



New Zealand Pacific peoples' drinking style: too much or nothing at all?

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Abstract

Aims To describe the alcohol consumption patterns and related harms of some Pacific peoples (Samoan, Cook Islands Maori, Tongan, Niuean, Fijian, and Tokelauan) living in Aotearoa (New Zealand), and to draw comparisons with measures from the general New Zealand population.

Methods The Pacific Drugs and Alcohol Consumption Survey (PDACS) was carried out with 1103 randomly selected Pacific peoples aged between 13 and 65 years old who were resident in households throughout New Zealand. The survey used computer-assisted telephone interviewing (CATI) and computer assisted cell-phone interviewing (CACI). The interviews were carried out in 2002/03. We descriptively compare findings from the PDACS with those from the 2000 National Alcohol Survey (NAS).

Results Fifty-seven percent of Pacific peoples were drinkers (males 61%, females 51%), compared with 85% of the general New Zealand population (males 88%, females 83%). The average annual consumption of absolute alcohol was 21 litres for Pacific drinkers (males 28 litres, females 14 litres) compared with 11 litres for general New Zealand population drinkers (males 16 litres, females 7 litres). The typical occasional quantity consumed by Pacific drinkers was eight drinks (males: nine drinks, females: five drinks) compared with four drinks for drinkers in the general New Zealand population (males: five drinks, females: around four drinks). Thirty-three percent of Pacific drinkers consumed enough to feel drunk at least weekly (males 41%, females 25%) compared with 9% of drinker in the general New Zealand population (males 13%, females 6%). Eighteen percent of Pacific males and 10% of Pacific females reported being physically assaulted by someone who had been drinking compared with 8% and 5% of national males and females respectively. Twenty-three percent of Pacific males and 16% of Pacific females got drunk when there was an important reason to stay sober, compared with 8% and 5% of general New Zealand males and females respectively. Nineteen percent of Pacific males and 21% of Pacific females reported being involved in a serious argument after they had been drinking compared with 12% and 8% of general New Zealand males and females respectively.

Conclusions The proportion of Pacific drinkers is less than the proportion of drinkers in the general New Zealand population. However, Pacific drinkers consume larger annual volumes and typical occasion amounts of absolute alcohol than drinkers in the general New Zealand population. Pacific peoples drinking patterns appear to be more harmful with greater proportions of Pacific peoples reporting violence and injury from other peoples' drinking, and greater proportions of Pacific drinkers reporting problems from violence and serious arguments as a result of their own drinking

compared with the general New Zealand population and general New Zealand population drinkers.

Past New Zealand national and Auckland regional alcohol telephone surveys¹⁻³ have provided only a limited picture about the pattern of alcohol consumption among some Pacific peoples because of the relatively small size of the Pacific population in New Zealand and because of their lesser access to telephones compared with the general New Zealand population drinkers.⁴

In the *New Zealand Drug Statistics 2001* publication,⁵ data on Pacific peoples from several annual Auckland surveys³ had to be combined to provide a brief picture about Pacific peoples' alcohol use. Those findings showed that 59% (n=760) of Pacific peoples living in Auckland had consumed alcohol in a previous year, with more males than females reporting that they had done so. The average quantity of alcohol consumed by males on a typical occasion varied between five to six drinks for those aged over 30 years, to nine drinks for those aged under 30 years. For females, the average quantity of alcohol consumed on a typical occasion varied between four to five drinks for those over 30 years, to five to six drinks for those under 30 years.

In 2003, it was decided to carry out a Pacific specific national survey to inform policy and practice. The *Pacific Drugs and Alcohol Consumption Survey (PDACS)*⁶ sampled 1103 Pacific peoples using both telephone and cell-phone computer assisted interview survey methods. PDACS collected data over several months from a nationally representative sample of Pacific peoples with and without landline telephones. PDACS provides us with the most comprehensive picture to date of the alcohol consumption patterns of Pacific peoples living in Aotearoa (New Zealand).

In this paper, we outline Pacific peoples' patterns of drinking and harm reported by this survey, and descriptively compare them with those of the general New Zealand population based on findings from the 2000 National Alcohol Survey (NAS).¹ While some methodological differences exist, this comparison enables us to make cautious inferences about differences in potential levels of harm Pacific peoples face due to differences in their pattern of alcohol consumption compared with that of the general New Zealand population.

Methods

Background—Between November 2002 and July 2003, PDACS collected data from 1103 Pacific peoples aged 13–65 years about their patterns of alcohol-use as well as about related harm.

Interviews—The sample was interviewed using computer-assisted telephone interviewing (CATI) and computer assisted cell-phone interviewing (CACI) systems. The survey was translated into four Pacific languages (Samoan, Cook Islands Maori, Tongan, and Niuean) and interviewers who were fluent in one of these languages were available if required. Around 79% of interviews were completed in English, 9% of interviews in Samoan, 9% of interviews in Tongan, 3% of interviews in Cook Island Maori, and less than 1% in Niuean.

The survey questionnaire was designed to provide comparable data to that collected in previous national alcohol surveys.^{1,2} The question format used allowed for collection of beverage and location specific data and has been shown to be a good measure.⁷ In the Pacific survey, one new location (that of celebrations) was added to the locations asked about, and some locations with lower consumption were excluded explicitly but implicitly included in the 'other' location category.

The alcohol measures included annual volume, frequency of drinking, quantity of alcohol consumed on a typical occasion, frequency of drunkenness, and experience of alcohol-related consequences in the previous 12 months from the respondents' own and others' drinking.

Sampling—The survey methodology involved sampling Pacific peoples aged 13 to 65 years from households with land-line telephones via CATI and from households without land-line telephones via CACI.

Households selected for the CATI survey were either selected using random digit dialling (RDD) or randomly selected from a list of published telephone numbers of households with people with ‘Pacific-seeming’ names (first names or second names) drawn from their electoral enrolment details (LEXICON).

Households selected for the CACI survey were selected from within clusters of households from mesh blocks within Statistics New Zealand Area Units via a systematic walk in a random direction from a random starting point. During these walks, the recruiter went door to door looking for Pacific households without a land-line telephone. Pacific members of such households were then given the opportunity to be interviewed using a cell-phone the recruiter was carrying. Hence there were three sampling frames used RDD, LEXICON, and CACI.

Call-backs were done at least 10 times for the RDD and the LEXICON methods, and at least three times for CACI on unidentified addresses to see if these were households with no land-line telephone that included Pacific peoples.

On average about one respondent per household was interviewed. The selection criteria used a combination of random numbers and a birthday question. The birthday question asked, “Who had the last birthday?”

Halfway through the survey, the question changed to: “who had the last birthday?” and “who will have the next birthday?” This change in procedure was made because it was found that the first person contacted was volunteering inappropriately to do the survey. If there was only one Pacific person in a household their probability of selection was adjusted to be 50%.

At the end of the interview a detailed enumeration of the household was made, including ethnic groups to which each member belonged, and then independent random numbers were used to select other members from that household to be interviewed. (The enumeration procedure was not carried out at the beginning of the interview (as is commonly done) because of concern that with this particular population such a procedure would reduce the response rate.)

Selection probabilities at this stage were modified so that people from smaller ethnic groups; for example, Niueans had a higher probability of being interviewed than those from the larger ethnic groups such as Samoan. The goals here were to have enough numbers for Pacific ethnic-specific information as well as obtaining a representative sample of Pacific peoples.

Post-stratification weighting was necessary because different Pacific peoples had different chances of being selected for the survey. The weighting took into account: RDD/LEXICON/CACI sampling frame, household selection, individual selection within each household, compound ethnicity, and census size of each ethnic group (as smaller Pacific ethnic groups were over-sampled). More detail about the weighting is presented elsewhere.⁶

Of the 1103 respondent interviews, 388 were RDD, 610 LEXICON, and 105 CACI. The response rate varied according to the sampling frame used. The response rate for the RDD was 60%, the response rate for the LEXICON was 77% and the response rate for CACI was 44%. The survey had an overall composite response rate of around 66%.

Table 1 shows that the sample is representative of the national Pacific population as the weighted data reasonably matches the gender and age profile of the national Pacific population enumerated in Census 2001.⁴

Analysis—The data were analysed using SAS⁸ and SUDAAN⁹ statistical software following the same procedures for calculating measures of alcohol consumption as used for the 2000 NAS. Small changes in the questions were taken into account in producing derived variables. Where gender and age differences are reported, they are statistically significant at the 5% level.

Table 1. Sample profile shown by gender and age group

Gender	Age Group (years)	Sample Numbers Unweighted	Sample % Unweighted	Sample % Weighted	% Census 2001
Male	13-17	77	7.0	8.7	8.0
	18-20	57	5.2	5.8	4.2
	21-29	99	9.0	9.3	11.1
	30-34	53	4.8	5.0	5.7
	35-44	108	9.8	8.4	9.5
	45-54	74	6.7	6.0	6.2
	55-65	39	3.5	3.9	3.6
Female	13-17	73	6.6	7.0	7.8
	18-20	59	5.3	5.0	4.4
	21-29	150	13.6	13.2	12.1
	30-34	63	5.7	4.4	6.6
	35-44	107	9.7	9.1	10.4
	45-54	81	7.3	7.9	6.3
	55-65	59	5.3	6.1	3.9
Total		1103	100	100	

Results

Table 2 displays various measures relating to patterns of alcohol consumption for the 2003 PDACS and 2000 NAS surveys.

Percentage of drinkers—In 2003, Table 2 shows that over half (57%) of the Pacific respondents were drinkers; more males (61%) than females (51%) drank. In comparison, 85% of the general New Zealand population were drinkers in the year 2000; similar proportions of males and females drank.

Annual consumption—In 2003, Table 2 shows that the average annual volume of absolute alcohol consumed by Pacific drinkers was 21 litres of per annum, and males consumed more alcohol annually than females. In comparison, the average annual amount of absolute alcohol consumed by drinkers in the general New Zealand population was 11 litres in 2000, with males consuming more alcohol annually than females.

Frequency of drinking—In 2003, Table 2 shows that (on average) Pacific drinkers drank approximately two to three times per week, and that Pacific male drinkers (on average) drank more often than Pacific female drinkers. In comparison, drinkers in the general New Zealand population drank approximately three times per week of whom male drinkers drank more often than female drinkers.

Typical quantity—In 2003, Pacific drinkers' average quantity of alcohol consumed on a typical occasion was 8 drinks (1 drink is equal to 15 ml of absolute alcohol—thus 8 drinks is equivalent to 120 ml of absolute alcohol), while Pacific males drinkers'

consumed an average of 9 drinks and Pacific female drinkers' an average of 6 drinks on a typical occasion. In comparison, the general New Zealand population drinkers' average quantity of alcohol consumed on a typical occasion was 4 drinks (61 ml of absolute alcohol) in 2000; of whom males drinkers consumed an average of 5 drinks, and female drinkers an average of 3½ drinks on a typical occasion, respectively.

Table 2. Patterns of alcohol consumption: the 2003 Pacific survey and 2000 National survey compared

	Proportion of drinkers (%)			Average annual volume (litres)		
	All	Males	Females	All	Males	Females
2003 PDACS	57	61	51	21	28	14
2000 NAS	85	88	83	11	16	7
	Average annual frequency (n)			Average typical occasional quantity (ml)		
	All	Males	Females	All	Males	Females
2003 PDACS	133	167	93	120	142	96
2000 NAS	168	203	136	61	72	52
	Proportion drinking enough to feel drunk at least weekly (%)					
	All	Males		Females		
2003 PDACS	33	41		25		
2000 NAS	9	13		6		
	Drinking in own home					
	Proportion (%)		Frequency (n)		Occasional quantity	
	Males	Females	Males	Females	Males	Females
2003 PDACS	72	58	62	48	165	119
2000 NAS	91	89	109	85	75	51
	Drinking in other people's homes					
	Proportion (%)		Frequency (n)		Occasional quantity	
	Males	Females	Males	Females	Males	Females
2003 PDACS	65	66	34	26	189	139
2000 NAS	86	84	26	21	92	59
	Drinking at pubs, hotels, and taverns					
	Proportion (%)		Frequency (n)		Occasional quantity	
	Males	Females	Males	Females	Males	Females
2003 PDACS	44	39	55	36	140	114
2000 NAS	61	51	34	17	84	52

NAS=National Alcohol Survey; PDACS=Pacific Drugs and Alcohol Consumption Survey.

Frequency of 'drinking enough to feel drunk'—In 2003, a third (33%) of Pacific drinkers consumed enough to feel drunk at least once a week, with more males (41%) than females (25%) reported doing so. In comparison, 9% of the general New Zealand population drinkers consumed enough to feel drunk at least once a week; and again, more males (13%) than females (6%) reported doing so.

Location of drinking—In 2003, 72% of Pacific male and 58% of Pacific female drinkers drank in their own home, on average once per week. On such a typical occasion, Pacific males had 11 drinks and Pacific females had 8 drinks. In comparison, around 90% of male and female general New Zealand population drinkers drank in their own home in 2000, on average twice per week. On such a typical occasion, males had 6 drinks and females had 3 to 4 drinks.

Around 65% of Pacific male and female drinkers had alcohol at other peoples' homes on average less than once per week, and on such an occasion (in other people's homes) Pacific males had 12 to 13 drinks and Pacific females had 9 drinks. In comparison, around 85% of male and female general New Zealand population drinkers drank in other peoples' homes in 2000, on average once per week; of whom (on a typical occasion) males had 6 drinks and females had 4 drinks

Forty-four percent of Pacific male and 39% of Pacific female drinkers drank at pubs, hotels, or taverns on average once per week, and males had 9 drinks and females had 7 to 8 drinks on a typical occasion. In comparison, 61% of male and 51% of female general New Zealand population drinkers drank at pubs, hotels, or taverns, on average once per week for males and less than once per week for females; and males drank 6 drinks and females drank 4 drinks on a typical occasion.

Table 3 contains measures of alcohol related harms including harms reported as a result of other peoples' drinking and problems reported from own drinking.

Table 3. Alcohol-related harms: the 2003 Pacific survey and 2000 National survey compared

Proportion (%) of people reporting problems from other peoples' drinking in the last 12 months				
	2003 PDACS		2000 NAS	
	Males (%)	Females (%)	Males (%)	Females (%)
Harms from other people's drinking				
Physical assaults	18	10	8	5
Motor vehicle accident	6	4	2	1
Sexual Harassments	5	10	3	10
Other accidents causing injury or major damage	5	4	2	2
Proportion (%) of drinkers reporting problems from own drinking in the last 12 months				
	2003 PDACS		2000 NAS	
	Males (%)	Females (%)	Males (%)	Females (%)
Problems from own drinking				
Felt alcohol effects next day	48	48	55	45
Unable to remember actions after drinking	30	27	21	15
Felt alcohol effects at Work/Study/Household	24	22	23	17
Got drunk when there was a reason to stay sober	23	16	8	5
Had serious argument after drinking	19	21	12	8
Ashamed of actions while drinking	18	24	15	14
Had physical fight because of your drinking	15	11	5	3
Felt alcohol effect on work performance	14	9	11	6
Stayed intoxicated for several days	11	8	4	2
Taken alcohol drink first thing in morning	8	7	5	3
Had your hands shake a lot in morning after drinking	8	6	5	3
Told to leave because of your drinking	8	6	6	2
Away from work because of your drinking	8	9	4	3
Drinking/Driving & had motor vehicle accident	2	1	0	0

NAS=National Alcohol Survey; PDACS=Pacific Drugs and Alcohol Consumption Survey.

Problems from other people's drinking—In Table 3, findings from the 2003 PDACS show that Pacific men (18%) were more likely than Pacific women (10%) to have reported being physically assaulted in the past 12 months by someone who had been drinking. Pacific women (10%) were, however, more likely than Pacific men (5%) to have reported being sexually harassed by someone who had been drinking.

In comparison, the 2000 NAS findings show that 8% of males and 5% of females reported physical assaults; 2% of males and 1% of females reported being in a motor vehicle accident; and 3% of males and 10% of females reported sexual harassment in the past 12 months as a result of other people's drinking.

Problems from own drinking—Table 3 shows that close to 50% of Pacific drinkers had felt the effects of alcohol (at least once in the previous 12 months) after drinking the night before. Moreover, close to 30% of Pacific male and female drinkers were unable to remember some of their actions while drinking; around 25% of Pacific male and 16% of Pacific female drinkers got drunk when there was an important reason to stay sober; around 20% of Pacific male and female drinkers had a serious argument after drinking; 15% of Pacific male and 11% of Pacific female drinkers got into a physical fight because of their drinking, and 11% of Pacific male and 8% of Pacific female drinkers reported staying intoxicated for several days.

The 2000 NAS showed that 55% of male and 45% of female drinkers felt the effects of alcohol after drinking the night before; 21% of male and 15% of female drinkers were unable to remember their actions after drinking; 8% of male and 5% of female drinkers got drunk when there was an important reason to stay sober; 12% of male and 8% of female drinkers had a serious argument after drinking; 5% of male and 3% of female drinkers had a physical fight because of their drinking; and 4% of male and 2% of female drinkers stayed intoxicated for several days in the previous 12 months.

Discussion

The *2003 Pacific Drugs and Alcohol Consumption Survey* study is important for several reasons. Firstly, it is the first nationally representative survey of the alcohol consumption patterns of Pacific peoples in Aotearoa (New Zealand); secondly, the sample size is large enough to test for differences across gender and age groups; and thirdly, the similarity in methodology with the 2000 NAS has allowed for some descriptive comparisons to be made.

PDACS 2003 has shown that Pacific male drinkers tended to consume more alcohol annually than Pacific female drinkers apart from the 18–20 and 35–44 year aged groups where both sexes consumed similar annual amounts. In general, Pacific drinkers aged 18–20, 21–29, and 30–34 consumed more alcohol annually than their 13–17, 35–44, 45–54, and 55–65 age groups. The finding that males tended to consume more alcohol than females, and younger age groups consumed more alcohol than older age groups, is common to most populations (including the general New Zealand population).

The main findings were that the proportion of Pacific drinkers is less than the proportion of drinkers in the general New Zealand population. Forty-three percent of Pacific peoples abstained from drinking alcohol (during the previous year) compared to 15% of the general New Zealand population. However, Pacific drinkers consumed larger annual volumes of absolute alcohol and higher quantities of absolute alcohol (on a typical occasion) than general New Zealand population drinkers.

The lower proportion of drinkers among Pacific peoples may be a result of alcohol not existing in the Pacific Islands prior to first contact with Europeans and due to the fact that the acceptability of drinking alcohol within Pacific cultures is low. Large

quantities of alcohol being consumed on a typical occasion is similar to findings from qualitative research.¹⁰

Previous research has concluded that alcohol plays a social role similar to that of food in Pacific societies. Like food, alcohol brings people together and as such alcohol is drunk in groups with a generous quantity of alcohol available because the quantity of alcohol represents the generosity of the group towards its members.¹¹ And just like food, alcohol is usually consumed until a person is full or until it is finished.¹¹

Compared to general New Zealand population drinkers, higher proportions of Pacific drinkers reported occasions of being in physical fights, having serious arguments, staying intoxicated for several days, and getting drunk when there was an important reason to stay sober (as a result of their own drinking). However, the proportions of Pacific drinkers who reported feeling the effects of alcohol the next day and while at work, study, or doing household duties was similar to the proportions reported by general New Zealand population drinkers.

In addition, compared to the general New Zealand population, higher proportions of Pacific peoples reported being involved in motor vehicle accidents, other accidents that caused serious injury and physical assaults (as a result of other people's drinking).

The 2003 PDACS and the 2000 NAS differ in some of their methodology. The 2000 NAS did not have a CACI sampling frame so only those households with land-line telephones were interviewed. However, previous research has indicated that alcohol measures for the general New Zealand population are not affected by the absence of non-telephone households in the survey (as land-line telephone ownership is high).¹² In order to achieve a sufficient sample of Pacific peoples in PDACS, three sampling approaches were used. While each had its limitations, the combination of the three provided a reasonably representative sample.

The PDACS interview schedule included very similar questions, and the CATI interview process was identical. Details about the measures obtained and the CACI interviewing procedure are available in previously published material.^{1,13}

We must also take care when making comparisons between the 2003 PDACS and the 2000 NAS because (as previously mentioned) there were some differences in measures between the two surveys. The main difference in measures was the addition of celebrations as a location where alcohol was drunk. Celebrations were included given the known importance of this location for Pacific drinkers. An artefact of the inclusion of this location may be an increase in consumption measures. However, celebrations accounted for only 4% of the total volume of annual alcohol consumed for Pacific drinkers (2% for males and 5% for females) and therefore it is unlikely that the inclusion of this location is responsible for the large differences seen in annual consumption and typical occasional quantity between Pacific drinkers and general New Zealand population drinkers.

The 2000 NAS is the most current available data that is comparable to the PDACS, but the 2003 alcohol environment was different compared to 2000 because there was approximately 6% more total alcoholic beverage available for consumption¹⁴ and this needs to be considered when interpreting differences. Finally, comparison with data

from the Auckland-only sample of Pacific drinkers collected in the 1990s showed similar levels of consumption.

In conclusion, we are confident that (compared with the general New Zealand population) these findings show that relatively fewer Pacific peoples drink alcohol, although those who do drink consume larger annual amounts of absolute alcohol and quantities of absolute alcohol on a typical occasion.

Indeed, that finding coupled with the measures of self-reported harm show that Pacific peoples' drinking patterns are more harmful (both to themselves and others) than those of the general New Zealand population.

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