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DRINKING AND DRIVING

**Prearrest situational factors associated with
those who illegally drink and drive in New Zealand.**

A thesis presented in partial fulfilment
of the requirements for the degree
of Master of Arts in Psychology
at Massey University.

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1994

ABSTRACT

The aim of the present study was to explore situational factors antecedent to drink driving among a sample of convicted New Zealand drink drivers. Specifically, it aimed to determine if the situational factors reported among convicted drink drivers differed from those reported by a control group from the general driving population. A second aim was to determine whether the situational factors reported by the convicted drink drivers varied as a function of their demographic characteristics. Two groups were compared: a random sample of people arrested for driving while intoxicated ($N = 43$) and a sample of the New Zealand general driving population matched on some characteristics ($N = 43$). Self report data assessing the situational factors and demographic variables were collected from subjects using modified versions of Vegaga and Klitzner's (1989) "Drinking Driving Interview". The results indicate that although there were some significant variations, the groups were not dissimilar on the situational factors. Situational factors did not vary greatly with the drink drivers' demographic characteristics. Ethical and practical problems in conducting research on antisocial behaviour are addressed. Future research needs are identified, in particular, research to determine the generalizability of the present findings and research directed towards an examination of personality characteristics of New Zealand drink drivers and their interaction with situational factors in creating a drink drive situation. Practical implications of the present findings for prevention policies and educational/intervention programmes are also offered.

ACKNOWLEDGEMENTS

Thank you to Joan Barnes for her support and guidance in the supervision of this thesis. Her encouragement and enthusiastic interest in my thesis sustained my motivation when I encountered difficulties.

Special thanks to Assistant Commissioner of New Zealand Traffic Safety, Phil Wright, and his administration staff for their assistance in the recruitment of the drink driving sample. Their help was appreciated and made for the smooth running of a very time consuming data collection.

Thanks also to all those in the Psychology Department office who have helped with finance, computing and general administrative matters. Their cheerful assistance was much appreciated.

I thank all those Graduates who made the Psychology Annex their home in 1993-1994, thanks for the long coffee and food breaks that kept me in touch with reality. To my friends and family who showed an interest in my work and who put up with my complaints. Thank you.

Finally, thanks to all those people who were willing to take part in this research without whom this thesis could have not been completed.

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CHAPTER 1

OVERVIEW

Introduction

Alcohol has created a serious safety problem, in the context of driving, since as early as 1904, when in an analysis of 25 fatal accidents occurring in horseless wagons, 19 of the drivers were found to have ingested alcohol within an hour of the accident (Buttigliere, Brunse & Chase, 1972). Prior to this alcohol also played a part in road accidents as intoxicated pedestrians were run down by horses, or intoxicated riders or passengers fell from horses and out of carriages (Bailey & Bailey, 1982).

Many early studies in the area of drink driving confirmed what many already believed to be true, namely that alcohol can impair skills related to driving; drivers impaired by alcohol are more likely to have road accidents than their non drinking counterparts; and increasing amounts of alcohol produce greater impairment and higher risks of crash involvement (Bailey, 1983; 1986; Bailey & Bailey, 1982; Bailey & Carpinter, 1991; Donelson, 1988; Forney & Harger, 1971; Geller & Lehman, 1988; Laurence, Snortum & Zimring, 1988; Levine, Kramer & Levine, 1975; Mitchell, 1985; Moskowitz, Ziedman & Sharma, 1976; Shinar, 1978; Verhaegan, van Keer & Gambart, 1975; Winek, 1983).

In an attempt to deter the drink driver various changes in government legislation relating to New Zealand road safety have led to lower legal blood/breath alcohol limits, more severe penalties for drink driving, blitz level enforcement and an increase in educational programmes and publicity related to drink driving. Selective blitzing in certain areas (e.g., near licensed premises) was the main drink driving countermeasure employed by the Ministry of Transport in the early 1980s and resulted in the number of fatally injured drink drivers decreasing by 14% over the period 1980-1982 compared to 1977-1979 (Bailey, 1986). In late 1983 'Operation Checkpoint' saw the introduction of random stopping, where drivers were stopped at random at a checkpoint and breath-tested at the discretion of the traffic officer. Random stopping which was seen as a deterrent to, not as a detector of, drink driving (Bailey, 1986) was to become the leading drink driving

countermeasure employed in New Zealand. However, according to Bailey (1992, cited in "Random Breath," 1992) "random stopping of motorists had not reduced drinking drive deaths in New Zealand" (pp. 3) and in fact, in 1991, there were still 112 deaths, compared to 113 drink drive deaths in 1985.

Further advances in drink drive countermeasures saw compulsory breath testing replace the random stopping procedure in 1993. Since then police have been able to stop a driver in a vehicle and breath test her/him for alcohol at any time and in any place (except on private property). The principle aim of this is to deter motorists from drink driving, by convincing them that they have a greater chance of being caught (Wright, 1993, cited in Venter, 1993). Evaluation of the effectiveness of compulsory breath testing is currently being carried out by Dr John Bailey of the New Zealand Institute of Environmental Health and Forensic Sciences, to determine how this law is affecting drink driving.

Drink driving however, is still a major social and health problem in New Zealand society. The extent of the problem can be seen in estimates that suggest that drink driving accidents account for 360 avoidable deaths a year and are one of the most frequent causes of accidental deaths in New Zealand (Bailey & Carpinter, 1991). In addition to human costs, financial costs associated with alcohol related crashes have been estimated as at least \$250 million per year (Bailey & Carpinter, 1991). Bailey and Bailey (1982) believe that there has been an increase in drink driving and suggest that this is a result of an increase in both drinking, and driving, separately, in New Zealand society.

Research on drink driving in New Zealand has appeared to concentrate on the demographic profiles of those involved in drink drive accidents (Anon., 1989; Bailey, 1983, 1991; Stacey & Lonsdale, 1982), attitudinal factors (Archer, 1990; Perkins, 1990) and general drink drive accident characteristics (Bailey, 1979; 1980; 1984; 1986; 1987a; 1987b; Bailey & Bailey, 1982; Bailey & Carpinter, 1991; Bailey & Winkel, 1981; deJongh & Bailey, 1987). One area that has received relatively little attention is the examination of situational factors immediately prior to a drink driving episode.

In drinking situations the way in which an individual behaves, or feels, is influenced by a variety of factors including what s/he believes s/he should feel - often determined by the culture - and what is taking place in the immediate environment (Bewley, 1986). Other people, social variables and environmental factors may adversely influence the behaviour of the driver or may fail to effect appropriate constraints on the driver's behaviour (Yoder, 1975). As these factors contribute to the drink driving situation and help determine the outcome of the individual's behaviour it would be valuable to identify those situational factors that precede a drink driving episode. Also of value would be information on whether these situational factors vary as a function of personal variables such as demographic characteristics found to be associated with drink driving. If these factors can be identified action can be taken to attempt to reduce or control those situational factors associated with drink driving. Present educational and intervention programmes can also be evaluated to ensure that appropriate aspects and demographic groups are being targeted.

Although many studies on situational variables associated with drink driving have been carried out in overseas countries (Adebayo, 1991; Beck & Summons, 1987; Donovan, Marlatt & Salzberg, 1983; Gusfield, 1985; Johnson & White, 1989; McMillen, Pang, Wells-Parker & Anderson, 1991; O'Donnell, 1985; Rabow, Newcomb, Monto & Hernandez, 1990; Snow, 1988; Snow & Anderson, 1987; Snow & Landrum, 1986; Steer & Fine, 1978; Thurman, 1986; Vegaga & Klitzner, 1989; Wieczorek, Miller & Nochajski, 1992; Wilson & Jonah, 1985) no systematic documented research data about these factors in the New Zealand context are available. Therefore the present study examines a variety of situational factors antecedent to an arrest for driving under the influence of alcohol in New Zealand. The situational factors examined are based on those examined in a similar study by Vegaga and Klitzner (1989) in which a United States population was used. The present study incorporates these factors with additional factors identified through the literature as associated with the drink driving situation and examines them in relation to a sample of New Zealand drink drivers and a comparison group from the New Zealand general driving population.

The study starts by exploring person - situation interactions and drink driving and in doing so highlights the importance of not only the situation in a drink drive episode but also the person. It then explores the drink driving person, drawing attention to those demographic characteristics found to be commonly associated with drink driving and then moves on to look at different aspects of the drink drive situation that have been examined previously overseas and which are examined in the present study in New Zealand.

Definitions

As definitions and terminology of blood/breath alcohol levels vary between countries the clarification of terms used in the present study need to be clarified.

The following definitions for blood and breath alcohol levels are those currently employed in New Zealand and are derived from Bailey and Carpinter's (1991) report on drink driving in New Zealand.

Blood alcohol levels - Alcohol in the blood is measured in milligrams of alcohol per millilitres of blood. The legal limit in New Zealand for fully licensed drivers is 80 milligrams of alcohol per 100 millilitres of blood (written as 80mg%). Bailey and Bailey (1982) note that many people may be impaired in their driving by alcohol at 50mg/100ml.

Breath alcohol levels - Alcohol in the breath is measured in micrograms of alcohol per litre of breath. The legal limit for fully licensed drivers is 400 micrograms of alcohol per litre of breath written as 400mcg/l.

The drink driver is defined for the purpose of the present study to be one who drives with a blood or breath alcohol level that is over the legal limit i.e. an individual whose blood or breath sample gave an alcohol reading over the prescribed value and, who, as a result, was charged with a drink driving violation. Drink driving violations are categorised into one of two types under present New Zealand law (Bailey & Carpinter, 1991):

EBA - (excess blood/breath alcohol) - To drive or attempt to drive, with excess breath or blood alcohol concentration. This is determined through evidential breath or blood tests.

DIC - (drunk in charge) - To drive while under the influence of alcohol or a drug to such an extent as to be incapable of having proper control of the vehicle. Prosecution is on the basis of the observations of the enforcement officer, a medical examination and

sometimes a blood test. Such a charge is rarely used nowadays and it for this reason that only EBA drink drivers were used in the present study.

The EBA sample used in the present study will be referred to as the 'DWI group' as this term is commonly used in previous literature when referring to a drink driving sample.

Other acronyms which appear in the drink driving literature worth noting are:

DUI - (driving under the influence of alcohol)

DWI - (driving while intoxicated)

It should also be noted that for the purpose of this research those driving while under the influence of alcohol will be termed as "drink drivers". This is as a result of the term "drunk drivers" no longer being official New Zealand Police terminology. This change in terminology has eventuated as a result of discussion by police officials. As quoted by Superintendent Ray Whatmough from the New Zealand Traffic Safety Division (Holland, 1993) " Drunk driving [is] a misleading tag for one of the main contributors of New Zealand's road carnage simply because no one considers themselves drunk. While downing a final drink or two before driving away from a party, many people are liable to console themselves with the thought ; 'I might have had a few drinks, but I'm not drunk'. As a result those people do not respond to public education about drunk driving or modify their behaviour" (p. 1).