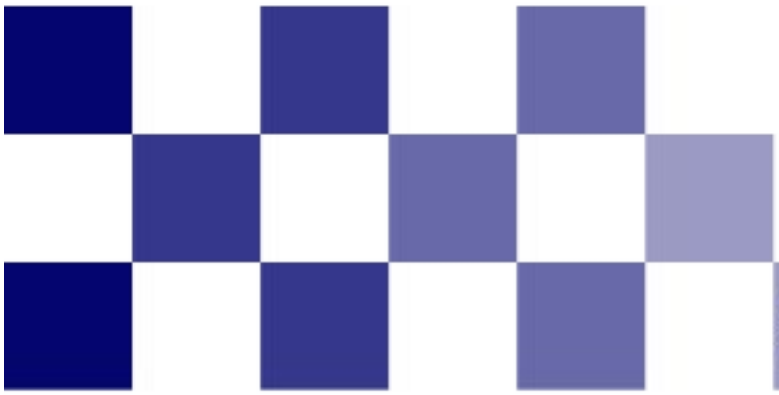

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Alcohol and the police workplace - Factors associated with excessive intake

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ALCOHOL AND THE POLICE WORKPLACE - FACTORS ASSOCIATED WITH EXCESSIVE INTAKE

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Executive Summary

The excessive intake of alcohol can have severe consequences for an individual in respect to the professional, financial, personal and social aspects of their lives. In the policing context, the consumption of excessive quantities of alcohol can have serious implications for the police organisation as well as the individual officer as it impedes reaction time and causes thinking and co-ordination to become sluggish. It can also decrease work performance and lead to an increase in the incidence of absenteeism and the risk of occupational injury. Even residual amounts of alcohol, following a session of excessive drinking, have been shown to be detrimental to the performance of complex manoeuvres such as driving.

There have been a number of studies conducted, both in Australia and overseas, examining the alcohol consumption levels of police officers. The general finding among these studies is that police officers consume greater quantities of alcohol per occasion than the normal population. There has, however, been very little research conducted to examine the factors associated with these consumption patterns. Research that has been conducted in the policing context has found that factors such as shift work, a lack of leadership and support, occupational stress and police culture are associated with excessive levels of alcohol consumption. The evidence for this, however, has primarily been based on qualitative work.

The study reported here was undertaken to examine factors associated with the excessive intake of alcohol among a group of police officers from one Australian jurisdiction, incorporating both quantitative and qualitative measures. A series of four interviews were conducted with 52 officers, of the ranks constable to senior sergeant. The officers had been categorised into high and low risk groups based on the National Heart Foundation risk categories. The interviews incorporated questionnaires, open-ended questions, and a 7-day retrospective alcohol diary. The interviews examined issues such as the impact of shift work on an officer's personal and social life, sociability of the workplace, supervisory leadership, academy experience and the general drinking behaviour of police officers. The questionnaires parallelled the topics of discussion. Each interview took approximately 45 minutes to complete and was conducted at a location of the officer's choice, invariably their workplace.

The main findings of the study are:

- High risk respondents displayed characteristics of problem drinkers. That is, they *believed* that alcohol would make them more assertive, that it would reduce their tension, that it would improve their cognitive functioning, and that they would have poor control over their drinking. High risk respondents also believed they were less able to resist drinking in social situations, emotional relief situations (e.g., when angry or upset), and opportunistic situations (e.g., when just finished playing sport).

- High risk respondents who displayed Type A characteristics were more dependent on alcohol which they believed aided relaxation, and they were less able to resist drinking in social and opportunistic situations. Perceived pressure at work was also associated with drinking to relax and a lowered resistance to drinking in social situations. Similarly, work spillover among high risk respondents was associated with a negative change in emotions believed to be induced by alcohol, greater dependence on alcohol, and being unable to resist drinking in social and opportunistic situations. Finally, those high risk officers who used alcohol to cope with stress *off duty* were more dependent upon alcohol and were more likely to believe that drinking increases their assertiveness, improves their cognitive skills, and aids relaxation. These officers were also more likely to have a lowered resistance to drinking in social or emotional relief situations.

- High risk respondents found relationships with other people at work a source of pressure. However, they felt they received greater support from their peers and that their workplace was a sociable environment. In line with this, the attitude that for team unity to exist, socialising and drinking together has to occur, was apparent among the high risk respondents. The area of conflict appeared to be with supervisors. High risk respondents did not view management and the relationship with them as positively as the low risk respondents.

- High risk respondents had lower job commitment and felt they had less autonomy than their low risk counterparts.

- Both high risk respondents and low risk respondents treated hangovers in a casual manner and displayed an apparent ignorance of the residual effects of alcohol.

The results highlight how beliefs individuals hold about the effects of alcohol impact upon their drinking behaviour. The results have also alluded to the influence that relationships with others in the workplace have on drinking behaviour.

In conclusion, this study highlights various factors associated with excessive alcohol consumption by police officers on the basis of which a number of recommendations have been made. It is recommended that the police organisation in each jurisdiction:

- Train officers in a range of coping strategies which do not involve alcohol with the assistance of skilled health representatives from the alcohol education units in each State / Territory and the involvement of the Occupational Health and Safety Unit in each agency.

- Ensure that supervisors are trained in their role of implementing departmental policy on alcohol and the workplace, and that the organisation actively displays a commitment to assisting supervisors in addressing alcohol-related problems.

- Introduce and maintain an educational or awareness campaign on the residual effects of alcohol so that recruits and officers at all ranks are made aware of the consequences of coming to work with a hangover and that such a campaign involve the police medical staff, police welfare representatives, and occupational health and safety representatives.

- Seriously consider the implementation of random breath testing within the police service, and the use of breath testing when officers on duty appear to be affected by alcohol.

Introduction

It is well documented that the excessive consumption of alcohol can cause many problems in terms of the personal, professional, social, and financial aspects of a person's life (e.g., Hunt, 1982; Jackson & Maslach, 1982).

In the policing context, excessive alcohol consumption can have serious implications as it slows reaction time, causes thinking and co-ordination to become sluggish, and increases both absenteeism and the chances of occupational injury (Pell & D'Alonzo, 1970; Observer & Maxwell, 1959). The adverse effect which heavy alcohol consumption has on an individual's health presents additional problems for the police organisation in terms of the increased financial costs incurred through sickness benefits and leave from work (Robertson & Heather, 1986). The excessive use of alcohol by police officers is obviously an area of concern.

Several studies both from overseas and from Australia have considered the drinking patterns of police and the resulting risk levels of officers. The majority of overseas studies which focus specifically on the alcohol consumption levels of police have been conducted in the United States. The estimates of alcohol consumption levels of police which are cited in these studies will not, however, be summarised here. At best, these estimates are likely to be misleading due to the small sample sizes, the general lack of adequate comparative data, and the reliance of these studies on unverified information obtained from 'police officials' (e.g., Hurrell & Kroes, 1975; Kroes, 1976; Van Raalte, 1979; Violanti, Marshall, & Howe, 1985). The studies do, however, draw attention to the issue of excessive alcohol consumption by police officers indicating the need for more detailed research in this area.

In more recent years there have been a number of attempts to determine the prevalence of alcohol consumption by Australian police. For example, a study by Pilotto (1990) examined the daily and weekly consumption of alcohol in samples of male and female Australian Federal Police (AFP) officers. Pilotto (1990) noted that there was a 'trend to heavy sessional alcohol consumption' (p. 87) or binge drinking. According to the World Health Organisation criteria, behaviour is classed as 'binge' drinking when more than 100 grams of alcohol (10 standard drinks) for men or more than 60 grams (6 standard drinks) for women is consumed on any occasion, and more frequently than on two occasions per month (Moser, 1985).

A study of Northern Territory (NT) police officers indicated that of the 400 respondents, 28% were at moderate risk and 12% were at high risk from their levels of alcohol consumption (based on the NHMRC risk categories: low risk is defined as consuming fewer than 5 standard drinks per day, moderate risk is defined as consuming between 5 and 8 standard drinks per day, and high risk is defined as consuming 9 or more standard drinks per day) (Daulby, 1991). These findings can be compared with the 16% of the NT male population who are at moderate risk and the 24% who are at high risk. This, in turn, can be compared with the general male population of Australia where the percentages are 5.3 and 1.2, respectively. These comparisons indicate that alcohol consumption in the NT is atypically high but that police officers as a group are not at greater risk than the general population of the NT.

O'Brien and Reznik (1988) surveyed 1440 officers in the New South Wales Police Service of the ranks probationary constable through to sergeant asking about their alcohol consumption. They obtained a 74% response rate. Like the AFP sample, the NSW sample was characterised by a higher than average level of participation in binge drinking.

Each of these Australian studies concluded that there was some cause for concern as each showed an elevated alcohol intake by officers in comparison to the general Australian population. The methodologies used in these studies were more stringent than those used in the American studies previously mentioned. However, the precise techniques have varied between studies and jurisdictions making detailed comparative analyses difficult.

As a means of obtaining a national perspective on the alcohol consumption patterns of Australian police, McNeill and Wilson (1993) interviewed approximately 900 officers of the ranks constable through to senior sergeant. The questions asked in the interview were adopted from the National Heart Foundation (NHF) Risk Factor Prevalence Study No. 3 (Risk Factor Prevalence Study Management Commitee, 1989) and were administered via a telephone survey. The finding of most concern was the quantity of alcohol consumed by police officers on an occasion when they did drink. Binge drinking was found to be high in both the female and male police officers with approximately 32% of the female officers and 16% of the male officers being classified as binge drinkers. McNeill and Wilson concluded that a more detailed examination needed to be made of what sorts of alcoholic drinks officers were consuming, with whom they were drinking, when they were drinking, and why such quantities were being consumed.

One study which did include an examination of possible factors associated with excessive alcohol consumption in police was conducted by Shanahan (1992) for the Victoria Police. A range of sources of evidence indicated that there was a problem with the use of alcohol amongst Victoria Police officers. The evidence included anecdotes, reported experiences with alcohol, and data on the number of drink driving offences and fatalities among members involving alcohol. For example, statistics supplied by the Victoria Police Traffic Accident Group indicated that, from January 1987 to December 1991, 12 officers of the Victoria Police had been killed as a result of drink driving. In addition, one police officer was charged with drink driving every 27 days.

Shanahan (1992) attempted to establish the views held by police officers regarding alcohol consumption, and its effect on their behaviours, attitudes, and working environment. The study examined the perceived primary causes of drinking behaviour, whether drinking was regarded as a problem, and if so, how widespread the problem was thought to be. Information for the study was obtained through discussions and interviews with Victoria Police personnel and their spouses.

The results indicated that there is a problem of alcohol abuse across all ranks and for both sexes, although many respondents felt that the younger members and women police were the most vulnerable. It was also the general view that the occupation provided an environment in which alcohol abuse could easily occur. Interestingly, alcohol abuse was categorised by most respondents as either binge drinking or chronic alcoholism, with alcoholism more frequently being associated with older personnel.

The main factors nominated by the police members as influencing alcohol consumption were the police culture, occupational stress, and a lack of support and absence of leadership. However, it should be noted that this study was based on anecdotal evidence only.

In summary, therefore, it is commonly observed that police officers tend to consume more alcohol than the general population and are more likely to binge drink. Both organisational and individual factors have been shown to be related to patterns of alcohol consumption. The general findings concerning each of these sets of factors and their implications for the observed patterns of alcohol consumption in police will be examined in turn.

ORGANISATIONAL FACTORS

One major factor which has been shown to be related to alcohol consumption is stress. The use of alcohol to cope with stress has been commonly reported with Conger (1956) formalising the relationship in the tension reduction hypothesis of alcohol consumption.

In the policing context, the most important aspect of stress is occupational stress. Cooper, Sloan, and Williams (1988) defined occupational stress as 'a negatively perceived quality which, as a result of inadequate coping with sources of stress, has negative mental and physical ill health consequences' (p. 7). It is in this context that policing has generally been regarded as a 'high stress' occupation with the sources of stress stemming from such areas as negative police-community relations, courtroom appearances, shift work, shortages in staffing levels, long working hours, physical danger, lack of support from senior officers and work / home conflict (Brown & Campbell, 1990; Bush, 1985; Kroes, 1976; Somodevilla, 1978; Spielberger, Westberry, Grier, & Greenfield, 1981). Selye (1978) stated that policing was one of the most hazardous professions while Territo and Vetter (1981) argued that police work is highly stressful since it is one of the few occupations where an employee 'is asked continually to face physical dangers and to put his or her life on the line at any time' (p. 125).

For the purposes of this report, three aspects of occupational stress will be considered in detail: organisational-related stress factors, work spillover, and individual factors associated with occupational socialisation.

Organisational-related stress factors

In Shanahan's (1992) study of the Victoria Police, the major stressors which were nominated by respondents were related to organisational factors. They included lack of leadership and support, internal investigations, rapid organisational change, court leniency in dealing with offenders, and shift work. Many of the operational police officers interviewed felt that the work they did was not valued by the Force Command, and that they received very little positive reinforcement. As a consequence, the officers felt very little motivation and had no incentive to do better. Alcohol was nominated by many respondents as a common mechanism for coping with these stressors, often being used as a means to relieve the frustration and pressures of police work.

A number of other studies have suggested that job characteristics, such as work load, job complexity, and lack of autonomy precipitate drinking as a coping mechanism. For example, in work by Fennell, Rodin, and Kantor (1981), lack of help from co-workers and from supervisors was consistently found to be significantly related to reasons for drinking.

Interestingly, Symonds (1970) drew comparisons between the police and military organisations. Like military personnel, police officers are frequently assigned unpleasant duties, change shifts often, and have to compete for promotion. This is of interest when examined in the context of work by Gwinner (1976) which listed five features of military life which place pressure on the individual possibly leading to problem drinking: it is hierarchical, uniformed and demands conformity, with strong pressure to be 'one of the boys'; alcoholic personnel are protected from the consequences of their drinking habits by the paternalism of military life; the working environment is tolerant of alcohol use; personnel may have to move often and so have a less stable home life; and there is a relative absence of female personnel. Gwinner believed that this absence encouraged a 'Let's be boys together' (p. 25) attitude which promoted excessive drinking. These features are all applicable, in part or in whole, to the police environment.

As noted above, one stressor nominated by respondents in Shanahan's (1992) study was shift work. Shift work can be described as an organisational-related stressor since it generally requires the individual to sleep and work at 'unnatural' times of the day. This pattern is at variance with the natural human tendency to sleep at night and be active during the day and so it may become a source of stress for the individual (Harrington, 1978).

There is evidence that shift workers invariably experience shortened sleep time while working the night shift. This occurs because there is generally little sleep before the first night shift, resulting in a period of about 24 hours where no sleep is taken (Colligan & Hepas, 1986). In addition, it has been found that sleep during the day following a night shift is at least one third shorter than that which would normally occur during the night (Knauth et al., 1980). This may arise because of noise levels, family or social commitments during the day, or the individual's inherent circadian rhythm. This relationship between shift work and sleep is a very important one since prolonged sleep deprivation can lead to decreases in concentration and work performance (Phillips, Magan, Gerhardstein, & Cecil, 1991).

Shift work has been found to be associated with a number of physical and social problems. For example, Ottman, Karvonen, Schmidt, Knauth, and Rutenfranz (1989) examined impairments in the well-being of day-working and shift-working police officers to determine if irregular shift systems are indeed highly stressful as had been claimed by Knauth et al. (1983). They found that the prevalence of all physical health symptoms (e.g., nervous and gastro-intestinal symptoms) was significantly higher in shift workers. This implied that shift work per se did decrease the well-being of police officers.

In a study of nurses, Coffey, Skipper, and Jung (1988) found that job performance varied in accordance with the shift that was worked. Job performance was greatest for those working a fixed day shift, followed by those working a fixed night shift, fixed afternoon shift, and lastly those working a rotating shift. In addition, Coffey et al. (1988) found that the greatest amount of role stress was experienced by nurses

working a rotating shift followed by afternoon, day, and night shift nurses. It could be suggested that since the policing environment has many similarities to that of the nursing environment (e.g., rotating shifts, type of clientele, incompatability between tasks required and resources, and work pressures) similar variations in job performance and role stress levels would be found among police.

Work-family conflict

Conflict between the work and family environments is another form of occupational stress. This type of conflict occurs when the requirements necessary to fulfil the demands of the job interfere with the demands of family life and vice versa (Greenhaus & Beutell, 1985). Such conflict may affect an individual's emotional and physical health. In addition, work-family conflict has been shown to be positively related to alcohol use / misuse among those individuals who believe that alcohol reduces tension and promotes relaxation (Frone, Russell, & Cooper, 1993).

Work-family conflict or work spillover, has been associated with the irregularity of shift work, inflexibility of the work schedule, and the amount and frequency of overtime (Brophy, 1983, as cited in Olekalns & McNulty, 1988; Pleck, Staines, & Lang, 1980). Weaver, Soutar, and Savery (1988) found that over half of their 1900 police respondents indicated that their work had a negative impact on their private life. In particular, over half of their 1900 police respondents indicated that they had difficulty both in making friends with non-police and with maintaining a normal social and family life. In addition, at least half of the respondents were of the view that their job adversely affected their health, and that a change in job would lead to improvements in their health.

Jones and Butler (1980) found associations between work-family conflict and role ambiguity and conflict. Role ambiguity can occur when the expectations, obligations and privileges of the role are not made clear or there is inadequate feedback from supervisors. Role conflict can arise from three areas: the individual is unable to fulfil a role because of his / her inadequacies; the role may generate conflicting expectations; or individuals may have to fulfil several roles at the same time which may require incompatible behaviour (Rizzo, House, & Lirtzman, 1970). Jones and Butler found that when role ambiguity and conflict were high so too was the level of work-family conflict. In addition, they found that low levels of supervisor support, as is commonly reported in a policing environment (e.g., Shanahan, 1992), also result in work-family conflict.

Occupational socialisation

Occupational socialisation is another factor which has been linked to drinking patterns. Occupational socialisation has been defined as a process by which a member of the organisation learns the appropriate behaviours and supportive attitudes necessary to participate as a member of an organisation (Van Maanen, 1975). The socialisation process consists of both formal methods (such as military indoctrination) and informal methods (e.g., role modelling on peer behaviour). The informal methods have been shown to be as powerful as the formal ones in eliciting behavioural conformity (Davis & Newstrom, 1972). The exact form of the socialisation will vary between occupations.

Shiner (1975, as cited in Berg & Budnick, 1986) suggested that some occupations can be classified as 'masculine' and others as 'feminine'. Masculine occupations are generally associated with high levels of competency, assertiveness, competition, managerial skills, and technological proficiency. In contrast, feminine occupations are associated with care giving, emotionality, clerical skills, and subservience. In accordance with these classifications, the traditional policing environment falls in the domain of a masculine occupation and both men and women who enter it are socialised as such. For example, Smith and Gray (1985) noted that a 'cult of masculinity' existed within the Metropolitan Police and that when the male and female officers in their sample socialised together their stories revolved around violence and fighting and included accounts of sexual conquests and feats of drinking. Further, what generally happened during this story-telling was that the extent and frequency of their exploits were exaggerated.

When women enter the police 'female behaviour conflicts with occupational role definitions of behaviour appropriate for a police officer' (Martin, 1980, p. 17). To deal with this role conflict it has been suggested that many women police officers try to compete with and emulate their male counterparts by accepting a pseudo-masculinity (e.g., Hochstedler, 1981; Martin, 1979). This is commonly known as defeminisation and results in women officers feeling that they gain both trust and acceptance from their male colleagues.

One aspect of the male role commonly adopted by policewomen is high levels of alcohol consumption. Respondents in Shanahan's (1992) study commented that policewomen attempted to 'keep up' with their male colleagues in their consumption of alcohol. Similarly, in a recent newspaper article, Chief Inspector Murray Lane of the Victoria Police stated that young female officers were encouraged to be 'one of the boys' and attempted to drink as quickly as the men ('Policewomen', 1992). In many societies there are gender-specific norms which act as a means of protection for women from expectations that they should drink like men (Blume, 1994). However, as Flaherty, Richman, and Rospenda (1993, as cited in Blume, 1994) have suggested, women in unusual social and work settings, such as the medical profession and indeed policing, may lose this protection and, therefore, develop drinking patterns similar to their male colleagues.

Over and above the masculinity / femininity issue, some occupations, work sites and work groups develop a set of customs and practices (i.e., a culture) which legitimise a high level of alcohol consumption (Ames & Janes, 1987; Cosper, 1979; Herold & Conlon, 1981). For example, in a study of unemployed automobile workers, Ames and Janes (1987) found that the workers were socialised to believe that a high level of alcohol consumption was necessary to enhance unity. A quote from an Australian police officer who participated in the Victorian Occupational Health and Safety Commission (1992) study suggests that the same pressures may apply to police. The officer stated that 'For all officers, the culture is such that it can be hard not to join in with drinking' (p. 66).

When drinking is highly valued by members of a culture, it becomes ingrained into that culture (e.g., Bush, Smith, & Dawes, 1991; Cosper, 1979) and when workers support such an occupational culture, their alcohol consumption levels will be higher than those workers who do not support such norms. Shanahan (1992) reported that the Victoria Police officers in his sample indicated that drinking at the end of shifts, with particular reference to the 'night shift barbecue', was an important part of the

police culture as it provided the officers with a means for socialising and relaxing, and talking about work-related issues and problems. There was an indication that at some stations pressure was applied to the younger members to drink to excess on these occasions, with the culture stipulating the accepted norms and values for drinking behaviour.

Blum, Roman, and Martin (1993) noted that some work cultures not only encourage high levels of alcohol consumption but also encourage the 'minimisation' of the perception and acknowledgement of alcohol-related problems. Such minimisation incorporates ideas, values, beliefs, and practices which decrease the awareness and acknowledgement of the occurrence and effects of drinking and drinking-related problems (Ames & Delaney, 1990).

As noted above, police report that they have difficulty in making friends with non-police (Weaver et al., 1988). Similarly, Bahn (1984) found that 'police officers find that constraints of schedule, of secrecy, of group mystique, and of growing adaptive suspiciousness and cynicism limit their friendships and relationships in the non-police world' (p. 392). This then is likely to lead to a greater incidence of socialising with co-workers which is an important condition for the workplace culture to involve drinking (Cosper, 1979).

INDIVIDUAL FACTORS

Coping methods

The observed high levels of alcohol consumption in police have been interpreted as indicative of a maladaptive coping response among stressed employees (e.g., Axelbred & Valle, 1978; Herold & Conlon, 1981). Kroes (1976) claimed that alcohol appeared to be the most convenient and socially acceptable means of coping with stress for a police officer.

People may resort to drinking in times of stress because they believe it is an effective coping mechanism. For example, Sadava and Pak (1993) found that stress predisposes people to heavy drinking particularly when they believe that drinking will enable them to cope with the stress and they are entrenched in a social environment in which heavy drinking is tolerated, if not encouraged. The important point here is that the individual must first believe that alcohol has the ability to lessen negative emotion before it is used as a means to cope with stressful situations (Young, Oei, & Knight, 1990). Similarly, Harris and Fennell (1988) suggested that the link between job stress and drinking is not necessarily a direct one and that beliefs in the efficacy of alcohol as a stress-reducer are more likely to be held by people experiencing work stress. In the same way, Martin, Blum, and Roman (1992) found that job characteristics influenced the consumption of alcohol by conditioning justifications supportive of the use of alcohol to cope with unpleasant situations. This implies that consumption of alcohol could give the worker a means for escaping, forgetting or redefining the effects of the unpleasant situations. The role of expectancies in alcohol consumption patterns is considered in greater detail below.

Expectancies of alcohol consumption

People hold a range of expectancies about the results of their alcohol consumption. The alcohol expectancy concept arose from learning-based theories of behaviour (e.g., Bandura, 1977) and initially only referred to positive expectancies (Brown, Goldman, Inn, & Anderson, 1980). More recently, the concept has come to include negative expectancies as well (Brown, Christiansen, & Goldman, 1987). The learning-based theories are derived from a model in which a particular motivation (a need or desire) compels an individual to respond in some way in order to reach a goal (i.e., fulfilling that need or desire) (Vuchinich & Tucker, 1988).

In the alcohol context, goals have been classified as 'avoid negative' or 'approach positive' (Cox & Klinger, 1988). 'Avoid negative' goals include the expectation that alcohol will endow people with the particular coping skills in which they feel they are deficient, and the expectation that alcohol will alleviate any unpleasant state (Marlatt, 1987; Marlatt & Gordon, 1985). 'Approach positive' goals encompass expectations that alcohol will enhance sexual relations or lead to positive mood states (Niaura et al., 1988). Brown et al. (1987) and Young and Oei (1991) have noted six goal areas which are commonly expected to be influenced by alcohol consumption. These are: assertiveness, affective state, general social interaction, cognitive and motor functioning, tension reduction, and sexual functioning. Of these, assertiveness, general social interaction, and cognitive and motor functioning can be categorised as 'avoid negative' goals while affective state, tension reduction, and sexual functioning can be categorised as 'approach positive' goals. Young and Oei also found a factor of dependence to be influenced by alcohol consumption. This relates to the expectation of the individual that they will have poor control over their drinking. In a study of the role of these expectancies in problem drinkers, Young and Oei observed that the expectancy factors of assertiveness, affective change, tension reduction and dependence are more likely to be inflated in problem drinkers while cognitive and motor functioning and sexual functioning are more likely to be lower.

Oei and Baldwin (1994) described the role that alcohol expectancies play in whether or not people decide to drink. They noted that both positive and negative expectancies play a role in this decision. If the individual strongly expects that alcohol will produce the desired goal then they are likely to decide to drink. Conversely, if the individual strongly expects that drinking alcohol will reduce the likelihood of achieving a set goal then they are likely to choose not to drink.

Another component of the decision to drink in certain situations is 'drinking refusal self efficacy'. This is based on Bandura's (1977) concept of efficacy which refers to the higher-order expectancies individuals have concerning their ability to carry out behaviours needed to effect a desired outcome. 'Drinking refusal self efficacy' is defined as the perceived amount of control people have over the quantity of alcohol consumed in certain situations, or the ability to resist drinking in a given situation (e.g., Baldwin, Oei, & Young, 1993). In this way efficacy plays a role similar to that of expectancies described above. If individuals consider themselves to be unable to resist drinking in a situation then drinking will occur in that situation. Efficacy also interacts with expectancies. For example, if a person expects positive effects from drinking (e.g., to feel happier), then the argument is that he or she cannot resist drinking. This allows them to relinquish responsibility for the decision to drink and to ignore possible negative consequences (Oei & Baldwin, 1994). Young, Oei, and Crook (1991) divided drinking refusal self efficacy into three factors: social support

self efficacy, i.e., a person's ability to resist drinking in various social settings (e.g., when out to dinner, or when wanting acceptance from friends); emotional relief self efficacy, i.e., a person's ability to resist drinking in situations involving emotional relief (e.g., when angry, upset, or feeling bored); and opportunistic self efficacy, i.e., a person's ability to resist drinking in opportunistic situations such as when listening to music, or when just finished playing sport. Young et al. (1991) found that problem drinkers were less able to resist drinking under all of these circumstances than were non-problem drinkers.

Knowledge of the detrimental effects of alcohol

It is well established that long-term or heavy alcohol consumption can result in such adverse physiological conditions as cirrhosis of the liver, cancers of the larynx, oesophagus, and liver, stroke, and cardiac arrhythmias (see for example, Anderson, Cremona, Paton, Turner, & Wallace, 1993). Given the extent and frequency of public health campaigns which deal with these effects of alcohol, it could be assumed that most individuals would have some knowledge about them. However, knowledge concerning the detrimental effects of alcohol on mental functioning may be far less widespread. Levine, Kramer, and Levine (1975) reported that alcohol reduces information processing ability, with the degree of impairment being greater for tasks requiring more complex information processing. Levine et al. (1975) also found that alcohol impedes the ability to divide attention between competing tasks, with performance on the secondary task suffering more than performance on the primary task. Johnston (1984) examined the effects of alcohol on the complex task of driving and found that if a driver is intoxicated, he or she is capable of keeping the car on the road provided no distractions occur. However, if the intoxicated driver has to perform a second task, driving performance may be immediately affected. Detection of and response to extraneous stimuli such as a pedestrian or a changing traffic light is also greatly affected.

It is also well established that even small residual amounts of alcohol in the blood can affect performance. There has been a substantial amount of research conducted, particularly on pilots, examining the consequences of the residual effect of alcohol. For example, Morrow, Leirer, and Yesavage (1990) found that pilots suffered acute impairment with a blood alcohol level (BAL) as low as 0.04% and that the impairment increased with BALs up to 0.10%. Even at two, four, and eight hours after drinking, impairment was significant, although the degree of impairment declined with time. In addition, Morrow, Leirer, Yesavage, and Tinklenberg (1991) found that although there was clear evidence of impairment of performance eight hours following consumption, pilots were unaware of it. Similar findings were obtained by Yesavage and Leirer (1986) although the pilots in their study reached higher initial BALs of between 0.10% and 0.12%. A more recent study by Morrow et al. (1993) also found pilot performance to be impaired eight hours after drinking. Morrow et al. (1993) found evidence that some of the participating pilots were inappropriately confident in their ability to fly eight hours after reaching a BAL of 0.10%. Even at two and four hours following alcohol ingestion, some pilots perceived that alcohol had no effect on their performance even though their actual performance was found to be influenced. Despite this evidence current regulations stipulated by the United States Federal Aviation Authority allow pilots to fly eight hours following alcohol consumption if their BAL is below 0.04% and they are 'unimpaired' (Morrow et al., 1993).

Alcohol, however, does not necessarily have an immediate effect on technical job performance. Blum, Roman, and Martin (1993) conducted a study which examined whether particular dimensions of job performance (including technical and interpersonal aspects), as assessed by the respondents (heavy and light drinkers) and their workplace collaterals (peers or supervisors), related to self-reported alcohol consumption. The self assessments from the heavy drinkers tended to have lower mean scores on each of the performance scales, namely, technical performance, conflict avoidance, interpersonal relations, and self-direction. This implied, for example, that the heavy drinkers did not get along with colleagues as well, and that they made mistakes more often than the light drinkers. With the assessments made by the collaterals, a significant negative relationship with alcohol consumption was found for each of the performance scales. In other words, according to the collaterals' assessment, work performance decreases as consumption increases. Interestingly, when these findings are examined more closely, the heavy drinkers were found to have significantly lower ratings on the conflict avoidance and interpersonal relations scales, as assessed by their collaterals, in comparison to the light drinkers. However, in terms of the technical performance scale, there were no significant differences between the light and heavy drinkers. According to this study, therefore, there is a deterioration of social relationships on the job among heavy drinkers before any deterioration of technical performance. The worker could therefore be disruptive to the work group and costly to the organisation in terms of dealing with outsiders before there is clear evidence of deterioration in technical performance.

The hangover effect, also described as the post-intoxication effect of alcohol, has been shown to have harmful consequences in terms of the performance of complex manoeuvres such as driving. Hangover has been defined as being an unpleasant state experienced by some individuals after heavy drinking sessions. Symptoms may include tiredness, nausea, headache, dizziness, and various gastric disturbances (Lemon, 1993). Laurell and Törnros (1982, as cited in Franck, 1983) found that even when an individual's BAL was zero, the hangover effect reduced the ability to perform complex driving manoeuvres by as much as 20%. This impairment was found to last up to three hours after the BAL had reached zero. In addition, Laurell and Törnros (1982, as cited in Franck, 1983) found that those individuals experiencing a hangover were unable to determine subjectively if they were capable of driving. This is similar to the findings of Morrow et al. (1991) and Yesavage and Leirer (1986) in their studies of pilots.

In a study of police, Lane (1991) found that many officers commence duty still under the influence of alcohol after having a 'big night out'. Lane noted that, in most jurisdictions, officers can commence duty with a blood alcohol concentration at the maximum legal limit stipulated (i.e., 0.05%). In such a case it could take up to three hours for the officer to reach a blood alcohol concentration of zero, based on the average alcohol elimination rate for a healthy adult (see Holford, 1987). It is acknowledged that many intra- and inter-individual variations will affect the blood alcohol concentration obtained. However, as shown by the research described above, an officer's ability to perform a variety of psychomotor tasks such as driving will be impaired both while the blood alcohol level is greater than zero and for some time after it returns to zero (Moskowitz & Burns, 1990).

In summary, there are a range of factors, both organisational and individual, which have been shown to influence drinking behaviour. The aim of this study is to examine the alcohol consumption patterns of a sample of police officers, and explore those factors associated with high alcohol intake. In particular, organisational and individual factors associated with the alcohol consumption patterns of a sample of police officers with high and low levels of alcohol consumption will be examined.

National Police
Research Unit

Methodology

RECRUITMENT OF PARTICIPANTS

In order to screen police officers for possible inclusion in the study it was necessary to establish their drinking patterns. To do this, a quantity-frequency questionnaire was developed which comprised both questions from the National Heart Foundation (NHF) Risk Factor Prevalence Study No. 3 (Risk Factor Prevalence Study Management Committee [RFPSMC], 1989) examining smoking, drinking and exercise behaviour and questions focusing on drinking with workmates, drinking at work, and drinking before work from Bush et al. (1991) (refer to Appendix A for a copy of the questionnaire). On the basis of responses regarding both the quantity (i.e., number of drinks consumed per session) and the frequency (i.e., number of times per week on which they did drink) of alcohol consumption, respondents can be categorised into the NHF risk categories from A (non-drinkers) to F (very high risk drinkers who consume an average of over 12 standard drinks per day). Table 1 shows the correspondence between quantity and frequency of alcohol consumption and NHF risk categories while Table 2 describes the risk categories for males and females.

Table 1. Categories of risk as defined by the quantity and frequency of alcohol consumption.

Frequency (no. of drinking occasions per week)	Quantity (no. of drinks per session)					
	1 - 2[a]	3 - 4	5 - 8	9 - 12	13 - 20	>20
Less than once	B	B	B	C	D	E
1 or 2 days	B	B	B	C	D	E
3 or 4 days	B	B	C	D	E	F
5 or 6 days	B	C	D	E	F	F
Every day	B	C	D	E	F	F

Note: From Risk Factor Prevalence Study Management Committee (1989). Risk Factor Prevalence Study No. 3. Canberra: National Heart Foundation of Australia, p. 80. Copyright by the NHF. Adapted by permission.

[a]Classified in terms of standard drinks.

Table 2. Definition of the risks of alcohol consumption.

Category	Description	Risk level Male	Female
A	Non-drinkers		
B	ADI[a] of less than 3 standard drinks	None	Low
C	ADI of 4 standard drinks or 9-12 standard drinks in any day	Low	Intermediate
D	ADI of 5-8 standard drinks or occasional excess	Intermediate	High
E	ADI of 9-12 standard drinks or frequent or great occasional excess	High	Very High
F	ADI of over 12 standard drinks	Very High	Very High

Note: From Risk Factor Prevalence Study Management Committee (1989). Risk Factor Prevalence Study No. 3. Canberra: National Heart Foundation of Australia, p. 80. Copyright by the NHF. Adapted by permission.

[a]ADI = Average daily intake.

The quantity-frequency questionnaire was administered to approximately 400 South Australian Police officers of the ranks constable to senior sergeant. In addition, officers were asked to indicate whether they were willing to participate in a further study involving a comprehensive interview regime. Questionnaires were completed by 327 officers. Each of these officers was assigned to an NHF risk category as outlined in Tables 1 and 2. The officers who volunteered were only considered if they drank alcohol and they had indicated that they worked shifts. Of those who had indicated that they were willing to participate in the further study, 27 officers who were of intermediate or high risk or were binge[1] drinkers were chosen for the 'high risk' group (i.e., female officers in categories C to F, and male officers in categories D to F). A further 27 officers drinking at low risk levels were chosen for the 'low risk' group (i.e., female officers in category B, and male officers in category C). They were matched to the 'high risk' group on age, gender, and rank. In all, 54 officers participated in the interviews.

For the purposes of this report, the terms 'highs', 'high respondents' and 'high group' will be used interchangeably to describe those categorised as 'high risk'. Similarly, to describe those in the 'low risk' group, the terms 'lows', 'low respondents' and 'low group' will be used.

THE SAMPLE

The 54 participants had an average age of 29 years with the range from 20 to 52 years. Seventy two per cent (N=39) were male. The majority were either constables (35%) or first class constables (52%) and there were three senior constables and four sergeants / senior sergeants. All but two officers were assigned to general duties. The demographic breakdown for the high and low groups is summarised in Table 3. As can be seen from the table, the groups are similar in terms of the age, sex, and rank of participants.

[1]Binge drinking is defined as imbibing more than 10 standard drinks for men or more than 6 standard drinks for women on any occasion, and on more than two occasions per month (Moser, 1985).

Table 3. Demographic breakdown of the high and low groups.

		High	Low
Number of respondents		27	27
Age:	Mean	29 years	29 years
	Range	20-51 years	20-52 years
Sex:	Male	20	19
	Female	7	8
Rank:	Constable	10	9
	First Class Constable	13	15
	Senior Constable	2	1
	Sergeant / Senior Sergeant	2	2

INSTRUMENTS

A range of questionnaire measures were used in this study. Where possible, the instruments were selected on the basis of their reliability and validity. Each will be described in turn.

The quantity-frequency questionnaire

This was similar to that used during the recruitment stage which was based on the NHF Risk Factor Prevalence Study No. 3 (RFPSMC, 1989). Only the format of responses differed. As in the version used to recruit participants, questions asked about both the number of drinks consumed per session and the number of times per week on which alcohol was consumed. In this version, however, respondents were required to write their response to each question rather than to indicate their response by ticking the appropriate category from a list supplied.

The Occupational Stress Indicator (OSI, Cooper et al., 1988)

The OSI examines a number of issues associated with work-related stress. It consists of six questionnaires each requiring responses on a 6-point scale. The questionnaires and response scales are as follows:

(1) How you feel about your job. The 27 items in this questionnaire cover such issues as satisfaction with career achievement, with the actual job, and with personal relationships (1 = very much dissatisfied, 6 = very much satisfied). High scores indicate a high degree of job satisfaction;

(2) How you assess your current state of health. The 30 items in this questionnaire focus on feelings and behaviours and how these are affected by perceived pressures of one's job. The choice of response varies with each question e.g., 1 = negative choices, 6 = affirmative choices. Examples of items include, 'Are there times at work when the things you have got to deal with simply become too much and you feel so overtaxed that you think you are "cracking-up"?', and 'As you do your job have you noticed yourself questioning your own ability and judgement and a decrease in the overall confidence you have in yourself?' This questionnaire also focuses on the frequency of occurrence of particular physical ailments (1 = never, 6 = very frequently). A high score on this scale indicates greater mental and physical ill-health;

(3) The way you behave generally. The 20 items in this questionnaire examine such issues as style of behaviour, ambition, and attitude to living. For example, 'My impatience with slowness means for example that when talking with other people my mind tends to race ahead and I anticipate what the person is going to say', and 'I am usually quite concerned to learn about other people's opinions of me particularly recognition others give me' (1 = very strongly disagree, 6 = very strongly agree). A high score indicates greater affiliation with a Type A personality (i.e., a high scoring individual will tend to exhibit behavioural characteristics such as excessive time consciousness, abruptness of speech, and competitiveness);

(4) How you interpret events around you. The 17 items in this questionnaire cover such issues as the individual's influence on the organisation, management processes and the controlling force of the organisation. Examples of items include 'In organisations that are run by a few people who hold the power, the average individual can have little influence over organisational decisions' and 'Assessments of performance do not reflect the way and how hard individuals work' (1 = very strongly disagree, 6 = very strongly agree). On this scale, a high score indicates that individuals feel that they have less control over things that concern them;

(5) Sources of pressure within your job. The 61 items in this questionnaire examine the extent to which issues such as relationships with other people, career and achievement, and conflict between the home and work environments are seen as sources of pressure (1 = very definitely is not a source of pressure, 6 = very definitely is a source). A high score indicates a greater amount of pressure; and

(6) How you cope with stress you experience. The 28 items in this questionnaire focus on coping strategies such as social support, time management, and task strategies (1 = never used by me, 6 = very extensively used by me). A high score indicates an extensive use of the various coping methods.

Content and construct validity for these scales is good and internal reliability is generally good (see Cooper et al., 1988).

The Work Environment Scale, Form R (WES, Moos, 1986)

The WES measures the perceptions of existing work environments. It consists of ten subscales each of nine items, which assess three underlying domains, namely, the relationship dimension, the personal growth dimension, and the system maintenance and system change dimension. For each item, the respondent is required to indicate whether, in the context of their work environment, the item is true or false. A score is obtained through the simple addition of these responses.

The relationship dimension is assessed by the involvement, peer cohesion, and supervisor support subscales. These subscales measure the extent to which employees are concerned about and committed to their jobs, how friendly and supportive employees are of one another, and how supportive management is of its employees and the extent to which it encourages employees to be supportive of one another, respectively. High scores indicate a high degree of job involvement / commitment, peer cohesion, and supervisor support.

The personal growth dimension consists of the autonomy, task orientation, and work pressure subscales. These subscales measure the degree to which employees are encouraged to be self-sufficient and to make their own decisions, how much emphasis they place on good planning and efficiency, and the degree to which they feel the pressure of work, respectively. High scores indicate a high degree of autonomy, task orientation, and work pressure experienced by the employee.

The system maintenance and system change dimension comprises the clarity, control, innovation, and physical comfort subscales. These subscales measure the extent to which employees know what to expect in their daily routine, the degree to which management controls them through the use of rules, the perceived degree of emphasis on variety and change, and the level of contribution the physical surrounds have on a pleasant work environment. A high score indicates a high degree of clarity, control, innovation, and physical comfort perceived by the employee.

The reliability and validity of the WES are acceptable (see Moos, 1986).

The Sociability Scale (Payne & Pheysey, 1971)

This scale focuses on group activities and social events within the work setting. The scale comprises eight items including, 'There is a lot of group spirit', 'Everyone is helped to get acquainted', and 'Everyone has a strong sense of being a member of a team' (0 = definitely false, 3 = definitely true). A high score indicates a greater sense of sociability within the work setting. The internal reliability of the scale is good (refer to Pugh & Payne, 1977) and validity is acceptable.

The Warmth Scale (Litwin & Stringer, 1968)

This scale examines the general feelings of fellowship and helpfulness within an organisation. There are five items encompassing three components, namely, a friendly atmosphere, easy-going working relationships, and warmth. Examples of items include 'People in this organization tend to be cool and aloof towards each other' and 'A friendly atmosphere prevails among the people in this organization'. The items are measured on a 4-point scale from 1 = definitely agree to 4 = definitely disagree, with a low score indicating a high degree of warmth. The reliability and validity are good (see Litwin & Stringer, 1968).

The Interpersonal Support Scale (Litwin & Stringer, 1968)

This scale measures the feelings an employee has about the support he or she receives from work colleagues. It is made up of five items, such as, 'People in this organization don't really trust each other enough' and 'The philosophy of our management emphasizes the human factor, how people feel, etc'. The 4-point response scale ranges from 1= definitely agree to 4 = definitely disagree, with a low score indicating a high degree of interpersonal support from work colleagues. Reliability is good and the validity is acceptable (see Litwin & Stringer, 1968).

The Role Conflict Scale (Rizzo et al., 1970)

Rizzo et al. (1970) propose that role conflict may arise from three sources: (1) conflict due to person-role misfit, i.e., the person is unable to fulfil the expectations of the role because of his or her inadequacies, or because they are overqualified for the job; (2) conflict due to the structure of a role, i.e., a role may generate conflicting expectations; and (3) conflict due to multiple roles, i.e., a person simultaneously holds a number of roles which may involve incompatible behaviour. The scale comprises eight items examining role conflict including, 'I have to do things that

should be done differently', and 'I do things that are apt to be accepted by one person and not by others'. Responses are provided on a 7-point scale from 1 = very definitely untrue to 7 = very definitely true. A high score indicates a high degree of role conflict. Reliability has been found to be good with validity being acceptable (Rizzo et al.).

The Role Ambiguity Scale (Rizzo et al., 1970)

Rizzo et al. (1970) believe that role ambiguity can arise when the expectations, obligations, and privileges associated with a role are not made clear, or when there is inadequate feedback and the employee does not know if his or her role performance is effective. Six items make up this scale including, 'I know what my responsibilities are', and 'I feel certain about how much authority I have'. The 7-point response scale ranges from 1 = very definitely true to 7 = very definitely untrue. A high score indicates a high degree of role ambiguity. Reliability and validity are good (see Rizzo et al.).

The Supervisory Scale and Peer Leadership Scale (Taylor & Bowers, 1972)

Both of these scales examine four aspects of leadership, namely, support, goal emphasis, work facilitation, and interaction facilitation. There are 13 items in the Supervisory Scale including 'How friendly and easy to approach is your supervisor?', 'To what extent does your supervisor encourage the persons who work for him or her to work as a team?', and 'How much does your supervisor encourage people to give their best effort?'. There are 11 items in the Peer Leadership scale including, 'To what extent do persons in your work group maintain high standards of performance?', 'To what extent are persons in your work group willing to listen to your problems?' and 'How much do persons in your work group emphasize a team goal?'. For both scales the items are measured on a 5-point scale, from 1 = to a very little extent to 5 = to a very great extent. For both scales a high score indicates a high degree of perceived leadership qualities. Reliability and validity are acceptable (see Taylor & Bowers, 1972).

The Work Spillover Scale (Small & Riley, 1990)

This scale examines the effect work spillover has on the family or personal lives of respondents. In all there are four subscales, namely, spillover into the marital relationship, spillover into the parent-child relationship, spillover into leisure time, and spillover into household tasks. Each subscale comprises five items. Items include 'My job helps me have a better relationship with my spouse' from the 'spillover into marital relationship' subscale, 'My job makes it difficult to enjoy my free time outside of work' from the 'spillover into leisure time' subscale, and 'I spend so much time working that I am unable to get much done at home' from the 'spillover into household tasks' subscale. The items are measured on a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree. A high score indicates a high degree of spillover. Reliability and validity for the measure are both acceptable (see Small & Riley, 1990).

The Work and Family Life Questionnaire (Alexander, Walker, Innes, & Irving, 1993)

This questionnaire lists 10 aspects of police work such as working shifts, having to work with members of the opposite sex, and being recalled while on weekly or annual leave. The respondent indicates the extent to which each aspect has a harmful effect on their own health; their partner's health; their relationship with their partner; their relationship with their children (if applicable); and their social life. Each aspect is rated on a 4-point scale ranging from 1 = not at all to 4 = extremely. A high score indicates a more harmful effect on the various personal factors in the officer's life.

The Methods of Coping Scale (Alexander et al., 1993)

This scale is of two parts: (1) methods of coping with stress when on duty, and (2) methods of coping with stress when off duty. Officers indicate the extent to which they use each of a list of methods to cope with stress when on duty and off duty. Examples of methods of coping with stress when on duty include 'I work harder', 'I talk things over with my colleagues', and 'I take sick leave'. Methods for coping with stress when off duty include 'I drink more alcohol', 'I take it out on family or friends', and 'I engage more in sport or physical exercise'. For both sets of items responses are on a 3-point scale from 1 = not at all to 3 = frequently. A high score on any item indicates that the particular coping method was used extensively.

The Drinking Expectancy Profile (DEP, Young & Oei, 1991)

This consists of two parts: expectancies of alcohol consumption and drinking refusal self efficacy. The expectancies of alcohol consumption examines what respondents expect to happen when they consume alcohol and contains six major factors encompassing 56 items. The factors are: assertiveness, affective change, dependence, sexual functioning, cognitive change, and relaxation. Examples of items include 'I have more self confidence when drinking' (assertiveness), 'Drinking alcohol makes me tense' (affective change), 'I drink alcohol because it's a habit' (dependence), 'I often feel sexier after I've been drinking' (sexual functioning), 'I get better ideas when I'm drinking' (cognitive change), and 'I do not drink alcohol to help me unwind after a hard day or week's work' (relaxation). The items are measured on a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree. A high score indicates greater expectancies associated with alcohol consumption. The drinking refusal self efficacy scale examines a respondent's ability to resist drinking in certain situations. This scale comprises three factors covering 31 items. The factors are: social pressure self efficacy (e.g., the ability to resist drinking when at a party), emotional relief self efficacy (e.g., the ability to resist drinking when angry or upset), and opportunistic self efficacy (e.g., the ability to resist drinking when just finished playing sport). Examples of items include 'When you see others drinking' (social pressure self efficacy), 'When you are angry' (emotional relief self efficacy), and 'When you are at lunch' (opportunistic self efficacy). The items are measured on a 5-point scale ranging from 1 = I am very sure I would drink to 6 = I am very sure I would not drink. A high score indicates high self efficacy.

Seven-day retrospective alcohol diary

A seven-day retrospective alcohol diary was also administered. The diary method involves respondents' self-reports or estimates of alcohol consumption over a given period of time, in this case, the seven previous days. An interview format was used in which the respondent was first asked about the previous day, then the day before that and so on. The diary method is seen to have the advantage that it requires respondents to report on actual drinking behaviour, rather than requiring them to decide about average amounts of alcohol consumed. It therefore avoids subjective interpretations (Fuller, Bebb, Littell, Houser, & Witschi, 1972). A number of studies have shown that retrospective diaries classify a greater proportion of drinkers as being heavy than do quantity-frequency measures (Czarnecki, Russell, Cooper, & Salter, 1990; Redman, Sanson-Fisher, Wilkinson, Fahey, & Gibberd, 1987; Werch, 1990). In addition, Werch (1990) found that the diary resulted in a greater reported number of drinking days per week and the greatest total reported number of drinks per week in comparison to 7- and 28-day quantity-frequency questionnaires.

PROCEDURE

Four interviews were conducted with 52 of the participants. Following the second interview, one high officer resigned and another high officer was transferred to a country posting. At least one interview was conducted on each of the different shifts which the officer worked (i.e., day, afternoon, and night). Not all officers worked each of the day, afternoon and night shifts. Each interview took approximately 45 minutes to complete and they were conducted during work hours at a prearranged time. The participating officer was given the opportunity to have four hours off work in order to attend the interview but no officer felt this was necessary.

The four interviews differed in their subject material. The general content and questionnaires used in each will be described in turn.

Interview 1

In the first interview, the OSI (Cooper et al., 1988), the WES (Moos, 1986) and the quantity-frequency questionnaire were administered. In addition, several related topics were discussed. These included the participants' general perceptions of the job and their academy experience; the impact of shift work on their personal and social lives; and who they generally socialised with.

Interview 2

The second interview did not include any questionnaires. The topics discussed included the social aspects of the workplace; the degree to which officers were accepted into the team; any difficulties which arise when clashes occur between officers; the drinking patterns of the team / colleagues; and hangovers.

Interview 3

The following questionnaires were administered during the third interview: The Sociability Scale (Payne & Pheysey, 1971); Warmth Scale (Litwin & Stringer, 1968); Interpersonal Support Scale (Litwin & Stringer, 1968); Role Conflict Scale (Rizzo et al., 1970); Role Ambiguity Scale (Rizzo et al., 1970); The Supervisory Scale and Peer Leadership Scale (Taylor & Bowers, 1972); Work Spillover Scale (Small & Riley, 1990); the Work and Family Life Questionnaire and The Methods of Coping Questionnaire (Alexander et al., 1993). Topics of discussion parallelled the questionnaires and included the relationship between the respondent and their supervisor and between the respondent and their working partner (if applicable); their ability to separate their work and home environments; problems with work impinging upon their home life and vice versa; and, methods of coping with such problems.

Interview 4

The Drinking Expectancy Profile (Young & Oei, 1991) was administered in Interview 4. The discussion covered topics such as the general alcohol consumption patterns of police officers; feelings of pressure to change drinking patterns in order to be accepted; and general views on methods of dealing with officers who come to work with a hangover.

In each of the interviews, the seven-day retrospective alcohol diary was also administered.

Results

The results from the interviews are dealt with in reference to specific organisational or individual factors rather than questionnaire by questionnaire.

ALCOHOL CONSUMPTION PATTERNS

Figure 1 shows the frequency with which respondents reported that they consumed alcohol. As can be seen from the figure the majority of both high and low groups usually consumed alcohol on one or two days per week. However, 15% of those in the high group reported they drank on 5 or more days per week whereas there were no respondents from the low group who indicated this.

Figure 1: Frequency of alcohol consumption expressed as a percentage of respondents.

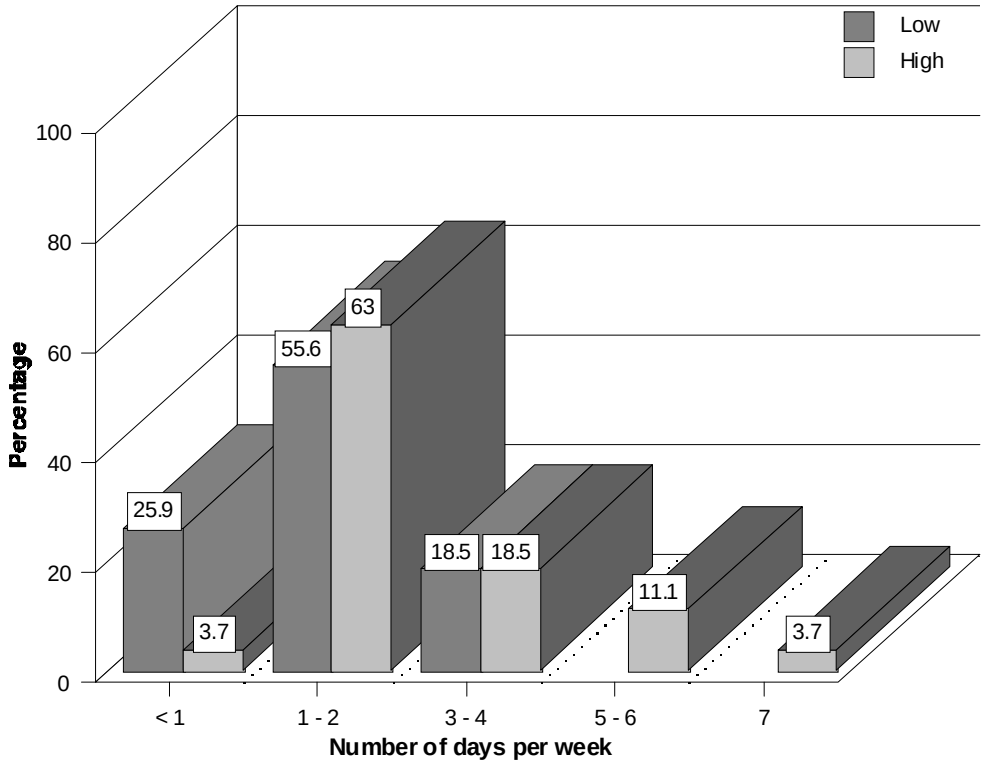
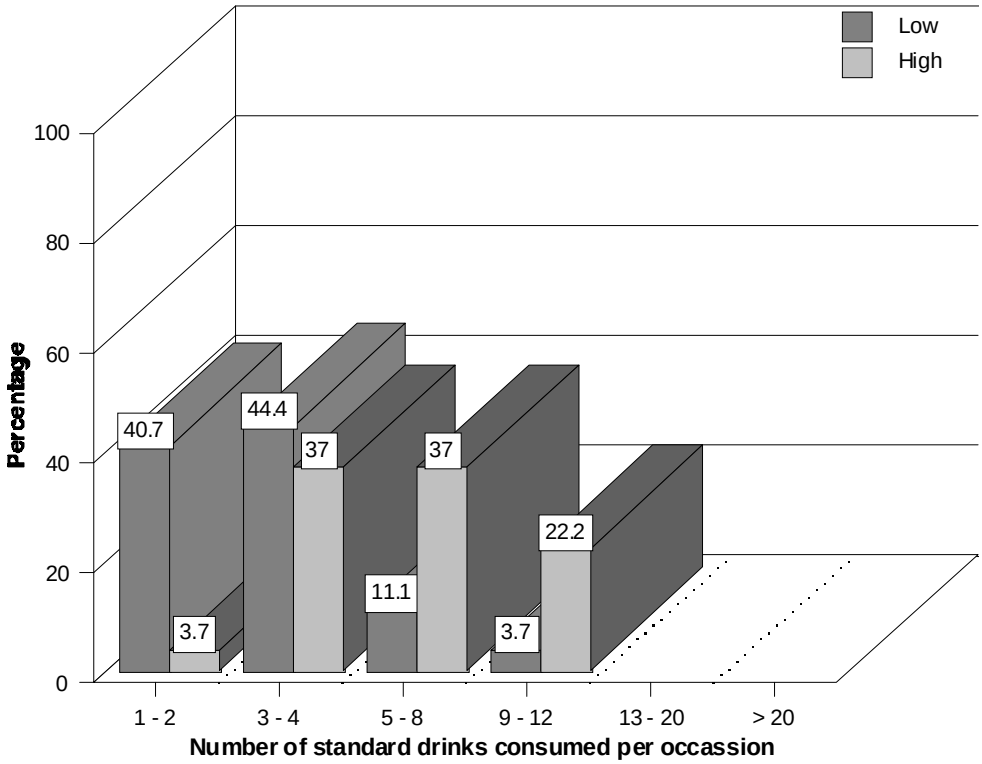


Figure 2 shows the quantities of alcohol consumed per occasion. As can be seen from the figure, approximately 85% of respondents in the low group drank less than 5 standard drinks per occasion whereas, in the high group only about half that proportion drank fewer than 5 standard drinks per occasion. At the other extreme, approximately 22% of high respondents drank at least 9 standard drinks per occasion while only 4% of the lows fell into this category.

Figure 2: Quantity of alcohol consumption per occassion expressed as a percentage of respondents.



For both the high and low groups, beer (light or standard) was the most popular alcoholic beverage consumed. Approximately 52% of respondents in the low group indicated that at least half of their beer consumption consisted of low alcohol beer. In contrast, approximately 8% of respondents in the high group indicated that at least half of the beer they consumed was low alcohol. Conversely, 56% of respondents in the high group and 26% of respondents in the low group did not drink any low alcohol beer.

ORGANISATIONAL FACTORS

Organisational-related stress factors

The seven-day retrospective alcohol diaries were examined to determine the effect of shift on alcohol consumption. There were 31 respondents (16 highs, 15 lows) who worked all three shifts (night, afternoon, and day) and 18 respondents (7 highs, 11 lows) worked only day and afternoon shifts. Three respondents (2 highs, 1 low) were excluded from analyses as two worked only day shifts, and the other could only be interviewed on day and night shifts.

For the high and low respondents who worked the three different shifts (night, afternoon, and day), a 2 x 3 (Group x Shift) repeated measures analysis of variance was conducted on the frequency of alcohol consumption data. This revealed significant main effects for Group ($F(1,29) = 5.39$, $p < .05$) and for Shift ($F(2,58) = 5.32$, $p < .01$). The interaction was not significant. This implies that the high

respondents drank alcohol on significantly more days per week than the low respondents (mean number of days were 4.1 and 2.5 respectively) and that for both highs and lows alcohol was consumed more frequently on afternoon and day shifts (mean number of days per week on both of these shifts, for highs was 2.8 and 2.6 respectively, and for lows, 1.4 and 1.9 respectively). Table 4 shows the frequency of alcohol consumption for highs and lows for each of the three shifts.

Table 4. Frequency of consumption of alcohol by group and shift (night, afternoon, and day)[a].

Number of days per week	Shift: Night				Afternoon				Day			
	High		Low		High		Low		High		Low	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
< 1 (includes 'did not drink')	3	9.7	6	19.4	1	3.2	2	6.5	-	-	1	3.2
1 - 2	7	22.6	7	22.6	6	19.4	11	35.5	9	29.0	9	29.0
3 - 4	6	19.4	2	6.5	7	22.6	2	6.5	5	16.1	5	16.1
5 - 6	-	-	-	-	2	6.5	-	-	2	6.5	-	-

[a]No respondents reported drinking 'every day'.

Table 5 illustrates the quantity of alcohol consumed per occasion by high and low respondents for each of the three shifts. A 2 x 3 (Group x Shift) repeated measures analysis of variance was conducted on the quantity of alcohol consumed per occasion. This revealed significant main effects for Group ($F(1,29) = 13.52$, $p < .01$) and for Shift ($F(2,58) = 4.04$, $p < .05$). The interaction was not significant. This implies that the high respondents consumed a greater number of standard drinks on a day when they drank alcohol in comparison with the low respondents (mean consumption per day for high and low respondents is 27.8 and 10.8 standard drinks respectively), and that both highs and lows consumed a greater number of standard drinks per occasion on afternoon and day shifts (mean consumption on both of these shifts for highs, was 18.6 and 18.4 standard drinks respectively, and for lows, 6.2 and 8.7 standard drinks respectively).

Table 5. Quantity of alcohol consumed per occasion by group and shift (night, afternoon, and day).

Number of standard drinks	Shift: Night				Afternoon				Day			
	High		Low		High		Low		High		Low	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
0	3	9.7	6	19.4	1	3.2	2	6.5	-	-	1	3.2
1 - 2	1	3.2	3	9.7	-	-	4	12.9	1	3.2	4	12.9
3 - 4	2	6.5	2	6.5	0	0	2	6.5	0	0	2	6.5
5 - 8	1	3.2	2	6.5	1	3.2	3	9.7	1	3.2	3	9.7
9 - 12	2	6.5	1	3.2	4	12.9	1	3.2	5	16.1	2	6.5
13 - 20	5	16.1	0	0	5	16.1	1	3.2	4	12.9	2	6.5
> 20	2	6.5	1	3.2	5	16.1	2	6.5	5	16.1	1	3.2

For the high and low officers who only worked two shifts (day and afternoon), a 2 x 2 (Group x Shift) repeated measures analysis of variance was conducted on the frequency of alcohol consumption data. The Shift, Group, and interaction effects were not significant. Table 6 shows the frequency of alcohol consumption by the high and low respondents on day and afternoon shifts.

Table 6. Frequency of alcohol consumption by group and shift (afternoon and day)[a].

Number of days per week	Shift: Afternoon High		Afternoon Low		Day High		Day Low	
	n	%	*n*	%	*n*	%	*n*	%
< 1 (includes 'did not drink')	1	5.6	4	22.2	1	5.6	2	11.1
1 - 2	5	27.8	5	27.8	5	27.8	4	22.2
3 - 4	1	5.6	2	11.1	1	5.6	5	27.8

[a]No respondents reported drinking on more than five days per week.

Table 7 illustrates the quantity of alcohol consumed per occasion by high and low respondents on the day and afternoon shifts. A 2 x 2 (Group x Shift) repeated measures analysis of variance was conducted on the quantity of alcohol consumed per occasion. The Group and interaction effects were not significant, however, a significant main effect for Shift was found ($F(1,16) = 6.08$, $p < .05$). This implies that both highs and lows consumed a greater number of standard drinks per occasion on afternoon shifts (mean consumption per occasion for high and low respondents is 13.9 and 7.9 standard drinks respectively).

Table 7. Quantity of alcohol consumed per occasion by group and shift (afternoon and day).

Number of standard drinks	Shift: Afternoon High		Afternoon Low		Day High		Day Low	
	n	%	*n*	%	*n*	%	*n*	%
0	1	5.6	4	22.2	1	5.6	1	5.6
1 - 2	-	-	-	-	1	5.6	3	16.7
3 - 4	1	5.6	2	11.1	1	5.6	2	11.1
5 - 8	1	5.6	2	11.1	1	5.6	3	16.7
9 - 12	-	-	1	5.6	1	5.6	-	-
13 - 20	2	11.1	1	5.6	-	-	2	11.1
> 20	2	11.1	1	5.6	2	11.1	-	-

Table 8 shows the mean scores and standard deviations for each questionnaire in the OSI (Cooper et al., 1988) for the high and low respondents. Analysis of the data from the OSI revealed no significant differences for any scales of the 'how you feel about your job' questionnaire. In other words the groups did not differ in terms of any aspect of job satisfaction.

Similarly the groups did not differ in terms of Type A behaviour as measured by the 'way you behave generally' questionnaire of the OSI. Nor were there any significant differences on the 'how you interpret things around you' questionnaire.

The 'sources of pressure within your job' questionnaire revealed a significant difference between the high and low respondents on the 'relationships with other people at work' scale ($t = 2.20$, $p < .05$). High respondents found this to be a greater source of pressure than their low counterparts. Interestingly one of the low respondents commented that the main stressors people experience at work are generated in their own peer group. That is, if you get along well with your peers, then the stress you experience will be fairly minimal. If peers do not get along then the work stress experienced is far greater. Other interesting, although non-significant, differences were noted on the 'sources of pressure within you job' questionnaire. High respondents tended to find that both organisational structure and climate, and acting in a managerial role were greater sources of pressure than did the low respondents.

Table 8. Mean scores and standard deviations for each questionnaire in the Occupational Stress Indicator for high and low respondents.

	High		Low	
	M	**SD**	**M**	**SD**
How you feel about your job				
1. Satisfaction with career and achievement	19.92	5.39	20.36	4.94
2. Satisfaction with the job itself	17.64	2.89	18.52	2.02
3. Satisfaction with organisational design and structure	16.20	4.52	17.12	3.40
4. Satisfaction with the organisational process	15.68	3.29	16.72	2.64
5. Satisfaction with personal relationships	12.16	2.46	12.56	2.45
6. Broad view of job satisfaction	19.20	4.06	20.96	2.98
How you assess your current state of health				
1. Mental ill-health	49.88	16.51	49.96	11.41
2. Physical ill-health	32.00	11.55	31.00	10.57
The way you behave generally				
1. Attitude to living	21.08	3.14	21.76	3.67
2. Style of behaviour	18.40	4.64	18.04	4.00
3. Ambition	10.44	2.25	10.44	2.29
4. Broad view of Type A	24.04	4.04	23.96	3.60

Table 8. continued

	High		Low	
	M	SD	M	SD
How you interpret events around you				
1. Organisational forces	20.08	3.64	19.32	2.72
2. Management processes	14.20	2.12	13.84	1.97
3. Individual influence	11.12	2.03	10.56	2.10
4. Broad view of control	18.84	3.29	17.88	2.60
Sources of pressure in your job				
1. Factors intrinsic to the job	30.68	1.39	30.00	1.14
2. Acting in a managerial role	37.72	1.75	34.24	7.21
3. Relationship with other people*	33.44	6.72	29.24	6.64
4. Career and achievement	32.96	6.70	32.36	6.40
5. Organisational structure and climate	43.08	8.94	39.92	6.73
6. Home/work interface	35.56	12.42	31.52	9.63
How you cope with stress you experience				
1. Social support	17.32	2.73	16.36	3.48
2. Task strategies	25.68	4.46	26.16	3.73
3. Logic	12.64	1.50	12.84	2.46
4. Home and work relationship	16.80	2.81	18.52	3.51
5. Time management	14.84	1.86	14.36	1.89
6. Involvement	24.80	3.63	24.76	2.73

*$p < .05$

There were no significant differences between the high and low respondents for the Role Conflict or Role Ambiguity scales (Rizzo et al., 1970; see Appendix B for mean scores and standard deviations of these scales for high and low respondents).

The responses to the Sociability Scale (Payne & Pheysey, 1971), the majority of which were non-significant, revealed that the high respondents were more inclined to feel that their work environment was sociable than were the lows.[2] There was a significant difference between the highs and lows for the item, 'Receptions or formal social affairs are seldom held here' (reverse scored, $t = 2.38$, $p < .05$) (refer to Table 9). This is supported by significant differences found between high and low respondents for the Warmth Scale (Litwin & Stringer, 1968) items 'It's very hard to get to know people in this organisation' (reverse scored, $t = 3.11$, $p < .01$) and 'People in this organisation tend to be cool and aloof towards each other' (reverse scored, $t = 3.50$, $p < .01$). In each case high respondents felt there was more of a feeling of general good fellowship (refer to Table 10). Further support is given by a significant difference found on the Interpersonal Support Scale (Litwin & Stringer, 1968) item 'People in this organisation don't really trust each other enough' (reverse scored, $t = 3.12$, $p < .01$)

[2]With this scale, sociability refers to a focus on group activities and social events within the work setting in comparison to the Warmth Scale which focuses on the general feeling of fellowship and helpfulness within an organisation.

where the high respondents felt they had greater support from their peers than the low respondents (see Table 10). These findings are consistent with comments made in the interviews. A number of high respondents felt that socialising with team mates was good as it brings people closer together and increases trust and camaraderie. One high officer said that any 'niggly' problems between team members may surface in a relaxed environment and this may aid resolution.

Table 9. Mean scores and standard deviations for high and low respondents on the Sociability Scale.

Sociability Scale Items	High		Low	
	M	SD	M	SD
1. Receptions or formal social affairs are seldom held here*	1.46	0.98	0.79	1.06
2. Everyone here has a strong sense of being a member of a team	2.17	0.82	1.96	0.46
3. There is a lot of group spirit	1.91	0.67	2.04	0.64
4. Social events get a lot of enthusiasm and support	1.70	0.64	1.65	0.78
5. There are many opportunities for people to get together in planned social activities after hours	1.29	0.55	1.38	0.82
6. Everyone is helped to get acquainted	2.08	0.72	1.92	0.72
7. It's easy to get a group together for games, outings, or other social activities	1.58	0.58	1.42	0.97
8. People spend a great deal of time together	1.33	0.70	1.13	0.85

*p < .05

Table 10. Mean scores and standard deviations for high and low respondents for each item of the Warmth and Interpersonal Support scales.

Warmth Scale Items	High		Low	
	M	SD	M	SD
1. A friendly atmosphere prevails among the people in this organization	1.92	0.65	1.83	0.70
2. This organization is characterized by a relaxed, easy-going working climate	3.04	0.81	3.17	0.76
3. It's very hard to get to know people in this organization**	2.13	0.85	2.79	0.72
4. People in this organization tend to be cool and aloof towards each other**	2.25	0.85	3.08	0.78
5. There is a lot of warmth in the relationships between management and workers in this organization***	3.38	0.77	2.00	0.66

Table 10. continued

Interpersonal Support Scale Items	High M	High SD	Low M	Low SD
1. You don't get much sympathy from higher-ups in this organization if you make a mistake**	3.25	0.79	2.25	0.79
2. Management makes an effort to talk with you about your career aspirations within the organization*	2.96	0.98	2.13	0.76
3. People in this organization don't really trust each other enough*	2.50	0.89	3.33	0.70
4. The philosophy of our management emphasizes the human factor, how people feel, etc.	3.04	0.81	3.29	0.62
5. When I am on a difficult assignment I can usually count on getting assistance from my boss and co-workers	1.96	0.96	2.04	0.69

***p < .001

**p < .01

*p < .05

With the Supervisory and Peer Leadership Scales (Taylor & Bowers, 1972, see Table 11), an interesting, although non-significant finding was that the low respondents regarded the supervisory skills of their supervisors in high regard while the high respondents held the leadership skills of their peers in high regard. This was supported by a significant difference found for the item 'There is a lot of warmth in the relationships between management and workers in this organization' ($t = 6.95$, $p < .001$) in the Warmth Scale (Litwin & Stringer, 1968) (see Table 8). This difference implied that the low respondents felt there was greater fellowship between the management and workers than did the high respondents. Significant differences were also found between the two groups on two items of the Interpersonal Support Scale (Litwin & Stringer, 1968). These were 'You don't get much sympathy from higher-ups in this organization if you make a mistake' (reverse scored, $t = 4.03$, $p < .01$) and 'Management makes an effort to talk with you about your career aspirations within the organization' ($t = 2.82$, $p < .05$). In each case, the low respondents felt they were given greater interpersonal support from their superiors than did the high respondents (refer to Table 10). One item in the Peer Leadership Scale did produce a significant difference between the two groups, with the high respondents feeling that their peers were more team oriented. This was 'How much do persons in your work group emphasize a team goal?' ($t = 2.23$, $p < .05$) (see Table 11).

Table 11. Mean scores and standard deviations of the Supervisory and Peer Leadership Scales for high and low respondents.

Supervisory Leadership Scale Items	High		Low	
	M	SD	M	SD
1. How friendly and easy to approach is your supervisor	3.96	1.27	4.17	0.96
2. When you talk with your supervisor, to what extent does he or she pay attention	3.88	1.08	4.21	0.72
3. To what extent is your supervisor willing to listen to your problems	3.75	1.08	4.25	0.85
4. How much does your supervisor encourage people to give their best effort	3.46	0.88	3.75	0.99
5. To what extent does your supervisor maintain high standards of performance	3.63	0.97	3.88	0.85
6. To what extent does your supervisor set an example by working hard	3.04	1.23	3.29	1.30
7. To what extent does your supervisor encourage subordinates to take action without waiting for detailed review and approval from him or her	3.65	0.94	3.74	1.01
8. To what extent does your supervisor show you how to improve your performance	2.79	0.93	3.17	1.24
9. To what extent does your supervisor provide the help you need so that you can schedule work ahead of time	2.71	1.08	2.63	0.88
10. To what extent does your supervisor offer new ideas for solving job-related problems	2.79	1.02	2.92	1.14
11. To what extent does your supervisor encourage the persons who work for him or her to work as a team	3.42	1.14	3.25	1.25
12. To what extent does your supervisor encourage people who work for him or her to exchange opinions or ideas	3.21	1.22	3.25	1.15
13. How often does your supervisor hold group meetings where the people who work for him or her can really discuss things together	3.22	1.54	3.43	1.56

Peer Leadership Scale Items	High		Low	
	M	SD	M	SD
1. How friendly and easy to approach are the persons in your work group	4.00	0.98	4.29	0.69
2. When you talk to persons in your work group to what extent do they pay attention to what you're saying	3.83	0.76	3.92	0.78
3. To what extent are persons in your work group willing to listen to your problems	3.83	0.76	3.65	0.92
4. How much do persons in your work group encourage each other to give their best effort	3.25	1.03	2.96	1.16
5. To what extent do persons in your work group maintain high standards of performance	3.67	0.82	3.38	0.97

Table 11. continued

	High		Low	
	M	SD	M	SD
6. To what extent do persons in your work group help you find ways of doing a better job	3.35	1.11	3.30	0.88
7. To what extent do persons in your work group provide the help you need so that you can plan, organize and schedule work ahead of time	2.96	1.12	2.58	1.02
8. To what extent do persons in your work group offer each other new ideas for solving job-related problems	3.54	0.83	3.21	0.98
9. How much do persons in your work group encourage each other to work as a team	3.58	1.14	3.58	1.10
10. How much do persons in your work group emphasize a team goal*	3.17	1.20	2.58	1.10
11. To what extent do persons in your work group exchange opinions and ideas	3.83	1.09	3.67	0.87

*p < .05

Table 12 shows the mean scores for the high and low groups on the 10 subscales of the Work Environment Scale (WES, Moos, 1986). The low respondents had significantly higher scores for the involvement and autonomy subscales (t = 2.40, and t = 2.51, respectively, p < .05). This indicates that the low respondents had greater job commitment and felt that they were encouraged to be more self-sufficient and make their own decisions more often than their high counterparts.

Table 12. Mean scores and standard deviations of each of the Work Environment Scale subscales for high and low respondents.

	High		Low	
	M	SD	M	SD
Involvement*	4.73	2.52	6.31	2.28
Peer Cohesion	4.92	2.26	5.34	2.22
Supervisor Support	4.19	2.38	4.88	2.14
Autonomy*	4.50	2.08	5.58	1.75
Task Orientation	5.50	2.16	6.38	1.70
Work Pressure	4.92	2.77	6.08	2.24
Clarity	5.08	2.33	5.62	1.77
Control	6.88	1.21	7.31	1.29
Innovation	2.62	2.06	2.69	1.74
Physical Comfort	3.69	2.38	3.42	2.25

*p < .05

To summarise the significant findings, high respondents drank on a greater number of days per week and consumed a larger amount of alcohol per occasion than the low respondents. High respondents found relationships with other people at work to be a greater source of pressure than the lows. Interestingly though, high respondents were more inclined to feel that their work environment was sociable. High respondents felt they had a better relationship and received greater support from their peers. They did not feel this way toward their supervisors. The low respondents, however, were more likely to feel that they had better relationships with their supervisors, and received greater support from them. Low respondents also had greater job commitment, and felt that they were encouraged to be more self-sufficient and make their own decisions.

Work-family conflict

With the Work Spillover Scale (Small & Riley, 1990) there were no significant differences between the high and low respondents.[3] (Refer to Appendix C for means and standard deviations for the Work Spillover Scale for high and low respondents).

With the Work and Family Life Scale (Alexander et al., 1993) the only significant difference between the groups related to the harmful effects of alterations to rostered shifts on the relationship between the respondent and their partner. High respondents had greater difficulties with this aspect of police work than did their low colleagues ($c^2 = 6.19$, $df = 2$, $p < .05$). The remaining differences were not significant, but the directions of the observed differences should be noted. For example, 28% of high respondents as opposed to 15% of low respondents said that working shifts had a considerable to extremely harmful effect on their own health. Working shifts also had a considerable to extremely harmful effect on the health of their partner for 30% of high respondents and only 9% of low respondents. In addition, similar proportions of both high and low respondents felt that working shifts had at least a considerably harmful effect on their relationship with their partner (37% of high and 31% of low respondents), and on their social lives (48% of highs and 50% of lows). High respondents reported that working long hours had a considerably or extremely harmful effect on their health (20%), their partner's health (27%) and their relationship with their partner (50%). Interestingly though, there was a slightly greater proportion of lows indicating that working long hours had a considerably or extremely harmful effect on their social life (48% as opposed to 41%). More high than low respondents felt that being unable to 'switch off' when off duty had a considerably or extremely harmful effect on their relationship with their partners (33% and 19% respectively). In the context of their social lives, being unable to switch off was considerably or extremely harmful for 20% of high respondents and 12% of low respondents. (See Appendix D for a full breakdown of responses for each aspect of police work).

To summarise, the only significant difference between the high and low respondents was that high respondents felt that the alteration of rostered shifts had a greater adverse effect on their relationship with their spouse or partner. There were, however, consistent differences in the extent of the perceived harmful effect on the relationship high respondents had with their partners caused by working long hours and being unable to 'switch off' when off duty. The implication is that there is a tendency for high respondents to experience greater conflict in their relationships with their spouse or partner than do their low counterparts.

[3]Five items, referring to children, were omitted from analyses as they were applicable to only a few respondents.

Occupational socialisation

The series of interviews highlighted a number of informal methods of occupational socialisation which occur in the police workplace. For example, the existence of a 'cult of masculinity' (Smith & Gray, 1985) was implied by a number of officers. One female officer said that, 'to survive, I guess, if you're a female you have to talk like a bloke, act like a bloke, and be very serious, so you just blend in'. A few female officers commented that they had put up with the sexual harassment they experienced so that they would be accepted and 'fit in' with the team.

Even male officers made implicit references to this 'cult of masculinity'. One officer said that colleagues may not see you as being a good worker if you do not put up a macho front or were not rude to people. A female officer added, 'New people come in, they find out quickly that this is the way you've got to be: you've got to slag off your wife, you've got to slag off women, you've got to talk about sex, and if you don't do that there's something wrong with you and you won't fit in. And the people who don't join in are seen as outcasts, and I guess, effeminate for the guys, maybe, or just not good police officers'. This macho image also carried over into an officer's drinking behaviour. One low respondent believed that for most police officers 'the more they can drink, the more manly the copper they can be'. Another officer, in recalling his time at the academy, said that when drinking at a public bar, recruits would put on a macho front in the presence of civilians, implying, 'I'm a policeman, I can drink beer'.

The process of defeminisation was illustrated by comments referring to the drinking habits of female police officers, 'generally the women drink more than the men' and 'some women are harder drinkers than the blokes'. The officer who made this comment went on to say that a particular female officer on his team was 'good value' because she could 'drink the blokes under the table'. Even at the academy, some female recruits felt under pressure to fit in with their male colleagues and thus take on some of their mannerisms. One officer said of her time at the academy, 'In the early stages it was "Look at me, I'm just as good as you guys, I can hold my drink"'.

More high officers than low said that they predominantly socialised with fellow police officers because of the hours they worked, and because their colleagues understood the nature of the work and what they have to deal with every day. Following on from this, a major theme in the interviews was that the unity of the team or work group is enhanced through socialising together. One officer said that there was 'immense pressure' applied to drink if one wants to feel part of the group. Quite a number of officers, both high and low, also made similar comments. For example, a high officer said that when he first joined the department 'if the team was going out after work to "X" I went, regardless of whether I wanted to or not, simply because you felt as though if you didn't your acceptance would wane off'. Another high officer believed that if you didn't go to the sporting functions or social functions then one's 'position' on the team was jeopardised. The consequences of this were that the officer would be 'snobbed off' or forgotten, and may be ignored or left out of team jokes at work. The officer extended this view by saying that the social activities were a means of proving oneself. The implications were that if an officer socialised with the sergeant and / or others in the team then the officer would generally 'fit in' with the team and be likely to get favours from the sergeant more often.

The pressure to drink, though great, is not explicit, but the expectation to drink exists. As one officer indicated, 'You go rounds and rounds and rounds and if you've got a big drinker there you've got to keep up!...You get your war stories where blokes drink and drink and drink until one bloke can't drink any more and then he drags twenty bucks out of his pocket and says "I don't want any more, youse (sic) can keep going"'. Another officer said that 'drinking's encouraged in the police department 'cause we all have a beer fund and we all have beer available all the time, and if you go to CIB I think it would be very hard not to drink because they want you to drink'.

Drinking at the end of shifts was seen by many officers as an integral part of the police culture. This activity would generally occur at the end of a block of afternoon shifts (i.e., on a Sunday night) or at the end of a block of night shifts (i.e., on a Friday morning). One officer said that 'it might seem strange but you might have a drink at 8 o'clock Friday morning and be absolutely written off by 11 o'clock'. Another officer commented, however, that drinks after night shifts were 'just one of those things you always did. There was no real peer group pressure but it was more of a culture...that you finished a night shift in one piece'. One high respondent explained it as such, 'after afternoons most of our wives are in bed [so we] have a few beers. Might as well - you're the only ones up at that hour of the day'. This same officer said that sometimes on Sunday nights he does not get home till five in the morning and 'there's Monday gone'. As a means of alleviating this problem, one particular station held the 'afternoon' drinks on a Saturday evening because if they 'got blind' on a Sunday night they would only have, at most, one and a half days to recover before they were back on duty. The implication here though, is that officers may be starting the afternoon shift on a Sunday suffering from the ill-effects of an excessive intake of alcohol the night before.

The general consensus though was that drinking at the end of a block of shifts was a good means of relaxing and talking about incidents and events which had occurred. However there were some officers who said they participated irregularly simply as a means of being accepted socially. One officer in particular said that one of the reasons why he used to drink with his team mates at the end of a shift was so he would be accepted socially. Now, for a number of reasons, he no longer participates in this type of activity and feels that he is not as socially accepted in the team.

INDIVIDUAL FACTORS

Coping methods

No significant differences were found between the two groups on the Methods of Coping with Stress While On Duty Scale (Alexander et al., 1993). There were, however, some differences of note. For example, more low than high respondents were inclined to take things more easily at work at least sometimes (88% and 68%, respectively); more high than low respondents would keep things to themselves at least sometimes (92% and 77%, respectively); and high respondents were more likely to take their stress out on their colleagues at least sometimes (52%) than were low respondents (42%). (See Appendix E for a complete breakdown of these data).

Analysis of responses to the Methods for Coping with Stress While Off Duty Scale (Alexander et al., 1993) revealed a significant difference between groups in the extent to which they used 'engaging more in other recreational activities' as a coping mechanism ($c^2 = 5.69$, df = 1, $p < .05$). The high group reported using this strategy

more often than the low group. There were other interesting though non-significant differences. For example, high respondents reported taking work home with them or thinking about work at home more often than lows (25% and 15%, respectively); 15% of the low respondents as opposed to 8% of the high respondents would talk things over with a professional person to cope with stress while off duty at least sometimes; finally, 72% of high respondents as opposed to 50% of low respondents drank alcohol at least sometimes to cope with stress while off duty. In the interviews, a number of high respondents indicated that they drank alcohol as they perceived it to be a good means for unwinding and talking about the week's events. One high respondent commented that he used to drink 'incredibly heavily' to cope with the stress he experienced and to be socially accepted within his work group. (See Appendix E for a complete breakdown of these data).

To summarise the significant findings, in order to cope with stress while off duty, more high respondents would participate in recreational activities (other than sport).

Expectancies of alcohol consumption

Table 13 shows mean responses for high and low respondents on the six factors from the Drinking Expectancy Profile (Young & Oei, 1991) which measure components of expectancies of alcohol consumption. Analyses revealed that there were significant differences between the groups on assertiveness ($t = 4.44$, $p < .001$), dependence ($t = 2.46$, $p < .05$), cognitive change ($t = 2.51$, $p < .05$), and relaxation ($t = 2.24$, $p < .05$). In contrast to low respondents, high respondents expected alcohol to increase their efficiency of communication, to have poorer control over their drinking behaviour, to have greater improvement in cognitive functioning, and to experience greater tension reduction.

Table 13. Mean scores and standard deviations for the high and low groups on Expectancies of Alcohol Consumption Factors from the Drinking Expectancy Profile.

	High		Low	
	M	**SD**	**M**	**SD**
Assertiveness**	36.08	4.71	28.54	6.62
Affective Change	24.42	4.78	22.58	5.15
Dependence*	16.42	4.85	13.25	3.64
Sexual Functioning	17.33	2.14	17.42	2.92
Cognitive Change*	8.42	2.04	7.17	1.99
Relaxation*	12.33	2.96	10.54	3.09

**$p < .001$

*$p < .05$

Table 14 shows the mean scores for the drinking refusal self efficacy factors of the Drinking Expectancy Profile (Young & Oei, 1991). Means for the high group were significantly lower than means for the low group on all three factors i.e., social pressure self efficacy ($t = 3.82$, $p < .05$), emotional relief self efficacy ($t = 2.77$, $p < .05$) and opportunistic self efficacy ($t = 2.56$, $p < .05$). In other words, high

respondents were less able to resist drinking in situations where there was social pressure (e.g., at a party), in emotionally driven situations (e.g., when angry or upset), or in opportunistic situations such as when they have just finished playing sport.

Table 14. Mean scores and standard deviations for high and low groups on Drinking Refusal Self Efficacy Factors.

	High		Low	
	M	**SD**	**M**	**SD**
Social Pressure Self Efficacy*	33.26	6.97	42.13	7.72
Emotional Relief Self Efficacy*	49.55	9.50	56.78	8.86
Opportunistic Self Efficacy*	35.78	6.22	39.78	4.79

*$p < .05$

To summarise, high and low respondents differed in their expectations of alcohol consumption. High respondents expected alcohol to increase their efficiency of communication and their cognitive functioning while reducing tension. They also expected to have less control over their drinking. In addition, the high respondents were less able to resist drinking in social pressure, emotional relief, and opportunistic situations. These significant differences between the two groups indicate that the high respondents are displaying characteristics of problem drinkers (Young & Oei, 1991).

Drinking Expectancy Profile and organisational-related stress

The relationships between scores on measures of alcohol expectancies and organisational-related stress were examined for each group. There was a significant positive correlation between the broad Type A factor (OSI) and dependence (expectancies of alcohol consumption factor) for high respondents (r = .38). Those in the high group with predominantly Type A behaviours, such as excessive time consciousness and competitiveness, were more likely to believe they have poor control over their drinking behaviour. Similarly, for high respondents there was a significant positive correlation (r = .38) between the broad Type A factor (OSI) and relaxation (expectancies of alcohol consumption factor). Those exhibiting Type A behaviours were more likely to use alcohol because they believe it aids relaxation. For the high respondents there were also significant negative correlations between the broad Type A factor and two of the drinking refusal self efficacy factors, opportunistic (r = .42) and social pressure self efficacy (r = .42). High respondents who exhibited a greater number of Type A behaviours were less able to resist drinking in situations such as when out for dinner (i.e., social) or when watching television (i.e., opportunistic).

In addition, for the high respondents, there was a significant positive relationship between work pressure (WES) and the relaxation factor of the expectancies of alcohol consumption scale (r = .41). In other words, high levels of reported work pressure are associated with the use of alcohol because it is believed to relieve tension. A significant negative correlation was also found between work pressure and social pressure self efficacy (drinking refusal self efficacy scale) (r = -.46). This indicates that the more the high respondents feel pressure from work the less able they are to resist drinking in social situations. For the low respondents there was a significant negative

correlation between the peer leadership scale and relaxation (expectancies of alcohol consumption scale) (r = -.45). This implies that, for low respondents, more positive feelings towards the leadership skills of their peers are associated with a lower likelihood of believing that alcohol relieves tension.

Drinking Expectancy Profile and work-family conflict

High respondents showed significant negative correlations between work spillover and two factors of the drinking refusal self efficacy scale: social pressure self efficacy (r = -.47) and opportunistic self efficacy (r = -.52). This indicates that for high respondents greater work spillover is associated with less resistance to drinking in social or opportunistic situations (e.g., at a party or when they have just finished playing sport). Among the high respondents there was also a significant positive relationship between work spillover and the dependence factor of the expectancies of alcohol consumption scale (r = .48) implying that greater work spillover is associated with the belief that they have less control over their drinking behaviour. In addition, there was a significant positive correlation between affective change (expectancies of alcohol consumption scale) and spillover (r = .43). This implies that the belief that a negative change in emotions is induced by alcohol is associated with a greater interference by work into the home life.

Drinking Expectancy Profile and coping methods

For the low respondents there was a significant positive relationship between coping with stress (on duty) by taking it out on colleagues and the relaxation factor of the expectancies of alcohol consumption scale (r = .42). Those low respondents who take their stress out on their colleagues were more likely to believe that alcohol aids relaxation. There was also a significant positive relationship for the low respondents between coping with stress at work by taking tablets for 'nerves' and using alcohol to enhance relaxation (expectancies of alcohol consumption scale) (r = .42). In other words, those low respondents who resort to medication as a coping mechanism also believe that alcohol aids relaxation.

With the high respondents there was a significant negative correlation between coping by taking things easier at work and the relaxation factor of the expectancies of alcohol consumption scale (r = -.40). This implies that the more likely they were to take things easy at work in order to cope with stress, the less likely they were to believe alcohol would help them relax. There was also a significant negative correlation between coping with stress by taking it out on the public and emotional relief self efficacy (drinking refusal self efficacy scale) (r = -.48). That is, high respondents who coped with stress by taking it out on the public, displayed a lowered ability to resist drinking when frustrated, angry, uptight, or worried. Similarly, there was a significant positive relationship between coping with stress by taking it out on the public and the dependence factor of the expectancies of alcohol consumption scale (r = .43). Those high respondents who coped with stress by taking it out on the public were more likely to believe they have poor control over their drinking behaviour.

In regard to coping with stress while *off duty*, for both high and low groups there were significant positive correlations between coping by drinking more alcohol and two factors from the expectancies of alcohol consumption scale, namely: dependence (r = .39 and r = .56 respectively); and relaxation (r = .58 and r = .72, respectively). Respondents who tend to drink alcohol to cope with stress believed that they would have poor control over their drinking behaviour and that drinking would help them relax.

The high respondents also had a significant positive relationship between drinking more alcohol to cope and two factors of the expectancies of alcohol consumption scale: assertiveness (r = .52), and cognitive change (r = .49). Drinking more alcohol to cope with stress was associated with the belief that alcohol would improve communication skills and cognitive ability.

For both high and low respondents, there were significant negative associations between coping by drinking more alcohol and the social pressure factor of the drinking refusal self efficacy scale (r = -.56 and r = -.52 respectively). In other words, drinking alcohol to cope with stress was associated with a lowered ability to resist drinking in social situations. The high respondents also had a significant negative relationship between coping by drinking more alcohol and emotional relief self efficacy (r = -.58). Drinking alcohol to cope with stress was associated with a lowered ability to resist drinking in situations associated with emotional relief such as when one is angry.

The low respondents also had a significant positive correlation between coping with stress *off duty* by taking tablets for 'nerves' and relaxation (expectancies of alcohol consumption scale) (r = .41). For these respondents, taking tablets to cope with stress was associated with a belief that the use of alcohol would help them relax. Similarly for high respondents, coping with stress *off duty* by taking sleeping tablets was positively related to relaxation (r = .39).

Knowledge of the detrimental effects of alcohol

The interviews brought attention to the general lack of knowledge displayed by officers regarding the residual effects of alcohol. For example, there was a prevailing attitude that if an officer came to work drunk they should be sent home or dealt with in some way, but that if they were only hungover then this was not such an issue. One officer made the comment that he had 'never seen anybody come in drunk [but] I've seen some mighty hangovers'. Not one of the officers offered a definition of what constituted being drunk or being hungover. Comments like these illustrate the ignorance of police with respect to the consequences of coming to work suffering from a hangover.

Furthermore, the issue of being hungover was seen to be treated as a joke. As one officer said, 'Most of them would happen on Sundays, with Sunday being a quiet day...It's a bit of a joke though, you'd have a contest to see who could blow the lowest to drive'. Another officer said 'You can tell someone's been drinking and you give them an alco-test and if they blow something like .15 or something like that, it's a big laugh'. Yet another officer commented, 'the unwritten law has always been that if you went out on pay night and got yourself blind stinking drunk, you didn't take a sickie on Thursday just because you had a hangover. That was considered bad form'. This attitude appears to be perpetuated by the 'macho' image. If you are able to 'party hard' and still get to work the next day, you are seen as a hero, and a good team person. The same officer went on to say that 'a copper that's 80 per cent fit is better than no copper at all'.

The officers were queried on the stance that their supervisors took in relation to hangovers. In most cases the supervisor was the patrol team sergeant or the administrative sergeant. A number of officers said that the supervisor generally was not aware if an officer was hungover, particularly if the team 'covers' for that person. Some officers made comments similar to those previously mentioned noting that the sergeant may consider the officer to be 'slack' if they did not turn up for work, regardless of the severity of the hangover; or that the sergeant would tolerate a hungover officer provided they could still perform the required tasks.

Officers were asked what types of strategies, if any, should be in place to deal with those coming to work with a hangover. The majority of officers felt that the informal strategies currently used were sufficient. These informal strategies include allocating the affected officer to typing, counter duties, or cleaning cars, and not allowing them to drive. One high respondent believed that only informal strategies should be used because an officer cannot be punished for what he or she does in their private life. Another high officer agreed that the current informal strategies were adequate, 'I mean if you come to work still drunk just make sure your partner drives for the first four hours of the shift and if you still reckon you're over the limit then get your partner to drive the whole shift'. A low respondent, however, disagreed with the use of these informal strategies. The respondent argued that although the hungover officer is typing or doing paperwork, if an emergency were to arise, the officer would have a moral obligation to act and they may not be capable of doing so. Another low officer felt that a more formal strategy, would be appropriate. The respondent suggested that a strategy like that of the Civil Aviation Authority (CAA), which stipulates that pilots are not allowed to consume any alcoholic beverages during the eight hours preceding a flight, would be applicable and more appropriate.

The option of random breath testing (RBT) in the workplace was discussed. Six high and eight low respondents indicated that they would be supportive of the introduction of RBT or at the very least would not be averse to it. One high respondent said he 'can see the days coming where that's [RBT] going to come in'. He also believed that there should be compulsory breath testing of any officer who would be in a position where they had to drive, before they started the shift. A low respondent believed that there should be a maximum blood alcohol limit set for police officers, which is lower than the legal limit applicable to all members of the community. This officer felt that this is necessary because 'they do go out for lunches, they do have big nights and work the next day and some of the ways coppers drink they'd probably be still over the limit the next day driving a police car'.

The majority of officers, however, did not think that the introduction of RBT would be accepted or that it was necessary. One high respondent thought that RBT would not be accepted because 'there are a lot of people that come into work hungover and with a BAL'. A number of officers felt it was not necessary because it was carried out informally anyway: '[I]f they've had a bit to drink they test themselves anyway'. A high officer confirmed this by saying, 'we do that here, if we're hungover. I'll get on the breath analyser'. This officer did concede however that RBT would be appropriate because 'driving is an important part of our job and you certainly can't afford to stuff up if you're driving at speeds that we do sometimes'. He noted, however, that most officers would use their common sense if they are hungover: 'I certainly do. I jump into the car and go to sleep till about lunchtime'.

Discussion

The findings from the present study highlight a major threat to best practice in service delivery in policing. Not only did officers selected for the high group consume far greater quantities of alcohol on more days per week than the low respondents but they also displayed the characteristics of problem drinkers (Young & Oei, 1991). In particular, high respondents believed that alcohol would improve their efficiency of communication, reduce their levels of tension, and improve their cognitive functioning. They also believed that they have poor control over their drinking and that they have difficulty resisting drinking in social situations, emotional situations (e.g., when they are angry), and opportunistic situations (e.g., when just finished playing sport). Together these findings indicate that the high respondents in this study are a group of police officers who have problem drinking patterns. Even if such officers comprise only a minority within any police service, they have the potential to cause major problems for the police service as a whole in terms of quality of service delivery, relationships with work colleagues, and both their safety and that of their peers.

A number of organisational and individual factors were shown to be associated with the excessive drinking patterns of these high respondents. The findings relevant to each of these areas will be summarised. Then, possible strategies to alleviate the effects of each of these factors on levels of alcohol consumption will be discussed.

ORGANISATIONAL FACTORS

Organisational-related stress factors

High respondents were found to have lower levels of commitment to the organisation and felt that they had less autonomy than low respondents. In apparent contrast, however, high officers saw work as a sociable and friendly place where team goals are important. In line with this, the interviews indicated that high officers were more likely to socialise with other police officers. In this way the emphasis on drinking to socialise, which is evident in the police culture, is likely to have a stronger effect on high respondents. However, relationships with people at work are a source of pressure for them, and their views of management and their relationships with them are not positive. This is consistent with previous findings that a lack of supervisory leadership and support was a factor contributing to excessive alcohol use (see Fennell et al., 1981; Shanahan, 1992). Alternatively, their drinking behaviour and its effect on their performance at work may result in tension with their supervisors.

In contrast to Shanahan's (1992) findings, there was no difference between high and low respondents in terms of the relationship between the type of shift worked (day, afternoon, or night) and either the number of days per week on which alcohol was consumed or the amount consumed on each occasion. This implies that shift work per se does not determine drinking behaviour in the short term. This was supported by the interviews where respondents indicated that, in general, shift work was not deemed to be problematic. The expectation was that shifts had to be worked, so sporting and social activities were organised around them.

Occupational socialisation

As with other organisations (e.g., Ames & Janes, 1987), drinking plays a key role in police culture. The prevailing attitude which existed among respondents was that for feelings of team unity, trust, and camaraderie to be enhanced, officers had to socialise and drink together. It was further believed that one is not accepted in the team to the same extent if one does not socialise, and in particular, drink with the team. Not all police officers in the study agreed with this attitude, but even those who did, tended to feel that they had to socialise intermittently with their team so that they belonged or felt they were part of the team. Further anecdotal evidence suggested that the feelings of being pressured to drink in order to be part of the group started at the police academy: 'Everyone drank at the academy. It was a big thing at the time'.

Similarly, the acceptance of hangovers is part of the police culture. Officers indicated that one is regarded as a good team person if one reports for work following a session of excessive alcohol consumption and that supervisors rarely intervened.

INDIVIDUAL FACTORS

Coping methods

For the high group a number of factors related to their alcohol consumption patterns were concerned with their methods of coping with both general and specific stressors. For example, those high respondents who had Type A characteristics were more dependent on alcohol which they believed aided relaxation, and less able to resist drinking in social and opportunistic situations. In addition, pressure at work was associated with both drinking to relax and a lowered resistance to drinking in social situations. Similarly, work spillover, such as that caused by a change to rostered shifts, was associated with a negative change in emotions believed to be induced by alcohol, greater dependence on alcohol, and being unable to resist drinking in social and opportunistic situations. Finally, those high officers who reported drinking to cope with stress *off duty* were more dependent on alcohol and were more likely to believe that drinking increases their assertiveness, improves their cognitive skills, and aids relaxation. These officers were also more likely to have a lowered resistance to drinking in social or emotional relief situations. In general terms, therefore, it appears that high officers believe that they cannot resist drinking and that it will help them to cope. They use alcohol as a coping strategy both at a general level to improve their communication and cognitive functioning and also at a specific level to reduce the stress associated with work or with the interaction between work and family demands.

This pattern of results is consistent with those of Frone et al. (1993) who found a positive relationship between alcohol misuse and aspects of work-family conflict among individuals who believed alcohol could reduce their tension and aid relaxation. In such associative studies it is not possible to determine whether the alcohol misuse gives rise to the work-family conflict or is the result of it. However, Cooper, Russell, and Skinner (1992) found that the use of alcohol to relax and reduce tension indicates that people have fewer active or positive coping skills (e.g., seeking professional help) available to them. As a consequence of this, people resort to the use of alcohol because it is an activity with which they are familiar and which is readily available.

Knowledge of the detrimental effects of alcohol

Both high and low officers regarded hangovers as an issue of little importance, an attitude similar to that found by McNeill and Wilson (1993), and it was reported that some officers would start their shift (in particular, day shifts) with a hangover. Furthermore, both high and low respondents demonstrated a lack of knowledge about the residual effects of alcohol. There was no apparent awareness that an officer who has a hangover can be of detriment to the organisation in terms of poor customer service, poor work performance, and poor relationships with work colleagues. Respondents were also not aware that an officer suffering from a hangover could jeopardise their own life and the lives of others if they were suddenly called upon to act in an emergency or high pressure situation (e.g., high speed pursuit or incidents involving firearms). The fact that officers who were hungover were driving police vehicles further demonstrates that they were unaware of the possible impairment of such complex manoeuvres by residual levels of alcohol. As found by previous research the performance of such activities can be impaired even up to eight hours after excessive consumption and even when the blood alcohol level is zero (see Laurell & Törnros, 1981, as cited in Franck, 1983; Morrow et al., 1991).

REMEDIAL STRATEGIES

The organisational and individual factors related to the excessive drinking patterns of police officers highlight the areas in which interventions are likely to have maximal effect in reducing drinking.

The apparently poor relationship high respondents have with their supervisors must be addressed. There are a number of reasons why the relationship between high respondents and their supervisors may be poor and it is not possible to determine which is the most critical on the basis of these data. For example, it is possible that supervisors are unpopular with these officers because they are attempting to counsel the officers about their drinking habits and poor work performance. If this is the case, there is a need both for the organisation to show clear support for the actions of the supervisors and for these supervisory behaviours to be adopted consistently throughout the organisation so that they are accepted by all staff.

Alternatively, the supervisors may not be attempting to assist these officers with their problems while at the same time, being critical of their behaviour. In this case the supervisors may need to be trained in the range of techniques available for counselling staff other than direct discipline. In the case of the high officers whose drinking is related to stress in general and to work-family conflict in particular there is evidence that specific supervisory techniques can be of assistance. For example, Thomas and Ganster (1995) found that those individuals described as 'family-supportive supervisors', who recognised the non-work demands (work-family conflict) of their subordinates and supported them, had positive effects on the subordinate's job satisfaction, and mental and physical health.

Finally there may be a lack of supervisory expertise in general as has been observed in earlier studies of police (e.g., Brewer, 1991; Kelling, 1983). In this case, general training in supervisory techniques as is currently being developed by the National Police Research Unit should be made available.

It is apparent that those officers who consume high levels of alcohol believe that drinking is a means of coping with stress. They also fail to consider that drinking may indeed perpetuate other stressors both at work and at home. It is clear that these officers demonstrate a need for training in alternative, more positive coping strategies. Such strategies could range from the use of professional counselling services to increased involvement in sporting or other activities not associated with alcohol consumption or the work environment.

The issue of the role of alcohol in the police culture also needs to be addressed. Measures need to be in place throughout the organisation including the police academies to encourage team unity without the current emphasis on excessive drinking. Mateship, camaraderie, and socialising should be encouraged among new recruits but with the example being set by senior officers of socialising without drinking to excess or indeed at all. Officers at all levels should be informed that they are responsible for the consequences of their drinking behaviour and that excessive drinking can negatively impinge upon their work colleagues or affect team unity because of the behaviours or actions of the affected officer, e.g., embarrassing behaviour in public, unreliability, insufficient contribution to the team.

The results have also highlighted the need for an educational or awareness campaign focusing on the residual effects of alcohol and hangovers. Staff at all levels must be informed of the nature of the effects of hangovers and the possible continuing effects on performance of residual levels of alcohol. Supervisors in particular must be made aware of these problems and encouraged to take more of an active or mentoring role in regard to the welfare of their subordinates. In addition, there must be clear organisational support for appropriate disciplinary action in any case where Police Regulations are breached. The administration of such action should be consistent with officers at all levels in the organisation.

The introduction of random breath testing in the workplace for police services was an issue raised in the interviews. This could be seen as a means for strictly and objectively implementing departmental policy and thus ensuring that occupational health and safety regulations are upheld. Random breath testing will not necessarily remove the problem of officers working with a hangover, but it will convey to officers that the police service has a clear and consistent policy about alcohol consumption. In conjunction with an awareness campaign on the residual effects of alcohol, random breath testing may go some way to curb the number of officers reporting for duty hungover.

Due to the cross-sectional design of this study it is not possible to determine causal links between factors or to map the development of alcohol consumption patterns in officers. It is also not possible to draw detailed comparisons between the group of general duties officers from this study and officers from other areas within the police service (e.g., CIB) where the demands of policing may be very different. To clarify these issues, future research should incorporate a longitudinal design to examine the development of drinking patterns in recruits and officers who perform a range of duties at different stages in their careers.

In conclusion, this study has highlighted various factors associated with excessive alcohol consumption by police officers on the basis of which a number of recommendations have been made.

It is recommended that the police organisation in each jurisdiction:

- Train officers in a range of coping strategies which do not involve alcohol with the assistance of skilled health representatives from the alcohol eduction units in each State / Territory and the involvement of the Occupational Health and Safety Unit in each agency.
- Ensure that supervisors are trained in their role of implementing departmental policy on alcohol and the workplace, and that the organisation actively displays a commitment to assisting supervisors in addressing alcohol-related problems.
- Introduce and maintain an educational or awareness campaign on the residual effects of alcohol so that recruits and officers at all ranks are made aware of the consequences of coming to work with a hangover and that such a campaign involve the police medical staff, police welfare representatives, and occupational health and safety representatives.
- Seriously consider the implementation of random breath testing within the police service, and the use of breath testing when officers on duty appear to be affected by alcohol.

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Appendices

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POLICE HEALTH:
SMOKING, DRINKING AND EXERCISE BEHAVIOUR

Please indicate your answer by ticking the appropriate box ☐ or by writing your answer in the space provided. If you require any help whilst completing the questionnaire, ask the researcher for assistance.

Thank you for your co-operation.

Questions 1 to 3 below focus on smoking behaviour.

1. Have you ever smoked cigarettes, cigars or a pipe regularly?

   YES ☐

   NO ☐ **Go to Question 4**

2. Have you given up smoking?

   YES ☐ **Go to Question 4**

   NO ☐

3. If no, please indicate below the usual quantity of tobacco you would normally consume:

   _____ manufactured cigarettes per day

   _____ grams of cigarette tobacco per week

   _____ number of cigars per week

   _____ grams of pipe tobacco per week

Please Note: A $1^{3}/_{4}$ ounce pouch of cigarette tobacco equals 50 grams.

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Questions 4 to 8 below ask about the exercise you did during the PAST 2 WEEKS. Please note the distinction between vigorous and less vigorous exercise.

4. In the past 2 weeks did you engage in vigorous / high impact exercise (i.e. that which increased your heart rate and made you breathe harder)?

YES ☐

NO ☐ **Go to Question 6**

5. If yes, how many sessions of vigorous exercise did you do over the 2 week period?

_____

6. In the past 2 weeks, did you engage in less vigorous exercise for recreation, sport or health purposes?

YES ☐

NO ☐ **Go to Question 8**

7. If yes, how many sessions of less vigorous exercise did you do over the past 2 weeks?

_____

8. In the past 2 weeks, did you walk for exercise or recreation?

YES ☐

NO ☐

Questions 9 to 20 below ask about your alcohol consumption.

9. How often do you usually drink alcohol?

I don't drink alcohol ☐ **Go to Question 21**

Less than once a week ☐

On 1 or 2 days a week ☐

On 3 or 4 days a week ☐

On 5 or 6 days a week ☐

Every day ☐

10. On a day when you drink alcohol, how many drinks do you usually have?

1 Standard Drink = 1 schooner of ordinary beer (285ml) = 1 glass of cider (285ml) = 1 glass of wine cooler (285ml) = 1 glass of table wine (120ml) = 1 glass of fortified wine (60ml) = 1 nip of spirits (30ml).

- 1 or 2 standard drinks ☐
- 3 or 4 standard drinks ☐
- 5 to 8 standard drinks ☐
- 9 to 12 standard drinks ☐
- 13 to 20 standard drinks ☐
- More than 20 standard drinks ☐

Those who drink alcohol please answer the following questions.

11. Do you usually drink beer?

YES ☐

NO ☐

If no, what do you usually drink?_____**(Go to Question 14)**

12. What brand of beer do you usually drink?_____

13. If you usually drink beer, how much of it is low alcohol beer?

- Only low alcohol beer ☐
- Mostly low alcohol beer ☐
- Half ☐
- A small amount ☐
- None ☐

What brand of light beer do you usually drink?_____

14. Have you had a drink with your workmates in the last 3 months?

YES ☐

NO ☐

15. How often do you usually drink with your workmates?

- Less than once a month ☐
- A few times a month ☐
- On 1 or 2 days a week ☐
- On 3 or 4 days a week ☐
- On 5 or 6 days a week ☐
- Every day ☐

16. On a typical day when you drink with your workmates, how many drinks do you have?

1 Standard Drink = 1 schooner of ordinary beer (285ml) = 1 glass of cider (285ml) = 1 glass of wine cooler (285ml) = 1 glass of table wine (120ml)= 1 glass of fortified wine (60ml) = 1 nip of spirits (30ml).

- 1 or 2 standard drinks ☐
- 3 or 4 standard drinks ☐
- 5 to 8 standard drinks ☐
- 9 to 12 standard drinks ☐
- 13 to 20 standard drinks ☐
- More than 20 standard drinks ☐

Think about your drinking occasions in the last month. Answer each of the following items:

17. Did you ever drink 1 to 3 hours before work?

- YES ☐
- NO ☐

18. Did you ever drink 4 to 6 hours before work?

- YES ☐
- NO ☐

19. Did you ever drink 7 to 10 hours before work?

YES ☐

NO ☐

20. Did you ever drink at work?

YES ☐

NO ☐

If yes, for what reason/s?_____

The following questions ask for some demographic information.

21. Your age:_____ years _____months

22. Sex: Male ☐

Female ☐

23. Your rank: Constable ☐

Constable First Class ☐

Senior Constable ☐

Sergeant ☐

Senior Sergeant ☐

24. Your duties, e.g., patrol, traffic, CIB: _____

25. Do you work shifts? Yes ☐

No ☐

26. How long have you been a serving officer? _____yrs_____mths

Thank you for your assistance.

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If you would be willing to participate in a more in-depth study involving a series of interviews could you please fill in the details below or contact Michelle McNeill at the National Police Research Unit, ph. 08 - 363 3033. Complete confidentiality is assured.

Interviews will be conducted during work hours at a location of your choice.

NAME:_____

CONTACT PHONE No: _____

- -

If you would like to know more about the next study, please contact Michelle McNeill at the National Police Research Unit on Ph. (08) 363 3033 during normal business hours.

Complete confidentiality is assured.

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Mean scores and standard deviations of Role Ambiguity and Role Conflict items for high and low respondents (Rizzo et al., 1970).

	High		Low	
	M	SD	M	SD
Role Ambiguity				
1. I feel certain about how much authority I have	2.71	1.55	2.88	1.33
2. I have clear, planned goals and objectives for my job	2.96	1.30	3.25	1.42
3. I know that I have divided my time properly	3.13	1.04	3.21	1.10
4. I know what my responsibilities are	2.42	0.93	2.54	1.02
5. I know exactly what is expected of me	2.50	1.10	2.83	1.05
6. Explanations are clear of what has to be done	3.21	1.62	3.21	1.10
Role Conflict				
1. I have to do things in a manner which I feel should be done differently	3.78	1.31	3.61	1.44
2. I receive an assignment without the manpower to complete it	3.38	1.53	4.29	1.55
3. I have to buck a rule or policy in order to carry out an assignment	3.54	1.14	3.96	1.46
4. I work with two or more groups that operate quite differently	3.79	1.32	4.25	1.33
5. I receive incompatible requests from two or more people	3.50	1.45	3.96	1.27
6. I do things that are apt to be accepted by one person and not accepted by others	3.92	1.56	4.46	1.32
7. I receive an assignment without adequate resources and materials to execute it	4.00	1.64	4.17	1.58
8. I work on unnecessary things	4.38	1.72	3.92	1.56

APPENDIX C

Mean scores and standard deviations of the Work Spillover Scale for high and low respondents (Small & Riley, 1990)[a].

	High		Low	
	M	SD	M	SD
1. My job helps me to have a better relationship with my partner / family / friends	3.65	1.03	3.35	1.07
2. My job keeps me from spending time with my partner / family / friends	3.65	1.11	3.57	1.27
3. Worrying about my job is interfering with my partner / family / friends	2.58	0.97	2.96	1.12
4. After work I am often too tired to do things with my partner / family / friends	3.13	1.30	3.00	1.06
5. My relationship with my partner / family / friends suffers because of my work	3.21	1.29	3.17	1.24
6. My job makes it difficult for me to enjoy my free time outside of work	2.42	1.10	2.42	0.88
7. The amount of time I spend working interferes with how much free time I have	2.88	1.08	2.79	1.10
8. Worrying about my job makes it hard for me to enjoy myself outside of work	2.09	0.79	2.39	0.99
9. Because I am often tired after work, I don't see friends as much as I would like	3.29	1.00	3.21	1.14
10. My job doesn't affect whether I enjoy my free time outside of work	2.75	1.23	2.58	1.18
11. My job makes it difficult to get household chores done	3.22	1.24	2.70	1.06
12. I spend so much time working that I am unable to get much done at home	2.88	1.04	2.33	0.92
13. Worrying about my job interferes with my ability to get things done around the home	2.25	0.94	2.21	0.93
14. When I get home from my job, I do not have the energy to work around the house	2.88	1.08	3.04	1.04
15. Having a job makes it easier for me to get my household chores done	3.22	0.95	3.61	0.89

[a] Five items, referring to children, were omitted from analyses as they were applicable to only a few respondents.

The number and percentage of high and low respondents who responded to each item of the Work and Family Life Scale (Alexander et al., 1993).

	Not at all				Slightly				Considerably				Extremely			
	High		Low		High		Low		High		Low		High		Low	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Working shifts has a harmful effect on:																
own health	9	36.0	8	30.8	9	36.0	14	53.8	5	20.0	3	11.5	2	8.0	1	3.8
partner's health	7	35.0	12	54.5	7	35.0	8	36.4	6	30.0	2	9.1	3	14.3	2	9.1
relationship with partner	6	28.6	7	31.8	7	33.3	8	36.4	5	23.8	5	22.7	1	16.7	3	11.5
relationship with children	-	-	1	25.0	3	50.0	2	50.0	2	33.3	1	25.0	7	28.0	-	-
social life	2	8.0	6	23.1	11	44.0	7	26.9	5	20.0	10	38.5	-	-	-	-
Working long hours has a harmful effect on:																
own health	10	52.6	10	40.0	5	26.3	12	48.0	3	15.8	2	8.0	1	5.3	1	4.0
partner's health	8	53.3	14	66.7	3	20.0	6	28.6	4	26.7	1	4.8	-	-	-	-
relationship with partner	5	31.3	9	42.9	3	18.8	7	33.3	7	43.8	4	19.0	1	6.3	1	4.8
relationship with children	-	-	1	3.7	1	25.0	1	3.7	3	75.0	2	7.4	-	-	-	-
social life	3	15.8	8	29.6	8	42.1	5	18.5	5	26.3	11	40.7	3	15.8	1	3.7
Recalled whilst on weekly or annual leave has a harmful effect on:																
own health	10	55.6	12	63.2	6	33.3	6	31.6	2	11.1	1	5.3	-	-	-	-
partner's health	10	71.4	12	75.0	2	14.3	3	18.8	2	14.3	1	6.3	-	-	-	-
relationship with partner	7	50.0	8	53.3	4	28.6	3	20.0	2	14.3	3	20.0	1	7.7	1	6.7
relationship with children	4	100	-	-	-	-	2	100	-	-	-	-	-	-	-	-
social life	4	22.2	8	42.1	7	38.9	7	36.8	4	22.2	4	14.8	3	16.7	-	-
Having weekly or annual leave cancelled has a harmful effect on:																
own health	7	50.0	13	76.5	5	35.7	4	23.5	2	14.3	-	-	-	-	-	-
partner's health	7	53.8	10	76.9	3	23.1	2	15.4	2	15.4	1	7.7	1	7.7	-	-
relationship with partner	3	25.0	5	38.5	4	33.3	4	30.8	2	16.7	3	23.1	3	25.0	1	7.7
relationship with children	1	33.3	-	-	1	33.3	1	50.0	1	33.3	1	50.0	-	-	-	-
social life	2	14.3	6	37.5	5	35.7	4	25.0	4	28.6	5	31.3	3	21.4	1	6.3

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	Not at all				Slightly				Considerably				Extremely			
	High		Low		High		Low		High		Low		High		Low	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Having a task which is sometimes dangerous or potentially dangerous has a harmful effect on:																
own health	12	50.0	10	40.0	9	37.5	15	60.0	3	12.5	-	-	-	-	-	-
partner's health	11	55.0	9	40.9	7	35.0	10	45.5	2	10.0	3	13.6	-	-	-	-
relationship with partner	6	28.6	9	40.9	11	52.4	9	40.9	4	19.0	3	13.6	-	-	1	4.5
relationship with children	3	60.0	2	50.0	1	20.0	1	25.0	1	20.0	1	25.0	-	-	-	-
social life	17	73.9	18	72.0	4	17.4	6	24.0	1	4.3	1	4.0	1	4.3	-	-
Being unable to 'switch off' when off duty has a harmful effect on:																
own health	9	45.0	14	56.0	8	40.0	9	36.0	3	15.0	2	8.0	-	-	-	-
partner's health	13	72.2	13	61.9	4	22.2	7	33.3	1	5.6	1	4.8	-	-	-	-
relationship with partner	9	50.0	10	47.6	3	16.7	7	33.3	4	22.2	3	14.3	2	11.1	1	4.8
relationship with children	4	66.7	2	50.0	1	16.7	2	50.0	1	16.7	-	-	-	-	-	-
social life	9	45.0	13	52.0	7	35.0	9	36.0	4	20.0	3	12.0	-	-	-	-
Having to move house because of work has a harmful effect on:																
own health	3	100	8	88.9	-	-	-	-	-	-	1	11.1	-	-	-	-
partner's health	2	100	6	100	-	-	-	-	-	-	-	-	-	-	-	-
relationship with partner	3	100	5	58.3	-	-	1	16.7	-	-	-	-	-	-	-	-
relationship with children	1	100	1	100	-	-	-	-	-	-	-	-	-	-	-	-
social life	3	100	7	77.8	-	-	-	-	-	-	2	22.2	-	-	-	-
Having to work with members of the opposite sex has a harmful effect on:																
own health	1	87.0	25	100	1	4.3	-	-	2	8.7	-	-	-	-	-	-
partner's health	14	70.0	21	95.5	4	20.0	1	4.5	1	5.0	-	-	1	5.0	-	-
relationship with partner	11	55.5	16	72.7	6	30.0	6	27.3	2	10.0	-	-	1	5.0	-	-
relationship with children	3	60.0	4	100	-	-	-	-	1	20.0	-	-	1	20.0	-	-
social life	20	90.9	23	95.8	1	4.5	1	4.2	1	4.5	-	-	-	-	-	-

	Not at all				Slightly				Considerably				Extremely			
	High		Low		High		Low		High		Low		High		Low	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Having rostered shifts altered has a harmful effect on:																
own health	11	45.8	17	68.0	11	45.8	6	24.0	2	8.3	1	4.0	1	4.0	1	4.0
partner's health	9	45.0	17	77.3	8	40.0	3	13.6	2	10.0	2	9.1	2	9.1	-	-
relationship with partner	4	19.0	11	50.0	12	57.1	5	22.7	4	19.0	4	18.2	4	18.2	2	9.1
relationship with children	4	66.7	1	25.0	1	16.7	3	75.0	1	16.7	0	0	0	0	0	0
social life	3	12.5	7	28.0	12	50.0	9	36.0	4	16.7	4	16.7	4	16.0	5	20.0
Being unable to choose exactly when I take annual leave has a harmful effect on:																
own health	17	77.3	18	75.0	4	18.2	4	16.7	-	-	2	8.3	1	4.5	-	-
partner's health	13	68.4	14	70.0	5	26.3	6	30.0	-	-	-	-	1	5.3	-	-
relationship with partner	8	42.1	7	35.0	8	42.1	6	30.0	1	5.3	5	25.0	2	10.5	2	10.0
relationship with children	2	40.0	1	33.3	1	20.0	1	33.3	-	-	-	-	2	40.0	1	33.3
social life	7	31.8	7	29.2	7	31.8	8	33.3	1	4.5	7	29.2	7	31.8	2	7.4

Table E1. The number and percentage of high and low respondents who responded to each item of the Methods of Coping with Stress While On Duty Scale (Alexander et al., 1993).

	Not at all				Sometimes				Frequently			
	High		Low		High		Low		High		Low	
	n	%	n	%	n	%	n	%	n	%	n	%
Work harder	7	28.0	5	19.2	14	56.0	18	69.2	4	16.0	3	11.6
Take things easier at work	8	32.0	3	11.6	14	6.0	22	84.6	3	12.0	1	3.8
Use relaxation exercises	22	88.0	17	65.4	2	8.0	7	26.9	1	4.0	2	7.7
Keep things to myself	2	8.0	6	23.1	14	56.0	10	38.5	9	36.0	10	38.5
Talk things over with colleagues	-	-	3	11.6	18	72.0	16	61.5	7	28.0	7	26.9
Eat more	13	52.0	12	46.2	9	36.0	11	42.3	3	12.0	3	11.6
Eat less	13	52.0	13	50.0	10	40.0	13	50.0	2	8.0		
Smoke more	11	55.0	17	77.3	7	35.0	2	9.1	2	10.0	3	13.6
Smoke less	19	95.0	22	100	1	5.0	-	-	-	-	-	-
Drink alcohol at work	23	92.0	26	100	2	8.0	-	-	-	-	-	-
Delegate more work	14	58.3	16	61.5	10	41.7	10	38.5	-	-	-	-
Delegate less work	18	75.0	22	84.6	6	25.0	4	15.4	-	-	-	-
Seek spiritual help	23	92.0	25	96.2	2	8.0	1	3.8	-	-	-	-
Take it out on colleagues	12	48.0	15	57.7	12	48.0	11	42.3	1	4.0	-	-
Take it out on the public	11	44.0	13	50.0	11	44.0	12	46.2	3	12.0	1	3.8
Take sick leave	15	60.0	17	65.4	10	40.0	9	34.6	-	-	-	-
Take tablets for 'nerves'	24	96.0	24	92.3	1	4.0	1	3.8	-	-	1	3.8
Take physical exercise breaks	17	68.0	17	65.4	8	32.0	7	26.9	-	-	2	7.7

Table E2. The number and percentage of high and low respondents who responded to each item of the Methods of Coping with Stress While Off Duty Scale (Alexander et al., 1993).

	Not at all				Sometimes				Frequently			
	High		Low		High		Low		High		Low	
	n	%	n	%	n	%	n	%	n	%	n	%
Eat more	14	56.0	11	42.3	8	32.0	13	50.0	3	12.0	2	7.7
Eat less	15	60.0	14	53.8	8	32.0	11	42.3	2	8.0	1	3.8
Drink more alcohol	7	28.0	13	50.0	13	42.0	11	42.3	5	20.0	2	7.7
Drink less alcohol	21	84.0	21	80.8	4	16.0	5	19.2	-	-	-	-
Smoke more	12	60.0	16	76.2	6	30.0	3	14.3	2	10.0	2	9.5
Smoke less	19	95.0	20	100	1	5.0	-	-	-	-	-	-
Take work home to think about when at home	18	75.0	22	84.6	2	8.3	4	15.4	4	16.7	-	-
Take things easier	3	12.0	3	11.6	13	42.0	16	61.5	9	36.0	7	26.9
Keep things to myself	5	20.0	7	26.9	13	42.0	7	26.9	7	28.0	12	46.2
Talk things over with family / friends	3	12.0	2	7.7	16	64.0	17	65.4	6	24.0	7	26.9
Talk things over with a professional person	23	92.0	22	84.6	2	8.0	4	15.4	-	-	-	-
Seek spiritual / religious help	23	92.0	25	96.2	1	4.0	1	3.8	1	4.0	-	-
Take it out on family and friends	10	40.0	13	50.0	15	60.0	13	50.0	-	-	-	-
Use relaxation exercises	12	48.0	11	42.3	8	32.0	4	15.4	5	20.0	11	42.3
Take tablets for 'nerves'	24	96.0	24	92.3	1	4.0	2	7.7	-	-	-	-
Take sleeping tablets	21	84.0	23	88.5	3	12.0	2	7.7	1	4.0	1	3.8
Engage more in sport or physical exercise	5	20.0	5	19.2	11	44.0	8	30.8	9	36.0	13	50.0
Engage less in sport or physical exercise	20	80.0	21	80.8	4	16.0	5	19.2	1	4.0	-	-
Engage more in other recreational activities	7	28.0	1	3.8	12	48.0	18	69.2	6	24.0	7	26.9
Engage less in other recreational activities	19	76.0	19	73.1	5	20.0	7	26.9	1	4.0	-	-
Mix more with friends	4	16.0	3	11.5	16	64.0	19	73.1	5	20.0	4	15.4
Mix less with friends	15	60.0	14	53.8	10	40.0	12	46.2	-	-	-	-