

# The adverse effects of kava

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## Abstract

In Fiji, kava is also known as yaqona or grog. A convenient sample of 300 kava drinkers in Nadi, Lautoka, Ba and Sigatoka were studied to see whether local people in Fiji experienced side effects of kava use. Because males usually consume kava in Fiji, we approached specific groups of people and asked them to participate in the survey. To evaluate the side effects of kava consumption, we interviewed housewives of male kava drinkers regarding specific effects of kava. We interviewed these housewives during kava drinking sessions since they were usually not taking part in the kava drinking. We also interviewed employers of these kava drinkers and the market vendors in Nadi Town since they were closely involved with kava drinkers. Wives of kava users felt deprived of basic family needs due to the amount of money spent on kava. In Urban schools, 64% males and 46.2% had tried kava. The present study aims to assess the prevalence of side effects of kava usage among a community sample of kava drinkers in Fiji and to compare the result with some of the side effects provided by other studies.

The questionnaire also asked how much kava was consumed and the reasons. Since kava use is very much part of our everyday culture and existence, convincing people to change their behavior and kava consumption is a major task. I hope that this study would emphasize the need at a national level to educate people on the harmful effects of kava and the need for the health ministry to view very heavy kava intake as contributing to morbidity in Fiji.

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## Introduction

Kava the rhizome of the pepper plant *Piper Methycticum* Forst has been widely used in the South Pacific as a narcotic drink. In Fiji, kava is also known as yaqona or grog. Kava is prepared by grinding to powder the dried root (called waka in Fijian) or stalk (called lewena in Fijian) of the plant (usually 3 to 5 years old plant). The powdered kava is then mixed with water by straining through a thin cloth in a wooden bowl (called tanoa in Fijian) or pottery bowl (called dari in Fijian). Depending on the circumstances, the kava is served in a bowl (coconut shell) and the order of serving dictated by order of chiefly rank, seniority or age.

Kava plays has an important role in the lives of many people in the Pacific Islands. Its origin is usually part of the people's mythology, and its consumption frequently follows a hierarchical and strict ceremonial form. It has been used in supplications to gods and ancestral spirits. In Fiji, for example, it is thrown in the sea to appease the shark god (Dakuwaqa). It is also used as a ritual offering or form of payment. Any visitor to a new place or anyone making a request is expected to present kava as part of a 'sevusevu'. It is also used as a medium for reconciliation called a 'Soro'. Besides its use for ceremonial occasions, kava was also used as a medicinal plant for a variety of complaints.

When missionaries in Fiji first encountered kava, attempts were made to wipe out its consumption, both as a rejection of the older religion, and as an extension of the temperance movements that were active at the time. Some of these attitudes still remain today. Modern day proponents of kava-use downplay its possible side effects and they attribute the negative concerns to old-fashioned religious attitudes against its use. However, within Fiji there continues to be significant concern about the negative effects of kava usage on individual health and family life. Market Vendors in Nadi stated that they sold about 1.5 tons of dried kava per week worth about \$60,000 and some heavy consumers spent as much as 20% of the household income on Kava. Some employers stated that because heavy consumers tended to be irregular and not punctual for work, they were against the consumption of Kava by their employ-

**Table 1. Subject characteristics**

District	Occasional user (100g/week = \$4/week)		Heavy user (300g/wk = \$12/wk)		Very heavy user (500g/wk = \$20/wk)		Total
	Male	Female	Male	Female	Male	Female	
Nadi	13 (8.6%)	29 (19.3%)	22 (14.6%)	14 (9.3%)	65 (43.3%)	7 (4.6%)	150
Sigatoka	12 (24%)	10 (20%)	10 (20%)	1 (2%)	15 (30%)	2 (4%)	50
Ba	6 (12%)	8 (16%)	10 (20%)	2 (4%)	23 (46%)	1 (2%)	50
Lautoka	5 (10%)	7 (14%)	7 (14%)	7 (14%)	23 (46%)	1 (2%)	50
Total	36 (12%)	54 (18%)	49 (16.3%)	24 (8%)	126 (42%)	11 (3.6%)	300 (100%)

ers. Wives of kava users felt deprived of basic family needs due to the amount of money spent on kava. In addition, the children perform poorly in school because of the lack of proper educational materials and parental supervision.

These concerns however are muted by the widespread support of kava usage in advanced countries like USA where it is being promoted as a herbal product for achieving relaxation. In addition, kava on the local scene in Fiji has become an important export product and significant money-earner for village farmers. Kava usage is the most commonly used drug in Fiji, and by adolescence, most Fijian have had the opportunity to try it. In a study of urban and rural school students in Fiji who are in Forms 2-4, 57% of male and 30% of female had tried kava<sup>1</sup>. In Urban schools, 64% males and 46.2% had tried kava.

There have been some studies that have also looked at the prevalence of side effects in people who consume kava in the Pacific. A major study by Matthews et al<sup>2</sup> among Australian aborigines<sup>2</sup> has been criticized by those who are pro-kava on the grounds that the side-effects mentioned reflect heavy usage and the underlying poor health of Australian aborigines rather than direct effect of kava usage. The present study aims to assess the prevalence of side effects of kava usage among a community sample of kava drinkers in Fiji and to compare the result with some of the side effects provided by other studies.

## Methods

A convenient sample of 300 kava drinkers in Nadi, Lautoka, Ba and Sigatoka were studied to see whether local people in Fiji experienced side effects of kava use. Because males usually consume kava in Fiji, we approached specific groups of people and asked them to participate in the survey. Kava is usually consumed communally and each person is expected to contribute to the amount used during a session. In addition, the amount of money that an individual spend on purchasing yaqona for a particular kava drinking session is approximately equivalent to the amount of kava they consume.

The degree of kava consumption was classified according to the classification used in the Australian Aborigines Study<sup>2</sup>

which used the following classifications - Non-user, Occasional User (100gram/week), Heavy User (310grams/week), Very Heavy User (440grams/week). This study further classified the groups into their ethnicity - Fijian, Indo-Fijian and Others.

To evaluate the side effects of kava consumption, we interviewed housewives of male kava drinkers regarding specific effects of kava. We interviewed these housewives during kava drinking sessions since they were usually not taking part in the kava drinking. We also interviewed employers of these kava drinkers and the market vendors in Nadi Town since they were closely involved with kava drinkers.

## The survey instrument

The questions used during the interviews are open-ended questions about health, effects on finance, family responsibilities, social and professional aspects of kava use. The questionnaire also asked how much kava was consumed and the reasons. Wives were asked the similar questions in addition to average household expenditure on kava and other goods. Employers were asked about their attitudes to kava use in the workplace and at home.

## Results

The result of the study (see Table 1) appears to be consistent throughout the four cities except in a few categories. Generally, the women are more likely to be occasional users of kava than men and they form 60% of the total in this category (54 out of 90). In addition, 60% of this category (table 2) are Indo-Fijians, 30% Fijians and 10% Others. Women however only form 8% of the "Very Heavy User" category. Male users of kava are 2 times more likely to be "Heavy Users" compared to female kava drinkers (16% vs 8%). The "Very Heavy User" category (see Table 1) however is predominantly male and comprises 92% of this population (126 out of 137). In addition, 60% of this category are Fijians compared to 20% Indians and 20% Others (see Table 2).

As expected, there is an increase in frequency of side effects from kava compared to the degree of consumption (see Table 3). This is true for all categories of symptom

**Table 2. Ethnicity and quantity of kava consumed**

	Fijians	Indians	Others
Occasional Users	27(30%)	54(60%)	9(10%)
Heavy Users	29(40%)	29(40%)	15(20%)
Very Heavy Users	83(60%)	27(20%)	27(20%)

examined. Interestingly, there is little health problem reported in people who are "Occasional Users" of kava. Poor health was not a problem in the "Occasional User Category" (OUC) but was a feature in 15% and 23% of the "Heavy User Category" (HUC) and "Very heavy User Category" (VHUC) respectively. The most common symptoms are watery eyes (57% of HUC vs 72% of VHUC) and kanikani (65% of HUC vs 78% of VHUC). Loss of appetite was significantly more frequent in VHUC (44% of VHUC vs 7% HUC). However, only 4% of the VHUC complained of weight loss compared to none in the other two categories. Loss of coordination was a feature in 37% of VHUC compared to 12% in the HUC.

## Conclusion

The main reasons provided by people in this study groups for consuming kava include – relaxation and relieving tensions, improving urination, assist in providing good sleep, socialize with other people, improving male sex drive when taken in moderation and to reduce high blood pressure.

The majority of wives of kava drinkers interviewed however, expressed concern about their husband's failure to fulfill their sexual desires as a result of kava drinking. This has resulted in extramarital affairs in a proportion of women. The sexual difficulties their husbands faced included both the loss of sexual drive and impotence.

This study demonstrates that although OUC has little kava side effects, there is increasing health problems when one consumes increasing amount as noted in the HUC and VHUC. The results of the present survey are much the same

as that demonstrated for the Aborigines study<sup>2</sup>. It demonstrates increasing prevalence of symptoms such as poor health, headache, chest pain, and indigestion in those who drink-increasing amounts of kava particularly when one progress from OUC to VHUC. Close to 50% of the people who consumed kava in this survey, belonged to the VHUC. This result subsequently raises the issue that kava consumers have a 50% chance of being in the VHUC and subsequently exposed to the potential health problems discussed above. It also raises important issues concerning financial, physical and social problem associated with VHUC.

It is also contradictory that the reasons for consuming kava (relaxing, sleeping well, improving sexual drive, etc) is being negated by heavy use and despite the frequency of symptoms discussed, 50% of the people surveyed are in the VHUC. This may however still be true for the OUC particularly when little health problem was reported.

The economic state in Fiji is far behind that in Australia where the study was conducted in a group of Aborigines. One can therefore imagine the stress that kava drinkers put on financial and social situation in Fiji. Our data supports the results found by Matthews et al, and suggests that there are significant health and social effects due to the consumption of kava, which should not be ignored.

Apart from health issues, kava has on a few occasions challenged other issues particularly in the field of "Driving Under the Influence of Kava". In Fiji, this is practiced widely throughout the country since consumers view it not to be a driving hazard. Our figures indicating that 50% of consumers are in the VHUC raises the concern about evaluating the

**Table3. Reported adverse effects of kava usage**

	Occasional user 100g/wk (\$4.00)	Heavy user 300g/wk (\$12.00)	Very heavy user 500g/wk (\$20.00)
Poor Health	0	11(15%)	31(23%)
Headache	3(3%)	29 (40%)	66(48%)
Chest pain	0	17(23%)	74(54%)
Loss of appetite	0	5(7%)	60(44%)
Weight Loss	0	0	5(4%)
Indigestion	9(1%)	12 (16%)	40(29%)
Loss of coordination	6(7%)	9(12%)	50(37%)
Watery eyes	0	42 (57%)	97(72%)
Kanikani	0	47(65%)	107(78%)
<b>Total Number</b>	<b>90</b>	<b>73</b>	<b>137</b>

kava-associated driving accidents which has been reported in California (USA) and New Zealand<sup>4</sup>.

In conclusion, there is increasing health problem in heavy kava drinkers, which are not in keeping with the expected reason for use. There is a 50% likelihood to be a very heavy user of kava in kava drinkers and this category provides the most symptomatic people with health problems. Women are more likely to be occasional users of kava and this group has very little symptoms of disease. The health and social difficulties mentioned needs to be addressed seriously by the health ministry since it may be an important factor in disease prevention and health promotion. Since kava use is very much part of our everyday culture and existence, convincing people to change their behavior and kava consumption is a major task. A major step towards this change in behavior is the need to nationally recognize that there is a drug problem in Fiji. Unfortunately, this first step has not been promoted or reached in Fiji.

I hope that this study would emphasise the need at a national level to educate people on the harmful effects of

kava and the need for the health ministry to view very heavy kava intake as contributing to morbidity in Fiji.

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## References

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The art of healing comes from nature not from physicians.  
Therefore the physician must start from nature, with an  
open mind.

**Paracelcus (1493-1541) in Seven Defences**