and drinking behaviour have been demonstrated. Jones, using a longitudinal design, found that there were distinct personality characteristics associated with different drinking patterns and that these characteristics were exhibited before drinking patterns had been established.\textsuperscript{16} She found, for example, that problem drinkers were characterised by extravertive behaviours and were likely to be disorganised under stress with marked fluctuations of mood, self-indulgent behaviours and acting out tendencies. Hampton, McCord and McCord, and Park were others to find a relationship between excessive drinking and personality maladjustment.\textsuperscript{14, 18, 22}

A further consistent research outcome has been that many drinking drivers are excessive drinkers. Popham found that a significantly larger number of drinking drivers had been patients in an alcoholism clinic than would be expected on the basis of general admission rates.\textsuperscript{24} Waller found that 63 per cent of his sample of drinking drivers met his operational criteria of "problem drinking."\textsuperscript{34} Selzer, Payne, Clifford and Kelly reported that 38 of their sample of 67 drinking drivers were classified as alcoholics.\textsuperscript{30}

Popham, Waller and Selzer \textit{et al.}, in their respective studies, focused upon drinking drivers and attempted to determine the incidence of alcoholism.\textsuperscript{24, 30, 34} Glatt followed a different approach and determined the number of outpatient alcoholics who had alcohol related driving convictions.\textsuperscript{9} His sample numbered 25 male alcoholic drivers and he found 13 admitted to past court appearances for driving under the influence. The size of the sample precluded definite conclusions but Glatt suggested that recurrent impaired and drunken driving may be regarded as an objective prodromal sign of alcoholism.

Given that many drinking drivers are excessive drinkers and that personality maladjustment is often associated with excessive drinking, it is to be expected that many drinking drivers would show signs of personality maladjustment. The present study was designed to examine that proposition. A second aim of this study was to compare the personality characteristics of drivers with "high" (\(\geq .15\%\)) and "low" (\(< .15\%\)) BALs. There is a general consensus that at least some persons convicted of drinking driving offences are likely to be alcoholics or are at high risk of becoming alcoholics. However considerable disagreement remains as to how these alcoholics or incipient alcoholics can be screened out from the total drinking driver population. Several studies have indicated that it is the driver with a BAL of .15\% or higher who should be examined for drinking problems with the inference being that the driver convicted with a BAL of less than .15\% is less likely to be a problem drinker.\textsuperscript{3, 4, 28}

If that assumption is valid, there may be differences in personality characteristics between drivers in the high and low BAL groups.

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\textsuperscript{b} This study formed part of a larger project. An extended report is available from the second author, Department of Psychology, University of Melbourne, Parkville, Vic. 3052.
Subjects

Convicted Drinking Drivers

This group comprised 70 males all of whom had been convicted of driving with a BAL in excess of .05% (the legal limit in Victoria) and referred by Magistrates to attend drinking driver educational programs conducted at two Melbourne general hospitals. The mean age of this sample was 23.1 years (range 18–33). Raymond indicated that drivers referred to the education courses were representative of convicted drinking drivers in the 18–25 age group. That age group was chosen for study because of its disproportionate involvement in alcohol related traffic accidents; from a sample of 2,002 drivers breathalysed in Victoria in 1973, 42% were under 25 years while that age group accounted for only 20% of the licensed drivers in Victoria.

Alcoholism Hospital Inpatients

This group consisted of 39 male inpatients from two hospitals in the Victorian Alcoholic and Drug Dependent Persons Services Branch. The mean age was 29.2 years (range 19–35). The upper age criterion of 35 years was imposed to obtain a group comparable in age to the drinking drivers and all subjects had been admitted to hospitals for treatment of alcohol related problems. These subjects were thus operationally defined as “problem drinkers”.

Control Group

This group consisted of 39 males who were originally part of a study which examined the personality characteristics and drinking behaviour of Melbourne University students. These subjects were all rated as “heavy drinkers” (appendix 1) and had

(a) no record of a drink-driving conviction and
(b) no record of admission to an alcoholism hospital

Personality Assessment

Subjects completed the California Psychological Inventory (CPI), a widely used instrument yielding scores on 18 scales over a range of interpersonal and intra-personal behaviours. The emphasis of the CPI is on skills for social living and social interaction and has shown particular relevance in studies of asocial groups. A number of personality characteristics measured by the CPI have been related to drinking behaviour. One problem associated with the use of the CPI concerns the absence of specifically Australian normative data. However, Australian figures which were available appeared sufficiently similar to the North American norms to indicate cross-national comparability.

Results

Driving Convictions

No control group subjects had convictions for driving under the influence (DUI) or for driving with a BAL in excess of .05%. Of the 39 problem drinkers, 19 (48.7%) had been convicted for a drink-driving offence with seven (17.9%) subjects having had multiple convictions. Nine (13%) of the drinking driver group had multiple convictions. The distribution of BALs for
the drinking driver and problem drinker groups are presented in Table I. The BAL listed for the recidivists was from the most recent offence.

<table>
<thead>
<tr>
<th>BAL mg/ml</th>
<th>Problem Drinkers N</th>
<th>Drinking Drivers N</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>.05 - .09</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
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<td>36</td>
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<td>.15 - .19</td>
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<td>.20 - .24</td>
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<td>6</td>
<td>22</td>
<td>9</td>
</tr>
<tr>
<td>.25 - .29</td>
<td>3</td>
<td>0</td>
<td>17</td>
<td>0</td>
</tr>
</tbody>
</table>

Mean BAL: .148% for Problem Drinkers and .194% for Drinking Drivers.

* One subject in the problem drinking group reported a conviction in another State and was not included in the data.

While the figures were small, it was evident that the problem drinkers have a greater proportion of high BAL convictions than the drinking driver sample.

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**Figure 1**

Mean CPI Profiles of the Control Group, the Drinking Drivers and the Problem Drinkers.
CPI Data

Means and standard deviations for the three groups on each of the CPI scales are presented in Appendix 1. The mean CPI profiles are presented in Figure 1. It was recognised that discussion of mean scores obscures individual within-group differences. However, the magnitude of the respective standard deviations indicated an homogeneity across groups sufficient to permit meaningful analysis of group data.

On all but the Fe scale the data followed an ordinal trend. Control group subjects scored significantly higher (p < .02) than the drinking drivers on all the CPI scales with the exception of Fe (p = .54) and Cm (p = .051). The drinking drivers had significantly higher mean scores (P < .05) than the problem drinkers on 12 of the CPI scales and a significantly lower Fe mean score (P < .001).

Figure 2 compares CPI profiles for the high (> .15%) BAL and low (< .15%) BAL groups. There were no significant differences (p > .05) between the two subgroups although all scales, except Sc, demonstrated lower scores for the high BAL group.
DISCUSSION

A Drinking Driver Profile

Gough recommended an initial evaluation of the CPI profile in terms of overall scale elevations. A majority of scales above the mean standard score (T = 50) indicates the likelihood of effective functioning. With 15 of the 18 mean scale scores of the drinking drivers falling below a T score of 50 (11 of these at least one standard deviation below the mean), there is a clear indication of personality maladjustment.

The drinking driver group recorded low scores on the CPI scales designed to measure responsibility (Re), self control (Sc) and socialisation (So). The low point of the group profile was on scale Re which was designed to identify individuals who are responsible, conscientious, dependable and articulate about rule and order. Low scorers on Re have been described as careless, irresponsible, pleasure seeking, reckless and inclined to “show off” in peer group situations. Whereas Re reflects the rules of society, the related So scale measures the extent to which those values are internalised and utilised in the life of the individual. The So scale classifies individuals among a continuum of socialisation with highly asocial and criminal dispositions at one pole and with rule respecting and socialised inclinations at the other. The drinking driver group scored significantly lower on that scale than the control group. Low scorers on So are typically described as deceitful, defensive, outspoken, headstrong and irresponsible. The So scale has been widely researched and well validated and provides an indication of the likelihood of an individual behaving in an antisocial manner. The drinking driver group also scored significantly lower than the control group on Sc, a scale designed to assess adequacy of self control. A low score on Sc indicates that the individual is characterised by aggressive and impulsive behaviour.

The low scores of the drinking drivers on Re, So and Sc, in combination, provided a consistent picture of disregard for society’s rules and regulations along with tendencies to aggressive and impulsive behaviour.

Another low point of the drinking driver profile was on Well-being (Wb), a scale designed to measure an individual’s degree of energy, vitality and ability to cope with the demands of everyday life. Gough and Heilbrun described low scorers on Wb as anxious, distractible, impulsive, shallow and restless. A number of studies have indicated a positive correlation between Wb scores and measures of psychological adjustment. This indication of lowered psychological and physical well-being is reinforced by the drinking drivers’ low score on the Ie scale which measures intellectual efficiency. Low scorers on the Ie scale have been characterised as awkward, sensitive, suggestible, restless and narrow in interests. Both Wb and Ie correlate positively with measures of emotional stability (Guildford-Zimmerman Emotional Stability Scale) and ego strength (Barron’s Es scale from MMPI) and low scores on those scales for the drinking driver group indicated tendencies to social and intrapersonal anxieties. The low scores on Tolerance (To) and Achievement via Conformance (Ac) were congruent with indications of poor psychological adjustment. The To scale reflects accepting and non-judgemental social beliefs at one end with hostility, estrangement and suspicion at the other. The cynicism, suspicion and hostility of the low To scorer indicates a paranoid view of society. The drinking drivers’ low mean score on To added support to Selzer’s observation that paranoid ideation is a frequently observed characteristic of the drinking driver. The Ac scale assesses not only achievement potential but also the degree to which the individual can work within structural or organisational limitations. Whereas the high Ac scorer accepts rules and regulations and rejects non-conforming behaviour, the low Ac scorer is seen both as underachieving and rebellious. The drink-driving conviction may be seen as a manifestation of a general inability to adequately function within the constraints of a system of rules.
The relative high points on the drinking driver group profile were on the scales measuring Social Presence (Sp), Self acceptance (Sa), Flexibility (Fx) and Femininity (Fe). However, it is emphasised that the drinking driver scores on the first three of those scales were high only in relation to their other scores. The drinking drivers’ mean scores on Sp, Sa and Fx were significantly lower than the scores of the control group. The relative elevation on Fe was interesting. Fe was designed to define a continuum that could be described as “feminine” at one pole and “masculine” at the other with high scorers on Fe described as formal, meek, nervous, sensitive and worrying, and low scorers as adventurous, aggressive, outgoing, pleasure seeking, and daring.\(^{13}\)

The elevation on the femininity scale suggested that the drinking driver did not fit the popular stereotype of the rugged, carefree, adventurous, beer-swilling Australian male. The Fe elevation, in combination with the low Wb and Ie scores for the drinking drivers, suggest instead a picture of emotionality and personal insecurity.

**Comparison of Personality Characteristics of the Groups**

The two major theories on the relationship between BAL and drinking behaviour can be summarised as follows: (i) that a drink driving conviction can be regarded as a warning sign indicating high probability of the driver being a problem drinker; and (ii) that it is the driver with a BAL greater than .15% who is likely to be a problem drinker. If all drinking drivers were either problem drinkers or at risk of becoming problem drinkers then similarities between the drinking drivers and a group of identified problem drinkers would be expected; if the high BAL groups contained the problem drinkers, or at-risk problem drinkers, then this group would resemble the problem drinkers more closely than the low BAL group.

The drinking driver group demonstrated significantly lower mean scores than the control group on all but two of the CPI scales (Communality and Femininity being the exceptions). While the control group subjects were university students and thus not expected to be representative of the overall population of 18–25 year old drivers, it appeared that probable biasing from the sample served to decrease rather than increase group differences; for example, of the 19 normative samples cited in the CPI manual\(^ {12}\) the university students’ sample had relatively low scores on the CPI intra-personal maturity scales and it was on these scales (among others) that the drinking drivers scored poorly. Thus, while the university student sample in this study tended to relatively low scores on CPI scales measuring socialisation, responsibility and self control, the drinking drivers were significantly lower again on those scales. However the difference between the drinking drivers and the control group subjects on the three achievement scales (Ac, Ai and Ie) may have been inflated by the different educational backgrounds of the groups.

The problem drinkers predictably showed a number of personality traits which have been described as characteristic of alcoholics. Bartholomew\(^ {1}\) argued that alcoholics tend to be irresponsible and undersocialised individuals who are lacking in self-control; in the present study the problem drinkers had low scores on the CPI scales measuring those traits. Zwerling argued that alcoholics frequently have difficulties establishing a secure masculine indentification;\(^ {35}\) the relatively high femininity scores of the problem drinkers supported that point. Zwerling also indicated that alcoholics often manifest feelings of hostility and depression and the low Wb and To scores of the problem drinkers in this study were in keeping with that observation.

The CPI profile of the drinking drivers was similar in shape to that of the problem drinkers with low scores on Wb, Re, So, Sc, and To, and a relatively high score on Fe. Within the drinking driver group, the CPI mean scores of the high and low BAL subgroups were similar with not one scale significantly separating the two sub-groups. In terms of these scores there appeared no justification for dichotomising the drinking driver sample into sub-groups.
CONCLUSIONS

Although the personality profiles of the drinking drivers were similar in shape, the drinking drivers scored consistently, and in most cases significantly, higher than the problem drinkers. There were at least two possible explanations for the discrepancy between the scores of the two groups.

It may be that the higher scores of the drinking drivers indicated that they were better adjusted than the problem drinkers, although they showed similar personality weaknesses. If this was the case, then it is possible that the relatively greater personality strengths of the drinking drivers may have prevented them from becoming problem drinkers.

An alternative and more likely interpretation is to view the problem drinkers and the drinking drivers as having essentially similar personality characteristics, with the relatively higher CPI scores of the drinking drivers explained in terms of the different ages of the samples. That 48% of the problem drinkers in the present sample had been convicted of drink driving offences (only 2.5% of the male population in Australia have a conviction for drinking and driving) indicated considerable overlap between the drinking driver and problem drinker populations. The drinking drivers were younger than the problem drinkers, and therefore it was likely that they had not been drinking for as long as the problem drinkers. When heavy drinking persists over a long period of time, there is often a concomitant decrease in efficiency of the personality functioning of the drinker; if the drinking drivers were assessed at an earlier stage in their drinking history than the problem drinkers, less deterioration of the personality of the drinking drivers would be expected.

The results of the present study contained implications for the management of the problem of the drinking driver. The personality maladjustment evident for the drinking driver group suggested a rehabilitative rather than punitive approach. At present in Australia the management of the drinking driver is virtually the sole responsibility of the legal system but it would appear that the problem is more appropriately placed within a public health context. Raymond suggested that the breathalyser might be used to detect alcoholism or the early signs of alcoholism in much the same way that the X-ray is used to detect tuberculosis. The results of the present study indicated that personality assessment may also be of value in the early identification of alcoholism. There would appear to be certain personality characteristics which, when occurring in a pattern, render an individual susceptible to the development of alcohol related problems. If these psychological vulnerabilities were detected at an early age (e.g. in the young drinking driver), then rehabilitative intervention may lessen the likelihood of the drinking driver becoming a problem drinker.

REFERENCES


Appendix 1

Raw Score Means and Standard Deviations on the Eighteen CPI Scales for Three Groups

<table>
<thead>
<tr>
<th>Scale</th>
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<th>Drinking Drivers</th>
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<td>n = 70</td>
<td>n = 39</td>
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<tr>
<td>Do</td>
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<td>Cs</td>
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<td>13.9</td>
</tr>
<tr>
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<tr>
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</tr>
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<td>14.9</td>
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<td>13.3</td>
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<td>Fe</td>
<td>16.5</td>
<td>3.8</td>
<td>16.1</td>
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</table>

Appendix 2

In the drinking classification scheme used by Encel and Kotowicz (1972)\(^8\) and adopted in this study, 'Heavy Drinkers' were defined in the following manner:

(a) Those who drink at least two or three times a month with a modal\(^a\) quantity of five or more drinks on an occasion.
(b) Those who drink at least three or four times a week, with any modal quantity and a range\(^b\) of five or more drinks.
(c) Those who drink nearly every day or more often, with any modal quantity and a range of three or more drinks.

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\(^a\) Modal quantity was defined as 'the number of glasses drunk on an occasion nearly every time or more than half the time'.

\(^b\) Range was defined as 'the greatest quantity drunk at least "once in a while"'.

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