

The association of alcohol dependence with general practice attendance

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Abstract

Introduction and Aims. *This study was designed to examine the relationship between alcohol dependence and general practitioner (GP) service attendance in Australia.* **Design and Methods.** *Data were analysed from the 1997 Australian National Survey of Mental Health and Wellbeing. In this survey, a representative sample of the Australian population was interviewed to ascertain past 12 month psychiatric diagnoses for all major mental disorders as well as the use of primary and other health services (n = 10 641, 79% response rate).* **Results.** *People with alcohol dependence comorbid with other psychiatric disorders have higher rates of service usage than those without such disorders.* **Discussion and Conclusions.** *Alcohol dependence comorbid with mental disorders has a significant impact on GP service in Australia. High rates of service use by individuals with such comorbidities were a considerable burden for GP services.* [Proudfoot H, Teesson M. The association of alcohol dependence with general practice attendance. *Drug Alcohol Rev* 2009;28:154–159]

Key words: general practice, alcohol dependence, service use.

Introduction and aims

Alcohol dependence affects some 4.1% of the Australian population in any year [1]. Alcohol misuse results in considerable burden to both society and the individual, and contributes more than 10% to the total health burden in established market economies [2]. Only a small proportion of people with alcohol dependence seek or receive treatment from specialist mental health or addiction treatment services [3].

General practitioners (GPs) play a crucial role in health care in Australia as gatekeepers and providers of early interventions [4–6]. If people with alcohol dependence do not seek specialist care, do they seek care from non-specialists such as GPs? This paper examines the relationship between alcohol dependence and GP service usage; in particular, high service usage. High service use in this context is based on previous research, suggesting that service use beyond the 85th percentile for a particular age and sex subgroup is excessive [7].

There are no data on the influence of alcohol dependence on heavy service use in Australia. High service

users consume a large proportion of GP resources and place considerable burden on the health system [8]. High service use by individuals with unmet treatment needs can be a source of inefficiency in the health-care system. The presence of undetected problems can prolong service usage until such time as the basic cause has been identified. Individuals who are older, female, single, unemployed and from lower socioeconomic backgrounds tend to have higher service use. In addition, those living alone, in poor health with physical and mental health disorders and psychosocial adversity are also higher GP service users [7–9].

The evidence to date regarding the relationship of alcohol dependence and service use is equivocal. It has been argued that those with alcohol problems, especially the young, do not seek or see the need for treatment for such problems [10–12]. Several studies have found that although the presence of a mental disorder increases the chance of any treatment seeking, alcohol dependence alone does not [3,8,13–16]. Anseau *et al.* analysed the prevalence of mental disorders in primary care in Belgium, and found that although mental disorders, including alcohol dependence, were common

in general practice, as were their comorbidities, they tended not to be the stated reason for the visit [17].

Data from the US-based National Comorbidity Survey indicate that alcohol dependence when comorbid with other mental disorders is more likely to lead to treatment seeking than either disorder alone [18]. Furthermore, a recent Australian study by Proude *et al.* found that heavy drinkers were more likely than light or non-drinkers to visit a GP for a range of comorbid health problems [19]. A review of the literature examining the characteristics of high service users found that there was an association between alcohol problems and high use of primary care services, although this was based on only two studies [7].

This paper analyses the Australian National Survey of Mental Health and Wellbeing (NSMHWB) to ascertain how frequently GP services are used by those with alcohol dependence in Australia. Specifically, it examines whether alcohol dependence relates to: (i) any attendance at GP services in a 12 month period; and (ii) high frequency of GP usage in the preceding 12 months. Implications of the findings for general practice and policy are discussed.

Methods

The NSMHWB was carried out in 1997 with a randomised stratified sample of Australians aged 18 years and older. The design and basic findings of this survey have been reported by Henderson *et al.* [20]. In summary, 10 641 respondents (78% response rate) were interviewed using a modified version of the Composite International Diagnostic Interview (CIDI) [21]. The survey provides measures of psychiatric disorders, including alcohol use disorders, as well as disability and chronic physical disorders, along with demographics and service use in the past 12 months. The CIDI has been shown to be a reliable and valid assessment instrument [22].

Alcohol use variables

In the survey, alcohol dependence was assessed in those who had more than 12 drinks in the past 12 months. Current DSM-IV alcohol dependence is present where an individual has met at least three of the following criteria in the past 12 months: (i) tolerance to the effects of alcohol—need more to get desired effect; (ii) withdrawal syndrome: alcohol or similar substance taken to avoid or relieve withdrawal symptoms; (iii) alcohol is taken in larger amounts or for longer periods than required; (iv) persistent desire or unsuccessful efforts to cut down; (v) a great deal of time spent obtaining, using or recovering from the effects of alcohol; (vi) reduction in important social, occupational

or recreational activities because of alcohol use; and (vii) continued use despite awareness of alcohol use causing physical or psychological problems.

The categories of alcohol use disorder used in the present study are based on the notion of ‘dose’ of alcohol use disorder [23,24]. This variable combines alcohol dependence with the assessment of the presence of other mental disorders. Four categories of the alcohol ‘dose’ variable are used:

- 1 non-drinker (<12 drinks per year);
- 2 drinker but not DSM-IV alcohol-dependent;
- 3 alcohol-dependent with no other comorbid mental health disorders;
- 4 alcohol-dependent with comorbid mental health disorders.

Comorbid mental health disorders included any other drug dependence, neurasthenia, and any affective, anxiety or personality disorder. Alcohol abuse disorder was not included as it is regarded as a separate disorder from dependence and is too low prevalence to give useful data in a separate ‘dose’ category.

GP service usage

Two variables were used to assess GP service usage—any GP visits in the past 12 months and high GP use in the past 12 months. In light of the review by Gill and Sharpe [7], high GP use was defined as the top 15% in 12 predefined age-by-sex categories. This method takes into account the large differences in GP usage across age and sex categories.

Data analysis

The NSMHWB data were analysed using SAS-callable SUDAAN, and adjustment was made for the complex sampling frame [25]. Logistic regression was used to determine the correlates of GP use. Correlates of interest were age, sex, measures of psychiatric disorders and the alcohol dose variable. Other sociodemographic variables (education, urban/rural status, marital status) as well as chronic physical illness and disability (number of days out of role in the last 4 weeks) were controlled in these analyses. Confidence intervals were calculated for the prevalences in alcohol dose categories, using the method recommended by Newcombe and Altman [26].

Results

Data from the NSMHWB indicate that the prevalence of DSM-IV alcohol dependence in Australia is 4.1% [3]. The prevalence among men (6.1%) is considerably

Table 1. Prevalence (%) of any GP use in sex, age and alcohol dose categories

Age group	Sex		Alcohol 'dose'				Total
			Non-drinker	Drinker (not dependent)	Alcohol-dependent only	Comorbid alcohol-dependent	
18–34 years	Male	n/total	121/205	723/1063	61/77	48/62	953/1401
		adj. prev.	58.6	68.4	79.3	77.9	68.0
		CI prev.	55.9–66.5	66.2–70.8	62.6–77.4	64.8–82.4	66.0–70.0
	Female	n/total	398/517	1089/1281	30/33	46/49	1563/1876
		adj. prev.	77.3	85.1	92.2	93.2	83.3
		CI prev.	76.3–83.1	83.1–87.2	75.0–98.3	80.8–100.0	82.4–85.8
	Total	n/total	519/731	1812/2384	91/111	94/113	2516/3311
		adj. prev.	70.6	76.4	82.0	83.0	75.6
		CI prev.	68.1–73.7	74.4–77.5	74.0–87.8	75.3–88.9	74.7–77.3
35+ years	Male	n/total	467/570	2051/2596	51/69	56/66	2625/3281
		adj. prev.	82.4	79.1	74.3	85.1	79.7
		CI prev.	78.6–84.8	77.5–80.4	64.0–81.3	74.2–91.7	78.7–81.3
	Female	n/total	1412/1642	2067/2376	27/32	35/40	3541/4070
		adj. prev.	86.3	87.4	83.9	87.0	87.0
		CI prev.	84.1–87.7	85.4–88.4	68.6–92.8	73.3–95.2	85.8–88.1
	Total	n/total	1879/2211	4118/4961	78/101	91/106	6166/7429
		adj. prev.	85.2	82.7	76.5	85.8	83.4
		CI prev.	83.3–86.5	81.9–84.0	68.9–83.5	77.6–91.6	82.1–83.8

adj. prev., prevalence (%) adjusted for sampling by SUDAAN; CI prev., 95% confidence intervals for prevalence; GP, general practitioner; n/total, number in the dose category/total number in the category.

higher than among women (2.3%), with men accounting for nearly 75% of the dependent group. Furthermore, there is a linear decrease in the prevalence of dependence with increasing age. For example, the age group of 18–34 years represents 35% of the population, yet accounts for some 60% of those with alcohol dependence. Thus, in examining prevalence data, the younger age group is considered separately.

Correlates of any GP use

The GP attenders in the past 12 months are more likely to be female [odds ratio (OR) 1.84; confidence interval (CI) 1.60–2.13], aged 55 years and older (cf. 18–35 years; OR 1.63; CI 1.31–2.04) and to have attended a professional service for a mental health problem in the past 12 months (OR 4.56; CI 3.18–6.52). Alcohol dependence was not significantly associated with any GP visits (OR 2.07; CI 0.82–5.20).

Sex and age differences. When considering any GP use in the past 12 months (Table 1), men in the age group of 18–34 years attend at significantly lower rates than women of the same age (overall 15% lower). This sex difference was much less in the age group of 35+ (7%), although still significant.

Alcohol 'dose' and age effects. Overall, the younger group tended to follow a more predictable pattern of

higher contact with GP the greater the alcohol 'dose'. The older group shows a dip in service use for the alcohol-dependent group (non-comorbid) compared with other 'dose' categories, but this is not significantly different from the dependent younger age group. Abstainers in the older group tended to use services at about the same rate as those with comorbid problems. Abstainers and non-dependent drinkers in the older group had significantly more GP service uses than abstainers and non-dependent drinkers in the younger age group. There were no significant differences between the older and younger groups in the 'dependent only' and 'comorbid' categories.

Defining high GP use

Twelve age-by-sex categories were defined and the number of visits required to place an individual in the top 15% (to the nearest whole number) was calculated from the frequency distributions for each of the 12 categories adjusted by SUDAAN. Age and sex categories and cut-off points are listed in Table 2.

For the purposes of this study, men aged 18–29 years were considered high service users if they attended more than four times in a year, while men and women aged more than 70 years were classified as high service users if they saw the GP more than 12 times in a year. Using this cut-off, the top 15% in each age-by-sex

category account for approximately 50% of all GP consultations per annum.

Correlates of high GP use

Controlling for chronic illness, disability and sociodemographic variables, high GP users were more likely to have an anxiety disorder (OR 1.76; CI 1.17–2.64), and attend a professional service for a mental health problem in the past 12 months (OR 2.68; CI 2.08–3.46). Non-dependent drinkers were significantly less likely to have high GP use than non-drinkers (OR 0.58; CI 0.48–0.71).

Table 3 lists the prevalences of high GP usage in age-by-sex categories. Young men and women who were

Table 2. Cut-off points for number of visits defining high GP use (top 15%) for the 12 age-by-sex categories

Age group (years)	Male	Female
18–29	>4	>9
30–39	>5	>7
40–49	>5	>6
50–59	>6	>10
60–69	>10	>11
70+	>12	>12

GP, general practitioner.

alcohol-dependent and who had comorbid mental disorders had the highest levels of high GP use. For both the age groups of 18–34 years and 35+ years, levels of high GP use were significantly greater for comorbid individuals than for those with alcohol dependence alone or non-dependent drinkers. Within both age categories, non-drinkers had significantly higher GP use than non-dependent drinkers. As found with the correlate data above, non-dependent drinkers overall were least likely to be high GP users. The only significant difference between men and women occurred in the 35+ non-dependent drinker group, where women attend GP services less than men. Comparing the two age groups in the alcohol dose categories shows that older non-dependent drinkers are less likely to be high users than younger non-dependent drinkers; and older dependent people with comorbid psychiatric disorders are less likely to be high attendees than their younger (comorbid) counterparts.

The prevalence by dose curves for both age groups with men and women combined was a modified U-shape where non-dependent and dependent only drinkers were least likely to be high GP service users.

Discussion

This study demonstrates that those with alcohol dependence are no more likely to seek GP care than those

Table 3. Prevalence (%) of high GP use in sex, age and alcohol use categories

Age group	Sex		Alcohol 'dose'				Total
			Non-drinker	Drinker (not dependent)	Alcohol-dependent only	Comorbid alcohol-dependent	
18–34 years	Male	n/total	35/175	143/1100	11/73	24/62	213/1331
		adj. prev.	19.9	13.4	15.2	39.2	15.7
		CI prev.	16.8–24.5	11.9–14.4	11.6–22.0	31.4–47.3	14.8–17.4
	Female	n/total	100/526	193/1379	8/36	19/41	320/2000
		adj. prev.	19.0	13.6	21.5	45.9	15.9
		CI prev.	17.1–21.4	12.9–15.3	16.5–33.3	36.5–56.8	15.0–17.1
	Total	n/total	135/711	336/2400	19/112	43/105	533/3331
		adj. prev.	19.3	13.5	16.5	41.4	15.8
		CI prev.	17.3–21.0	13.2–14.9	13.6–22.5	34.9–47.6	15.2–16.8
35+ years	Male	n/total	130/565	337/2592	9/75	22/76	498/3320
		adj. prev.	23.4	13.1	12.3	28.9	15.2
		CI prev.	20.9–25.5	12.2–13.9	9.2–18.5	23.4–36.5	14.3–15.8
	Female	n/total	300/1500	241/2410	5/42	13/48	559/3993
		adj. prev.	19.9	9.7	12.4	26.8	14.0
		CI prev.	18.8–21.4	9.3–10.8	9.0–21.2	20.8–36.7	13.3–14.7
	Total	n/total	430/2048	578/4816	14/117	35/125	1057/7047
		adj. prev.	20.9	11.6	12.3	28.2	14.6
		CI prev.	19.9–22.2	11.4–12.6	9.5–16.9	23.5–33.8	14.5–15.6

adj. prev., prevalence (%) adjusted for sampling by SUDAAN; CI prev., 95% confidence intervals for prevalence; GP, general practitioner; n/total, number in the dose category/total number in the category.

without alcohol dependence. However, when an individual also has a comorbid mental disorder (predominantly anxiety and depression), high use of GP services is observed. This study also presents unique findings in the Australian setting. The NSMHWB, although into its 11th year, remains the only national survey of a randomly selected population sample exploring psychiatric diagnoses and treatment-seeking behaviour in this country.

It is possible that measures of disorders from this sample are underestimates for two main reasons:

- 1 Individuals are likely to under-report their levels of drinking and problems associated with drinking. The impact of this is limited as studies have found reasonable reliability of self-reports especially as assessed by structured diagnostic interviews (e.g. [27–29]). In addition, some studies report that alcohol dependence is over-diagnosed in young people [30]. Nevertheless, the estimates of alcohol use and dependence, although potentially biased, are the best available for this population.
- 2 The NSMHWB was a household survey and as such did not access minority groups with purported high drinking levels, such as prison detainees, hospitalised patients and the homeless.

The likelihood that the prevalence of alcohol dependence is underestimated implies that the relative numbers presenting to GP services with the disorder alone or comorbid with other mental health problems are higher than indicated by the data in this study. They are also likely to be higher than indicated among high service users.

Although young people, and particularly men, are less likely to present to a GP service in a given year, more than three quarters of all young people do, and more than 80% who are alcohol-dependent do. With regard to high use of GP services, those with comorbid alcohol and mental disorders are most likely to be over-represented.

Increasing treatment of alcohol dependence in the general practice setting is an easy and logical suggestion to make given the data in this paper. However, there are considerable barriers, including the increased burden on GPs, an already extended GP workforce, a lack of faith in treatments on the part of GPs, the training requirements so that GPs have the specific knowledge and skills to implement treatments, and general community beliefs and social attitudes about alcohol dependence [1,4,5,31–35].

Despite evidence of efficacy of treatments for alcohol dependence, a recent review and meta-analysis by Beich *et al.* [36] provides some insight into the challenges in this area. The review found that despite evi-

dence that brief interventions can reduce drinking, the process of screening and treating has a very low yield of positive outcomes—that with universal screening, only two to three people per 1000 will actually receive an intervention and benefit from it. The reviewers conclude that this is not likely to provide the incentive that doctors would need to counter the increase in workload because of screening and treatment. It should, however, be noted that a critique of this research by Whitlock [37] takes issue with the assumption that screening yield would be as low in primary care as it was in the studies analysed by Beich *et al.* [36], where exclusion criteria were used.

An added complexity is that patients presenting in primary care for alcohol use disorders will often have comorbid common mental disorders. Research has shown that treating alcohol dependence can ameliorate symptoms of depression and anxiety and may eliminate symptoms altogether [38,39].

Concluding remarks

These Australian data suggest that people with alcohol dependence do see their GP in any one year, and many do so at very high rates. This applies across the age spectrum and is especially true for those individuals who suffer comorbid alcohol and mental health problems. GPs have contact with the large proportion of individuals with alcohol dependence comorbid with other psychiatric disorders. Overall, GP services are currently carrying a significant health burden in our society—greater than would be expected in an optimally funded health-care system [40]. Their role as gatekeeper and primary referral source to specialist care remains crucial.

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