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DISSERTATION

***“The influence of culture on the relationship between
psychoactive substance use and the likelihood of
engaging in risk behaviour”***

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ABSTRACT

Aims. *To investigate the pattern and motivation for psychoactive substance consumption and risk behaviour while intoxicated. Also to explore to what extent intoxication is perceived to be related to likelihood of engaging in risk behaviour and to compare the outcomes between Brazilians and British subjects in London in order to examine whether cultural background is significant.* **Design.** *Cross-sectional survey in which subjects were recruited by 'direct contact', contact with Association of Brazilian Post-Graduate Students (ABEP) and a snowballing procedure.* **Setting.** *For 'direct contact', subjects were mainly approached for invitation for completion of the questionnaire in universities and students common areas.* **Participants.** *Fifty-two participants (26 Brazilians and 26 British) aged between 18 and 35 years were recruited.* **Measurements.** *Life-time and last twelve months prevalence of psychoactive substance use focusing on alcohol consumption was also investigated. Also life-time and current sexual activity, sexual risk behaviour (after and without drinking alcohol) and perceived influence of intoxication on likelihood of engaging in risk behaviour were studied.* **Findings.** *The life-time and last 12 months drug and alcohol consumption were considerably higher in the British sample than the Brazilian sample. In this study, British subjects reported drinking alcohol more frequently for social/contextual functions. British subjects reported sexual risk behaviour after drinking alcohol more frequently than the Brazilian participants. The British self-reported stronger alcohol perception influence on risky sexual behaviour (e.g. sexual activity without condom use). The Brazilians were more likely to participate in risky sexual behaviour (e.g. anal sex without condom use) regardless of alcohol intake.* **Conclusions.** *If these findings are confirmed in larger studies, further efforts on education and prevention campaigns for psychoactive substance consumption and sexual transmitted diseases, HIV/AIDS should be combined and redirected for target populations.*

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D. L. Vieira

The Influence of Culture on the Relationship Between Psychoactive Substance Use and Likelihood of Engaging in Risk Behaviour.

INTRODUCTION

Literature Review

'Risk', this little four-letter word that can have different meanings and various consequences. Whatever the way of looking at or perceiving 'risk' to be, it contains a degree of 'uncertainty'. In this study, the concept of 'risk' used was the "existence of threats" to life or health (Fischhoff *et al.*, 1981, cited in Yates & Stone, 1992). Considering this definition, various types of behaviour are 'risky', "threatening" life or health.

'Speed racing', 'drunk driving', 'an individual eating something he knows he is seriously allergic to', 'taking drugs' are different examples of 'risk' behaviour and in all of them the "existence of threat" to life or health is present.

The target 'risk' behaviour in this study is sexual risk behaviour, where individuals have sexual intercourse without using condoms, where the individual puts themselves at risk of being infected by a sexual transmitted disease. Condom use in sexual intercourse is perceived as 'safer sexual practice'. All the relevant definitions of sexual risk behaviour for the present study will be listed shortly.

Psychoactive substance use, especially stimulants (e.g. cocaine hydrochloride, amphetamines and methylene dioxymethamphetamine MDMA - Ecstasy) have been associated to 'risk behaviours'. Several studies have been carried out to investigate the relationship between sexual risk behaviour and substance use (Cooper, 1992; Rhodes & Stimson, 1994; Strunin & Hingson, 1993; Halpern-Felsher *et al.*, 1996; McEwan *et al.*, 1992; Plant, 1990; Senf & Price, 1994;

Lauchli et al, 1996). The reason might be because many people use drugs, either licit or illicit (or both), and most people are sexually active. Young adults (as a group) report high levels of both sexual activity and alcohol use (Graves & Leigh, 1995). And to put these two variables together is not difficult, especially because these two little words 'sex', 'drugs' always seem to beg an 'and' in between (Rhodes, 1996). The act of taking drugs is popularly perceived, at least in some circles, to enhance the act of having sex, in the same way that the act of having sex is popularly perceived to enhance the effects derived from drug taking (Rhodes, 1996).

Intriguingly, the outcomes of the studies are very different (which make interpretation very difficult to assert) some researchers have found a relationship between substance use and inconsistency in condom use (Strunin & Hingson, 1993) while others have not found any such correlation (Senf & Price, 1994). In many cases, however, when a correlation between substance use and likelihood of engaging in risk behaviour is found, this relationship is not statistically significant.

Recent studies of the relationship between alcohol, drugs and safer sex are careful to point out that correlation does not necessarily mean causation (Plant 1990; Stall & Leigh, 1994). Findings to suggest that alcohol and drugs are statistically associated with sexual risky behaviour could be a product or artefact of a specific methodological approach (Graves & Leigh, 1995), and may also be due to the specific populations studied. For instance, subjects who participated in these studies might have either very similar or very different attitude towards alcohol and drug use and sexual risk behaviour, which might make it difficult to find a correlation between the variables. Variables that might lead to a different outcome "in the same sample population" include, for example, nationality, race, ethnic group, gender, age, educational and social-economic backgrounds and status, religious background, culture, personality, etc. Another aspect that can 'bias' the outcome is where the cohort is taken from. Samples recruited from bars might contain a larger proportion of people who regularly combine substance use and sex, or who, generally speaking,

engage in more risky sex; consequently, leading to an overestimation about the relationship between substance consumption and risky sexual behaviour (Graves & Leigh, 1995). It has therefore been difficult to 'prove' the correlation between drug/alcohol use and likelihood of engaging in sexual risk behaviour. There is evidence that alcohol increases the likelihood of sexual behaviour that puts a person at risk of HIV infection. However, the relationship between these two variables is complex and not very well understood (Cooper, 1992).

Psychoactive substances, such as alcohol and stimulants, are believed to alter people's perceptions and behaviour. It is important to highlight that what people think, perceive and expect from substances is not only based in their pharmacological knowledge of the drug, but also the social organisation of knowledge in different social settings and/or subcultures (Becker, 1967, 1977; Zinberg, 1974). The effects of the drugs on sexual behaviour are socially and culturally organised. Howard Becker states that "when a person ingests a drug his subsequent experience is influenced by his ideas and beliefs about that drug because what he knows about the drug influences the way he uses it, the way he interprets its manifold effects and responds to them, and the way he deals with the sequelae of the experience" (Becker, 1977).

Some psychoactive substances act as reinforcers (e.g. alcohol, amphetamines, and cocaine) and there is also the popular and common-sense belief that they have a 'disinhibitive' characteristic. As, for example, in the case of certain stimulants that are believed to have aphrodisiac and disinhibitive effects. 'Ecstasy', for instance, is popularly known to be a 'love-drug', whether or not they have tried the drug or experienced these effects. People expect stimulants and alcohol, to have disinhibitive effects, particularly as far as sexual behaviour is concerned (Rhodes, 1996).

Rhodes (1996) uses the definition 'social pharmacology' to explain that the expectations and beliefs of the pharmacological effects of a substance are socially

and culturally organised. What people expect and perceive about the pharmacological effects of the drugs on sexual behaviour depends on the social context, culture and subculture. Thus, it is also important to highlight culture differences regarding to sexual behaviour. Some cultures behave in a more sexually explicit way than others and have more liberal attitudes towards sex. An example is Amsterdam (Holland), which is famous for its liberal and open attitude towards sex and also towards drugs. Where cannabis, for example, can be smoked in some “coffee shops”.

The influence of culture plays a complex role in the natural history and psychosocial development of alcohol and other drug use behaviour (Orlandi, 1992). According to Heath (1986), there are more than 200 hundred definitions of culture, however, there is little agreement on a commonly accepted or universal definition.

Culture was defined in earlier literature as the customs, beliefs, values, knowledge, and skills that guide a people’s behaviour along shared paths (Linton 1947); social norms which are the shared rules that specify appropriate and inappropriate behaviour (Berne 1964); the norms that people consider vital to their well-being and to the most cherished values (Bellah et al. 1995); and the socially imposed rewards and punishments that compel people to comply with norms (Light and Keller 1985).

Considering that culture is the shared values, norms, traditions, customs, arts, history, folklore and institutions of a group of people (Orlandi, 1992) and language, the Brazilian and the British culture will be assumed to be different.

According to the literature, 'risks' are not simply or only calculated by individuals, and neither is risk-related action necessarily individually 'chosen' or 'decided' upon. The costs and benefits of actions are socially organised because individuals' own thinking and behaviour are influenced by what is socially acceptable and legitimate (Rhodes,1995). Mary Douglas (1986) states "if a group of individuals ignore some manifest risks, it must be because their social network encourages them

to do so. Their social interaction presumably does a large part of the perceptual coding on risks". An example of this social interaction is when, in a couple one of them is known to be HIV positive, they choose not to use condoms and put the partner at risk of infection, because for them loss of their intimacy and trust is a greater cost than being infected (Rhodes, 1995).

Rationale for the Study

Various studies have been carried out investigating the relationship between drugs, alcohol and risk behaviour, but none of them with Brazilian population in London. It is estimated that 70,000 Brazilians live in England, with the majority residing in London.

The purpose of this study is to investigate and compare the influence of intoxication on likelihood of engaging in sexual risk behaviour between Brazilians and non-Brazilians (British). Whether people perceive influence of psychoactive substance consumption and risk behaviour whilst intoxicated and when not under influence of intoxication. Furthermore, to examine the pattern and motivation for substance consumption, whether they become intoxicated to engage in such risk behaviour or engage in risk behaviour because intoxicated. Whether substance consumption is an excuse or reason to behave in a 'mad', 'bad' or unsafe manner, which people would not have such behaviour if not intoxicated. In other words, is intoxication a casual factor, *explanation* or *legitimater* of high health risk taking? Individuals might make implicit and explicit choices to become intoxicated to engage in behaviour that is legitimated in this social context. In this case, intoxication is therefore both a facilitator and legitimater of behaviour that the individual wishes to pursue but is not socially acceptable in a non-intoxicated state.

This study is going to investigate substance use (licit and illicit drugs), but it will focus especially on alcohol, because it is a legal drug (therefore, easily found and bought) and it is often and widely associated with pleasure and celebration. This association makes it a drug of choice of many people including young people (making alcohol largely consumed) who refer to alcohol as being a substance to relax to 'have laughs' and 'time out' with friends and partners (Parker, Aldridge & Measham, 1998). This fact might also be due to the belief that alcohol acts as a disinhibitor.

Two different groups (Brazilians and British) were used in this study to investigate pattern and motivation of drug use and drinking. Perception of intoxication and the likelihood of engaging in risk behaviour to see if there is any significant difference in behaviour whilst being intoxicated and when not, and whether culture influences these behaviours were also investigated.

Aims of the Study

The aims of the study are:

- to investigate pattern and motivation of psychoactive substance consumption;
- to investigate sexual risk behaviour without and after drinking alcohol;
- to explore how intoxication is perceived to be related to likelihood of engaging in risk behaviour;
- to compare the outcomes between Brazilians and British in order to examine whether the cultural variable is significant or not.

Hypothesis

Psychoactive substance use influences the likelihood of engaging in sexual risk behaviour and cultural background influences drug and alcohol consumption patterns and sexual behaviour.

Null Hypothesis

There is no difference in drug and alcohol consumption patterns and risk behaviour between the nationalities and there is no association between drug and alcohol consumption and likelihood of engaging in sexual risk behaviour.

Definitions

For the purpose of this study, sexual risk behaviour is defined as the behaviour that increases the participants' potential risk of unintended pregnancy or of acquiring a sexually transmitted infection (Blakey *et al*, 1997). Such behaviour may include:

- unplanned sexual intercourse;
- non-consensual sexual intercourse;
- sexual intercourse without contraception;
- sexual intercourse without condoms as prophylaxis against sexually transmitted infections;
- sexual practices, e.g. unprotected anal sex, oral sex, 'vigorous sex' (in which the strength and speed of the movements could more easily hurt the genitals of the people involved, producing micro cuts where blood contact would be more likely to occur, and even if a condom is used, the condom is more likely to tear or come off) which are associated with higher risk of HIV infection;
- unprotected sexual intercourse with multiple partners;
- sexual activity which involves violence.

It is also important to define the term 'culture', within the context of personal and public health, as it is an essential issue in this study where two nationalities have been compared.

In this study, culture has been defined as a collective expression for behaviour patterns acquired and socially shared and transmitted through symbols, including: customs, beliefs, values, knowledge, traditions, social norms, values, arts, history, folklore and language.

Brazil is a considerably young country (it was discovered in 1500), with a large continental area. Due to colonisation and immigration, there is a wide cultural diversity (mixed races, several ethnic groups, different religions, etc.) in the country.

Great Britain has a “longer period of history” and there are also cultural diversities due to immigration to this country.

According to this, the Brazilian and the British cultures have been assumed to be different.

Unfortunately, the cultural differences in behaviour and attitude which are highlighted here regarding the two nationalities compared in this study, are based only in observations and stereotypes of Brazilian and British people.

Cultural Issues

This section presents a description (from the author's personal perspective) of the main relevant features and differences between Brazilian and British people.

Brazilians

Brazilians when talking about themselves would say that they are friendly, loud, talkative, passionate, hot blooded, sensual, they like flirting, making love and enjoying life. They tend to be hopeful and optimistic, expecting that everything is going to be better.

They are not very organised or disciplined, leaving things to be done at the last minute because they think they would have enough time.

As the climate is tropical in the major part of the country and due to a large extension area by the sea, where many big cities are located, they have a very expressive "body culture". They like showing their bodies and they wear clothes that highlight the body's shape and/or leave shown/bare part of their bodies. They exercise to be fit and in 'good shape'; they also have a large cultural dance background, where sensuality is widely explored. They like eye and physical contact; body language and touching all of which are strong features among Brazilians.

They are not "politically correct", because, very often they are selfish and "immediatist" (it has to be now, immediately, no time wasting, they cannot wait to get what they want!) because they think everybody would "save their own skin" instead of thinking about not harming other people. It is "save yourself if you can" politics.

They don't trust their government (one of the reasons might be that corruption is believed to be high in Brazil). The population has numerous problems, including financial (which is the main issue because as educational, health and basic care policy in general in Brazil does not work well, if the individual does not have money, he will not have good basic care. This is cyclic: no money, no basic care; no basic care, difficulties to be healthy [about 70% of the population suffers from different

degrees of malnutrition. Fernandes, 1990], *educated and skilled to earn money*). The health situation in Brazil is a reflection of the poor educational, economic, and social conditions in general (Fernandes, 1990). *But even though, Brazilians try to enjoy life because they think they deserve it, and as they work hard, they deserve a reward.*

They don't know their own rights. They like arguing and complaining, though. They are temperamental; straightforward (direct); conservative (due to Christian background, a major part of the population is Catholic) and impatient.

Although Brazil is one of the ten biggest economies of the world, it is the second worst country in wealth distribution where most of the population is poor, have no education (many are illiterate) and very little access to information, health and basic care. These are important features where behaviour, risk behaviour and prevention are concerned.

British (particularly, the English)

British people seem to be shy, reserved, very controlled regarding to their emotions (you never know what they are thinking or feeling, the emotions seem to be kept inside) when they are sober, because when they are intoxicated they lose/soften their serious expression.

They are polite but not necessarily friendly. They are always in a hurry as if they didn't have time for anything, including when talking about the way they drink (they drink a lot and fast). As the pubs close at 11 p.m., the young people particularly seem to want to make "the most of it", taking the chance and drinking as much as they like before the pub closes. As a result what often occurs is that many people become completely drunk before 9 p.m.).

They have easy access to information, education, health and basic care. They have the habit of reading, everybody reads, books, newspapers, magazines.

They seem to be satisfied with the government, they are very worried about policy and to be "politically correct". They know their rights but they do not complain;

they queue a lot; they wait their turn, even if it takes 'forever'. They have a thought on the collective well being.

They seem to be bothered by emotional expression as if they do not know how to deal with it. They seem to fear eye contact (with strangers) and their body language is constrained. They do not shout, to express "discontentment" or anger, they just give a cross look and murmur something. There is an expression that describes it: "I mustn't grumble".

They seem very "contradictory", they are very concerned about other people's opinion in some situations, usually related to feelings and, on the other hand, regarding to fashion and appearance, for example, they do not seem to care what people think about them.

They are practical, independent and seem to seek intellectual improvement and equilibrium (everything should be balanced, in the middle, not extremes). They seem afraid of taking risks, they plan 'everything', as if there is no life without a schedule.

They consider themselves reserved and respectful about people's private lives. They are known to have a peculiar sense of humour.

METHOD

Design

The study design was cross-sectional, where a single 20-25 minute self-administered questionnaire were conducted in informal settings, mainly in university's canteens and students' common areas, by consenting volunteers.

Research Measures

A structured questionnaire was developed for this study containing sections from four standardised instruments, which were compiled. These include: Alcohol Use Disorders Identification Test (AUDIT) in full; Severity of Dependence Scale (SDS) in full; three questions of Maudsley Addiction Profile (MAP) (Marsden *et al*, 1998) and some items of the questionnaire developed by Boys *et al* (1998); which will be described in this section.

These research measures were used to assess, identify and investigate the cultural variation, expectations and beliefs towards drugs and alcohol, circumstances and contexts of use, reasons for drinking and/or using drugs, and sexual behaviour. It was piloted in a small number of people (n=4) in order to check out its usefulness.

The questionnaire was divided in 5 sections: A) Demographic and General Information; B) Drug Consumption; C) Alcohol Consumption; D) Sexual Behaviour and E) Describe Yourself.

Section A - Demographic and General Information

This section meant to assess, for example: gender, age, nationality, ethnic group, length of period living in the UK, religion, occupation, whether or not in a relationship, length of period in the relationship or not in a relationship, marital status, gender of current partner.

Section B – Drug Consumption

Lifetime use, age of first use and use over the last twelve months of licit and illicit drugs and use of drugs with alcohol on the same occasion were recorded. The use of drugs over the last thirty days was assessed by frequency (number of days used during the last thirty-day period). The list of drugs includes tobacco, cannabis, cocaine hydrochloride (cocaine powder), crack cocaine, benzodiazepines, heroin, amphetamines, methylene dioxymethamphetamine (MDMA - ecstasy), methadone, lysergic acid diethylamide (LSD), magic mushrooms and inhalants/solvents. Prescribed medication was added on the list of the last 30-day use and consumption with alcohol on the same occasion questions.

Section C – Alcohol Consumption

This section was more detailed than the drug consumption section, as this study intended to focus on alcohol consumption and sexual risk behaviour. The assessment of alcohol consumption include questions regarding: lifetime use, age of first use, use over the last twelve months and number of days which alcohol was consumed over the last thirty days. The quantity and type of drink(s) consumed on the last drinking occasion were conventionally converted into units (8g of alcohol = 1 unit). The subjects were asked to compare 'this' last occasion with a typical drinking day and recall if the quantity consumed was less, the same or more than usual. The standardised scales (AUDIT, SDS and Boys *et al*) were used in this section. A 6-item scale was developed to assess eating habits while drinking, also trying to assess cultural differences in drinking patterns between the two nationalities. When drinking alcohol 'on an empty stomach' the individual is more likely to get intoxicated faster due to an increase of alcohol blood concentration because of more rapid alcohol absorption. They might also be more likely to drink more, as they are already intoxicated.

Section D – Sexual Behaviour

The longest section of the questionnaire assessed lifetime sexual intercourse, age of first time, number of lifetime sexual partners (male and female sexual partners– to identify homosexuals and bisexuals), number of sexual partners (male and female) over the last twelve months, frequency of sexual activity. Lifetime and current use of contraceptive and protection against sexual transmitted diseases (STD), number of unwanted pregnancies and abortions, lifetime and last twelve-month period sexual transmitted disease prevalence, HIV status, and frequencies of condom use with regular, casual and new partner. Frequency of alcohol drinking before sexual activity, prevalence of split condoms without and after drinking alcohol and attitude as reaction to it (changed the condom, carried on, stopped or did not do anything because it was too late). Five 'events' ('one night stand', 'anal sex', 'multiple partners', 'wild sex' and 'oral sex') were investigated according to the same set of questions for each event, using condoms and without using condoms. The set of questions included: lifetime prevalence of these events, prevalence during the past twelve months, number of occasions they have happened over the last twelve months. Frequency of alcohol drinking before these occasions and the perceived influence of alcohol intoxication on the likelihood of these occasions to have happened were assessed as well as drug taking. Frequency was scored with a 5-point score (from never to always) and likelihood of these occasions to have happened was also assessed with a 5-point score (from "no influence at all" to "it would be impossible without it").

The set of questions, below:

“Have you ever had ‘anal sex’ WITHOUT using condoms?”

Yes No

“Have you had ‘anal sex’ WITHOUT using condoms, over the last 12 months?”

Yes No

“If yes, on how many occasions did you have ‘anal sex’ WITHOUT using condoms?”

1 – 2
3 – 4
5 – 6
7 – 9
10 or more

“Have you drunk alcohol on or before these occasions?”

Always
Often
Sometimes
Rarely
Never

“To what extent do you consider having had drunk alcohol made you more likely to have had ‘anal sex’ WITHOUT using condoms?”

No influence at all
A little influence
A reasonable influence
Very much so
It would be impossible without having drunk alcohol

“Have you taken drugs on or before these occasions?”

Always
Often
Sometimes
Rarely
Never

“To what extent do you consider having had taken drugs made you more likely to have had ‘anal sex’ WITHOUT using condoms?”

No influence at all
A little influence
A reasonable influence
Very much so
It would be impossible without having taken drugs.

Section E – Describe Yourself

The central hypothesis in the study is that there are several cultural differences between Brazilian and British people which could influence drinking and drug-taking onset and patterns, as well as sexual behaviour. A detailed personality assessment and exploration of cultural differences between these two nationalities are beyond the scope of the present study.

Nevertheless, a brief set of measures were designed to contrast Brazilian and British culture. Example of one of the measures:

Please describe yourself. To what extent do you think you are: *Please tick () the appropriate box:*

Extroverted /___/___/___/___/___/ *Introverted*

Confident /___/___/___/___/___/ *Shy*

Loud /___/___/___/___/___/ *Quiet*

Outgoing /___/___/___/___/___/ *Reserved*

In the questionnaire (Appendix – II) the questions 51 to 60 were the 10 item - Alcohol Use Disorders Identification Test (AUDIT) used in full in order to identify possible harmful drinking patterns (score >8) among the subjects. The score is the sum of the 5-point-scale (0 to 4) for each question, with a cut-off point of 8. Therefore score of 8 or more means possible harmful drinking pattern. One example of the AUDIT questions follows:

How often do you have a drink containing alcohol?

- (0) Never
- (1) Monthly or less
- (2) 2 – 4 times per month
- (3) 2 – 3 times per week
- (4) 4 or more times per week

The questions 64 to 68 were the Severity of Dependency Scale (SDS) questions. The score is the sum of the 4-point-scale (0 to 3) for each question. One example of the SDS questions follows:

Over the last year, have you ever thought that your alcohol drinking was out of control?

- (0) Never, almost never
- (1) Sometimes
- (2) Often
- (3) Always, almost always

The questions 48 (number of days drank alcohol last thirty days), 88 and 89 (How many people have you had penetrative sex during the last 30 days without using condoms and how many times) were taken from the Maudsley Addiction Profile (MAP) to help to assess alcohol consumption and sexual risk behaviour.

The questions 45, 46, 47, 61, 62, 71 and 72 were taken from Boys *et al* (1998). They identify reasons for drinking or not drinking alcohol and assess the perception towards regular drinking. Questions 46 and 47 assessed the main reasons for not drinking alcohol over the past year for those subjects who have not drunk over the last twelve months. Questions 61 and 62 assessed the reasons for drinking alcohol among those who have drunk over the last twelve months, using function scales (Mood Function and Social/Contextual Function, Boys *et al*,1998) which are measures of behaviour, where the subjects report the frequency of using alcohol for those specific reasons. Scale scores were the sum of responses divided by the number of items.

The Mood Function scale measured the frequency (5-point-scale, from never to always) of using alcohol:

- a) "to help you feel better when feeling low or depressed";
- b) "to help you to relax";
- c) "to make an activity such as listening to music or playing a game or sport more enjoyable".
- d) "to help you to sleep";
- e) "to help you to stop worrying about a problem"

The Social/Contextual Function scale assessed the frequency (5-point-scale, from never to always) of using alcohol:

- a) "to help you feel more confident in a social situation";
- b) "to help you to let go of inhibitions (e.g. When dancing)";
- c) to help you to enjoy the company of your friends";
- d) "to help you feel closer to someone";
- e) "because you wanted to fit in with a group of people you were with";
- f) "to make you feel more confident in a sexual situation";
- g) "because someone pressurised you into drinking";

The item "just to get drunk" was analysed independently.

Question 62 was an open question, as continuation of question 61 where the subject could refer to other reasons for drinking alcohol which had not been asked.

Questions 71 and 72 were used to assess how the subjects perceived people who drink regularly in a 5-point scale (strongly agree to strongly disagree). Some examples follow.

People who drink regularly...

- a) "have a better social life";
- b) "are more at ease in social situations";
- c) "are damaging their health";
- d) "feel sad and anxious";
- e) "say things they regret later";
- f) "take risks".

Pilot Study

The questionnaire was piloted in a small number of people (n=4) to check its usefulness, comprehensibility, readability, lay-out and time for completion (average 20 minutes – range from 15 minutes to 32 minutes) depending on how fast the person read and understood the questions and alternatives and also, how many of those experiences she/he had had, because if they have not had, the subject may have skipped questions. The questions of Section 5 have been discarded after piloting due to length of the questionnaire and difficulty of understanding the questions. Some wording and style changes have also been made in the questionnaire after piloting in order to the instrument become more easily understandable.

Analytical Issues and Statistical Procedure

Data were analysed with SPSS, using contingency tables, Chi-Square, t – test, cross tabulation and correlation.

Procedure

The procedure involved:

- approach of subjects by the investigator;
- description of the study, procedure and instrument;
- verbal consent and Information Sheet;
- completion of the questionnaire (which did not contain the subject's name);
- sealing the envelope where the questionnaire was kept, for anonymity.
- signing up the list to be entitled to receive the £3 phone card.

Ethical Considerations

The central ethical consideration concerns the maintenance of privacy of personal information and the right of a human subject to withdraw from the study at any time. To protect the former consideration all gathered data was anonymous and maintained under strict confidentiality. To maintain the latter consideration, all participants had the right to refuse to answer any questions (without giving a reason) and to leave the study at any point with neither action having an impact on their rights.

SAMPLING

Settings

Three types of sampling procedures were used in this study to collect the data:

- Direct contact
- ABEP (Association of Brazilian Students)
- Snowballing

Direct Contact

This sampling procedure took place in canteens, student unions and students' common areas in universities and colleges in London. The universities and colleges were the Institute of Psychiatry, the Imperial College, University of Westminster, Goldsmiths University of London, London School of Hygiene and Tropical Medicine, King's College- London, Sound Audio Engineering College. The investigator went to these places to recruit subjects and made an informal invitation to the subjects to participate in the study. Assurances were given about the confidentiality of the gathered data. The investigator then outlined the study and gave a brief explanation about the procedure accompanied by Information Sheet (see Appendix-1). The investigator gave the participant the opportunity to ask questions. Those subjects willing to take part in the study gave a verbal consent and then completed the questionnaire, in an anonymous fashion.

Most of the participants (n= 34) completed the questionnaire whilst the investigator was waiting. After completion, the participants put the questionnaire in an envelope that was given with the questionnaire and sealed it. A £3 phone card was given for participation in the study.

ABEP (Association of Brazilian Students)

As it was difficult to collect the data among Brazilians, the investigator approached the Association of Post Grad Brazilian Students and Researchers (ABEP) to increase recruitment. The investigator received some responses via email and contacted the subjects willing to participate to arrange the most convenient date and place for the questionnaire to be completed following the same procedure as in the 'Direct Contact'.

Snowballing

In order to gather as many subjects as possible in a short period of time, the snowballing procedure has been used. Some of those who responded to the email participated in the study and referred to other Brazilian and/or British students of any course, in a snowballing procedure. Non-students (who had some kind of relationship with the students: partner, siblings and friends) also happened to be referred to the study, in the snowballing procedure. The investigator asked the participants to refer to other subjects to take part in the study. Some of the subjects who were referred to the study by other participants were approached by the investigator either directly in person or contacted on the phone to arrange a personal meeting in order to proceed the same way as in the 'Direct Contact'. For those referred subjects who the investigator was unable to contact personally, the investigator relied on the participants who referred them, who voluntarily became mediators. The mediators received the instructions and necessary information about the procedure and became responsible for handing out the questionnaire with the envelope. This procedure might mean a bias for the study as it is not possible to know if the referred subjects have themselves completed the questionnaires. It is neither possible to assure if they were given the exact instructions and information about the study and

procedure, nor they were given the opportunity to clear any doubts that they might have had.

Subjects

- Nationality (Brazilians and British)
- Gender (both: male and female)
- Age (18 to 35 years old)

The participants of this study were a sample of consenting Brazilians (people who were born and brought up in Brazil) and British (people who were born and brought up in Great Britain. Although two of the British subjects were not born in the UK, but they have lived most or all their lives in the UK). The sample consisted of 52 volunteers (26 Brazilians and 26 British) aged 18 to 35; both gender (male and female) living in London. Most of the participants (n=37) were students and the other participants (n=15) were partners, friends or siblings of the students.

Exclusion Criteria

Subjects who were under 18 or above 35 years old and who were neither Brazilian nor British did not participate in the study.

Sample Size and Power Calculation

No precise information is available to determine the size of populations parameter for the correlation coefficient (r) between substance use intoxication and sexual health risk behaviour. In an exploratory study of this type we have conducted a crude power calculation as follows based on an assumed a 0.5 correlation between the core response measures (intoxication and risk) within the sample and a difference of 0.6 between two means from the study groups. Given this effect, the proposed sample of at least 80 cases is expected to produce power of at least 98% to detect a correlation of the above magnitude and power of at least 72% for a one-tailed t test of two means (with Type I error set at 0.05).

RESULTS

Demographic and General Information - Description of the Sample

Fifty-two people (26 Brazilians and 26 British) participated in the study. A brief description of the whole sample is shown in Table 1.

Table 1. Brief description of the sample (gender, age, education qualification and ethnicity)

| Measure | Brazilian (n=26) | British (n=26) | Statistical Test | P Value |
|------------------------------|---------------------|-------------------|--------------------------------|---------|
| Gender | | | | |
| (n) male | 11 | 13 | $\chi^2_{[1]} = 0.310$ | 0.578 |
| (n) female | 15 | 13 | | |
| Mean age (S.D.) | 30.0 (3.52) | 26.5 (3.44) | $t_{[50]} = 3.587$ | 0.001** |
| (n) educated to degree level | 24 | 19 | $\chi^2_{[4]} = 5.064^\dagger$ | 0.024 * |
| (n) white ethnic group | 19 | 19 | $\chi^2_{[1]} = 8.667^\dagger$ | 0.070 |

Notes: Values shown in brackets are the Standard Deviation values for each group; † = Fisher's Exact Test
* = Statistically significant at level $p \leq 0.05$; ** = Statistically significant at level $p \leq 0.01$
Shaded rows show statistically significant differences between the two nationalities

British sample

The British sample consisted of 13 males and 13 females. The average time of living in the UK of 25.6 years (S.D.= 4.06). Their average age was 26.5 years (range 22-32). For ethnicity, nineteen subjects (73.1%) described themselves as "white", two (7.7%) as "black", two (7.7%) reported their ethnic origin to be "mixed race", three (11.5%) as "other" (they described themselves as one Arabic/African; one White/Latin American and one as Jewish).

Twelve (46.2%) were in some form of education (n=1, part-time studies; and n=11, full-time) at the time of the completion of the questionnaire. Six subjects (23.1%) reported their highest education qualification was post-graduate; twelve (46.2%) have a degree certificate; six (23.1%) have GCSE's; one participant (3.8%) has A' levels and, finally, one subject (3.8%) has a technical college certificate.

Regarding religion nine (34.5%) reported being Church of England, three (11.5%) were Jewish, three (11.5%) were Christian, two (7.7%) were Catholic, one (3.8%) Islamic, one (3.8%) Serbian Orthodox and seven (26.9%) reported not belonging to any religion.

Most of the participants (n=18, 69.2%) were in a relationship. Of those, 50% (n=9) have been in the relationship for 3 years or more, 22.22% (n=4) for 1 to 2 years and 11 months, 11.11% (n=2) for 3 to 11 months and 16.67% (n=3) were in a relationship for less than 2 months. Those who were not in a relationship (n=8), six (75%) haven't been in a relationship for 1-2 years and 11 months and one (12.5%) for 3 years or more. One subject (12.5%) has not responded to the question.

Regarding who the participants were living with, half of those who were in a relationship (n=9) were living with their partners. One person (3.8%) lived with other students, three (11.5%) lived with their family, five (19.2%) lived on their own, eight (30.8%) lived with flatmates and nine (34.6%) were living with their partners.

Regarding marital status three participants (11.5%) were married, one (3.8%) was separated, and twenty-two (84.6%) were single. Just one participant had children (3.8%), one (3.8%) was expecting a baby and the great majority 92.3% (n=24) did not have children.

For 53.8% the main source of income was their work, for 11.5% (n=3) was grant, 7.7% (n=2) received parents' support, one participant (3.8%) was on benefits, 11.5% (n=3) had other sources of income and other 3 participants (11.5%) had multiple sources of income. The mean monthly income was £1022 (range £80 to £2000, S.D.= 545.37)

Brazilian Sample

The Brazilian sample consisted of 11 (42.3%) males and 15 (57.7%) females, with a mean period time of 2.25 years (S.D. = 1.26) living in the UK. Their average age was 30 years (range 21-35). For ethnicity, nineteen subjects (73.1%) described

themselves as “white”, four (15.4%) reported their ethnic origin to be “mixed race” one (3.8%) white/native South American Indian, one (3.8%) black/white, one (3.8%) as “brunet” which probably means some mixture between black and white, one (3.8%) as Latin. Three participants (11.5%) did not wish to answer this question.

Twenty-four (96.2%) were in some form of education (n=1 just reported being a student without specifying if part or full-time; n=2, part-time studies; and n=22, full-time) at the time of the completion of the questionnaire. The highest education qualification was post-graduate for 61.5% (n=16), 30.8% (n=8) have a degree certificate, 3.8% (n=1) have a second degree (equivalent to A' levels for the British), and one participant (3.8%) did not responded to the question.

Regarding religion 46.2% (n=12) reported being Catholic, 11.5% (n=3) were Jewish, 11.5% (n=3) were Spiritualist, one (3.8%) reported believing in God with no specific religion, one (3.8%) Christian and 23.1% (n=6) reported not belonging to any religion.

Most of the participants (n=19, 73.1%) were in a relationship. Of those 57.9% (n=11) have been in the relationship for 3 years or more, 26.32% (n=5) for 1 to 2 years and 11 months, 5.26% (n=1) for 3 to 11 months, and two (10.52%) did not completed this question. Of those who were not in a relationship (n=7), one participant 14.29% has not been in a relationship for 3 years or more; two participants (28.57%) have not been in a relationship for 1-2 years and 11 months; three (42.86%) for 3 to 11 months, and one (14.29%) for less than three months.

Seventeen people (65.38%) were living with their partners, of those two were also sharing their flat with other people, and six had their children with them; two (7.7%) lived with other students, 23.1%, 7.7% (n=2) lived on their own, and 19.2% (n=5) lived with flatmates.

The marital status for 42.3% of the participants (n=11) were married, one (3.8%) was divorced and 53.8% (n=14) were single. Six participants had children (23.1%), the great majority 76.9% (n=20) did not have children.

For 50% of the Brazilian sample (n=13), the main source of income was grant; work was the main source for six subjects (23.1%); one participant (3.8%) received parents' support; one (3.8%) was on benefits; and 5 participants (19.2%) had multiple sources of income. The mean monthly income was £810 (range £200 to £1700, S.D= 294.45).

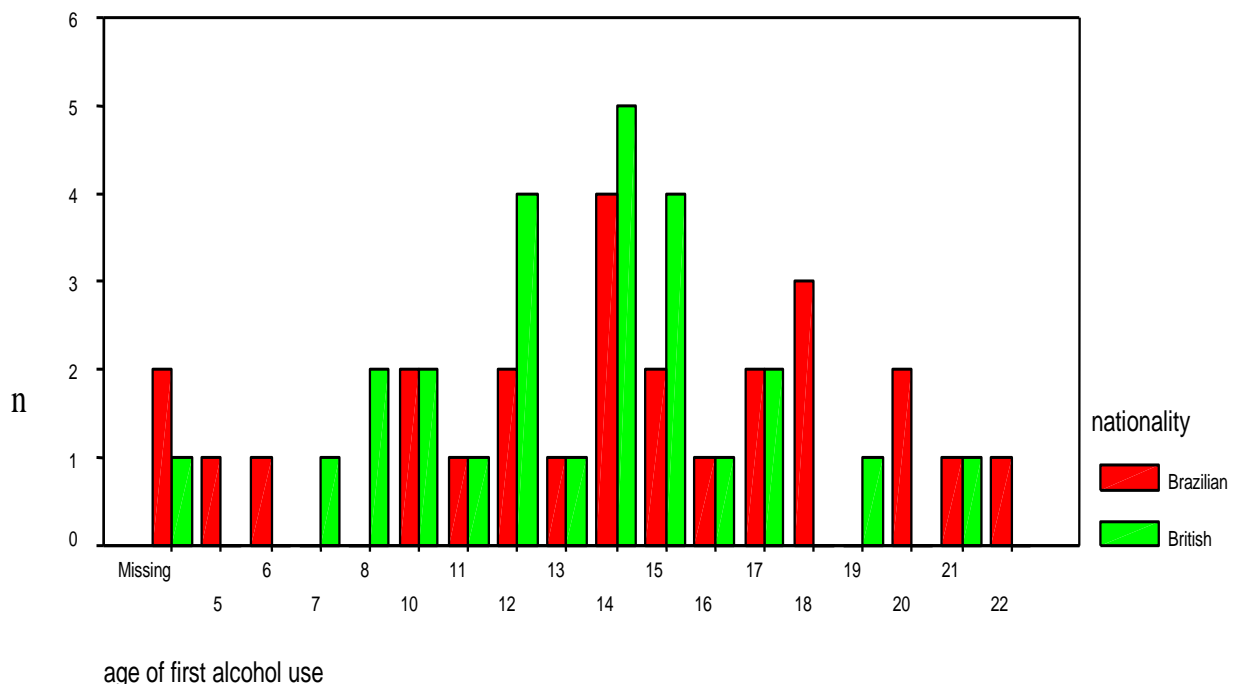
Analysis of Alcohol Consumption

All participants (n=52) reported alcohol consumption for at least once in their lifetime. All participants reported alcohol consumption in the past 12 months but one Brazilian female, who reported that 'alcohol tastes horrible' as the main reason for not drinking.

Age of first use

There were no significant differences for age of first use between the nationalities ($t_{[47]} = 1.139$; $p = 0.260$). Mean age of first alcohol use among Brazilians (n=24) was 14.7 years old (range 5 – 22; S.D.= 4.38) and among the British subjects (n=25) the mean age was 13.4 years old (range 7 – 21; S.D. = 3.35). See Graph 1.

Graph 1. Age of first alcohol use for Brazilians and British.

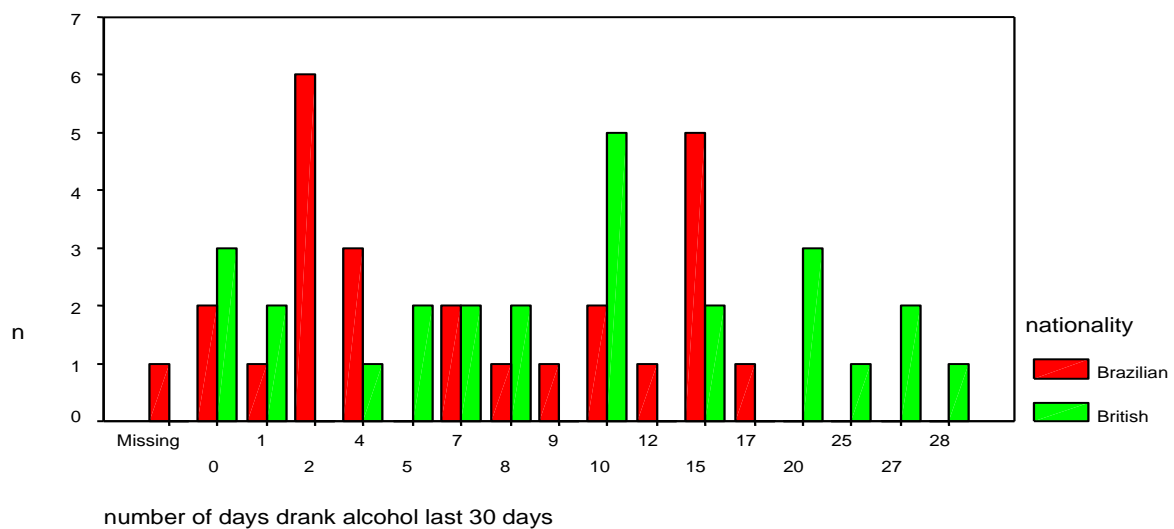


Number of days of alcohol consumption in the last 30 days

The mean number of days of alcohol consumption among Brazilians was 7.2 days (range 1 -17; S.D.= 5.69) and among the British was 11.3 days (range 1 - 28; S.D.= 8.98). There is a tendency towards British drinking more often over the past 30 days than Brazilians but it was not statistically significant ($t_{149} = - 1.926$; $p= 0.060$).

See Graph 2.

Graph 2. Frequency of number of days of alcohol consumption in the last 30 days for both nationalities



Number of alcohol units consumed on last occasion

Participants named the drinks they have consumed on last occasion giving type of measure (e.g. beer -half pint, pint, can or bottle), number of drinks according to the measure previously given (e.g. beer – 2 pints and one can [440ml]) and size of the measure if can and bottle. See APPENDIX II question 49. The conversion from the data given into units was made according to Maudsley Addiction Profile (MAP) – Drink Conversion Table. Alcohol units for cocktails were converted according to conventional conversion two units for each cocktail. Alcohol units for ‘alcopops’ were converted according to Alcohol Concern.

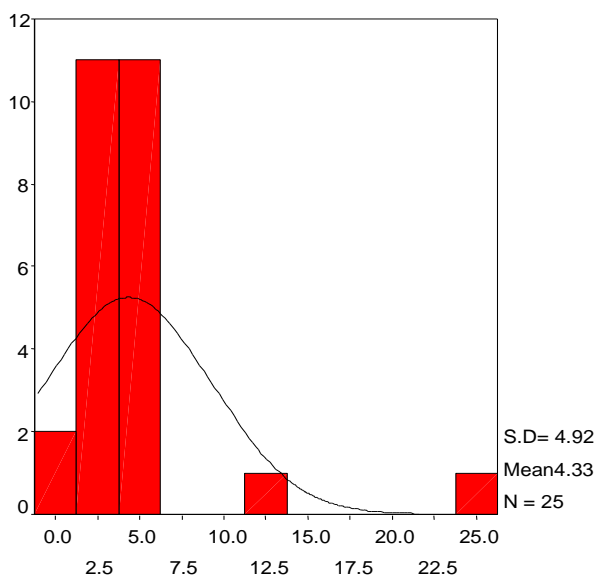
The British and Brazilian samples differed in terms of reported number of units of alcohol consumed on the last occasion (British mean consumption was 9.71

units [S.D.=6.67] and Brazilians mean consumption was 4.33 units [S.D.=4.92]; $t[50] = -3.31, p=0.002$). See Graphs 3a - 3b. Among Brazilians, 92.3% (n=23) drank 6 units or less on the last occasion whilst 38.5% (n=10) of the British drank 6 or less units on the last drinking occasion. Comparing last drinking occasion consumption with a typical drinking day, four Brazilians reported drinking less than usual, 15 reported the same amount as usual, and six had drunk more than usual. Among the British, 11 reported having drunk the same as usual and 15 more than on a typical drinking day. There were no reports of drinking less than usual among the British.

The most frequent alcoholic drinks in the total sample were wine with 65.4% of the subjects (n=34) reporting its consumption; beer with 50.0% of the responses (n=26); spirits were consumed by 25.0% (n=13); and cider, alcopops and cocktails with 5.8% of the responses (n=3) each. Comparing types of alcoholic drinks consumption between Brazilians and British it was recorded a statistically significant difference for spirits consumption between the nationalities, 13 British reported they had drunk spirits on the last occasion compared to none of the Brazilians ($\chi^2_{(2)} = 17.789; p \leq 0.001$).

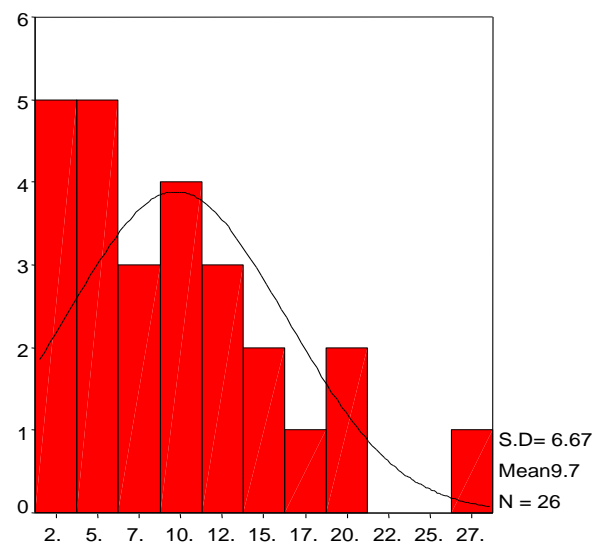
Graphs 3a – 3b. Number of alcohol units consumed on last occasion for both nationalities separately. Brazilians - Graph 9b; British - Graph 9b

Graph 3a. N° of units/ Brazilians



Number of UNITS Brazilian

Graph 3 b. N° of units/ British



Number of UNITS British

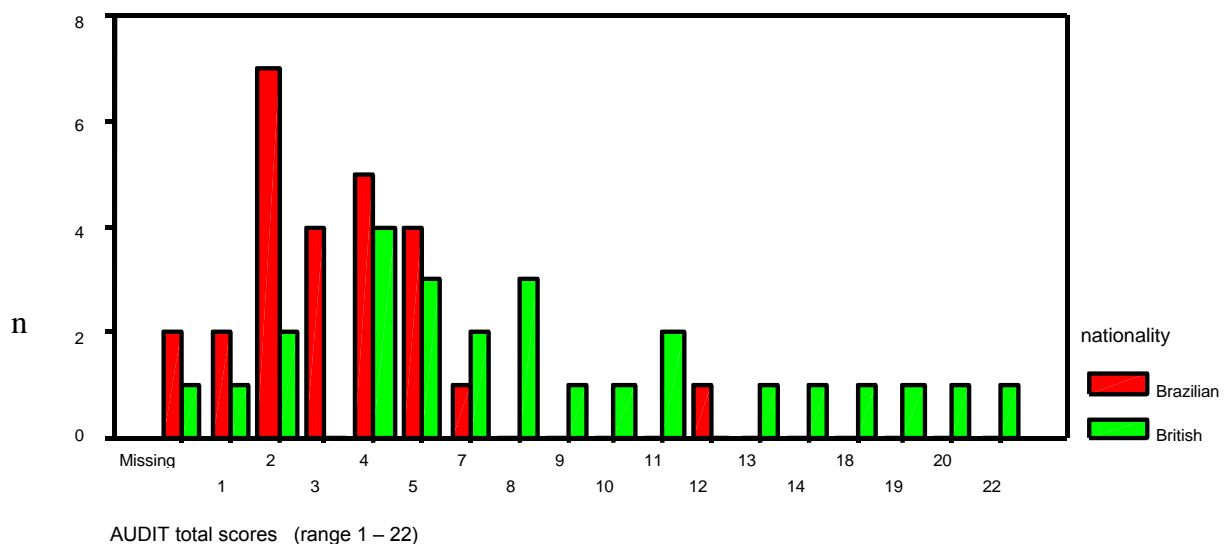
Comparing number of units consumed on last occasion by gender within the nationality, there were no statistically significant differences within the two nationalities. Brazilian males consumed on average 6.21 units [S.D.= 7.03] on last drinking occasion and Brazilian females average consumption was 2.96 units [S.D.= 1.81]; ($t_{[24]} = 1.725$; $p = 0.097$). For the British population, average consumption for males was 11.24 units [S.D.= 8.14] and British females consumed on average 8.18 units [S.D.= 4.61]; ($t_{[24]} = 1.177$; $p = 0.251$).

AUDIT scores

The British and Brazilian samples also differed in terms of Alcohol Use of Disorders Identification Test (AUDIT) score where the British (mean score was 8.84, [S.D.= 5.92]) scored significantly higher than Brazilians (mean score was 3.63 [S.D.= 2.32]), ($t_{[47]} = -4.027$; $p \leq 0.01$). See Graph 4 for AUDIT scores.

The AUDIT scale ranges from 0 to 40 with the cut-off point for harmful drinking at 8.00 (eight). Thirteen British subjects (52.0%) of those 4 females scored 8 or more in the AUDIT (range 1 - 22, mean value = 8.84, median value = 8.00, mode value = 4). In the Brazilian sample, only one female scored more than 8, the other 24 Brazilian subjects (95.8%) scored 7 or less (range 1 - 12, mean value = 3.63, median value = 3.00, mode value = 2).

Graph 4. AUDIT scores for both nationalities.



Gender, AUDIT scores and number of units consumed on last occasion

The AUDIT scores among Brazilians were not significantly different for gender. Brazilian males mean score was 3.55, [S.D.= 1.75]) and females mean score was 3.69, [S.D.= 2.78]; ($t_{122} = - 0.151$; $p= 0.881$). In the British sample the AUDIT scores comparing gender were not significant either, British males mean AUDIT score was 10.77 [S.D.= 7.04] and females mean score was 6.75 [S.D.= 3.65]; ($t_{123} = 1.769$; $p= 0.090$).

Regarding Brazilians and British AUDIT scores and the number of units consumed on last occasion (by gender) were recorded significant differences for females, with British females drinking more than Brazilian females. See Table 2 Considering AUDIT scores, although there was a statistically significant difference between Brazilian females and British females, the mean score in both nationalities were under the cut-off point for harmful drinking.

The comparison among males shows a statistically significant difference for AUDIT scores, where the mean scores for British males were above the cut-off point 8, suggesting harmful drinking pattern among British males. See Table 3.

Table 2. Comparison of Brazilian and British females for AUDIT scores and number of units consumed on last occasion.

| | Brazilian Females (n=13) | Standard Deviation | British Females (n=12) | Standard Deviation | Statistical Test | P Value |
|------------------------------------|--------------------------|--------------------|------------------------|--------------------|---------------------|-----------------|
| AUDIT score (mean) | 3.69 | 2.78 | 6.75 | 3.65 | $t_{123} = - 2.369$ | $p= 0.027^*$ |
| Mean number of units last occasion | 2.96 | 1.807 | 8.182 | 4.606 | $t_{126} = - 4.055$ | $P= 0.000^{**}$ |

Notes: Shaded rows show statistically significant differences between the two nationalities.
* = Statistically significant at level $p \leq 0.05$; ** = Statistically significant at level $p \leq 0.01$

Table 3. Comparison of Brazilian and British males for AUDIT scores and number of units consumed on last occasion.

| | Brazilian Males (n=11) | Standard Deviation | British Males (n=13) | Standard Deviation | Statistical Test | P Value |
|------------------------------------|------------------------|--------------------|----------------------|--------------------|---------------------|-----------------|
| AUDIT score (mean) | 3.55 | 1.75 | 10.77 | 7.04 | $t_{122} = - 3.308$ | $p= 0.003^{**}$ |
| Mean number of units last occasion | 6.21 | 7.027 | 11.235 | 8.138 | $t_{122} = - 1.604$ | $P= 0.123$ |

Notes: Shaded rows show statistically significant differences between the two nationalities.
* = Statistically significant at level $p \leq 0.05$; ** = Statistically significant at level $p \leq 0.01$

Mood Function and Social/Contextual Function

Reasons to drink alcohol were assessed by the frequency the participants had drunk alcohol for various reasons, e.g. “to help you feel more confident in a social situation”. The questions were put together into groups as Mood Function and Social/Contextual Function and a separate item “drink alcohol just to get drunk”. The analysis was computed regarding mean total score in the Mood Function, mean total score for Social/Contextual Function and Pearson Chi-Square for “just to get drunk”. See APPENDIX II question 61 and TABLE 4.

There were no significant differences in responses for the Mood Function between the nationalities.

Brazilians and British differed in terms of Social/Contextual Function total score and frequency of drinking ‘just to get drunk’. British reported having drunk alcohol for social reasons (especially, in the items ‘drink to feel more confident in a social situation’ and ‘drink to feel more confident in a sexual situation’) more frequently than Brazilians did. British participants also reported drinking alcohol “just to get drunk” more frequently than Brazilian. Participants responded to the question of frequency (never to always) they had got drunk in the past 30 days, 15 Brazilians reported “never” and 10 “rarely”. Seven British subjects reported having “never” got drunk in the past month, 10 “rarely”, four “sometimes”, 4 “often” and one participant reported having “always” got drunk in the past 30 days. See Table 4.

Table 4. Mood, Social/Contextual Functions and “just to get drunk” and frequency of having got drunk last 30 days

| | Brazilians | Mean | S.D. | British | Mean | S.D. | Statistical test | P Value |
|-----------------------------------------|------------|------|------|---------|------|------|---------------------------------|------------------|
| Mood Function | n = 24 | 3.79 | 2.99 | n = 25 | 4.68 | 3.39 | $t_{147} = -0.971$ | $p = 0.336$ |
| Social/ Contextual Function | n =24 | 4.00 | 2.45 | n = 26 | 6.19 | 3.15 | $t_{148} = -2.731$ | $p = 0.009^{**}$ |
| “Just to get Drunk” | n = 24 | --- | --- | n = 26 | --- | --- | $\chi^2_{[4]} = 15.635 \dagger$ | $p = 0.004^{**}$ |
| Frequency got drunk last 30 days | n = 25 | --- | --- | n = 26 | --- | --- | $\chi^2_{[4]} = 11.894 \dagger$ | $p = 0.018^*$ |

Notes: † = Fisher’s Exact Test; Shaded rows show statistically significant differences between the two nationalities; * = Statistically significant at level $p \leq 0.05$; ** = Statistically significant at level $p \leq 0.01$

Eating and drinking patterns

Regarding eating before, whilst drinking, when realising ‘getting merry’, when back home after drinking or for long periods without eating, Brazilians and British differed. Brazilians are more likely to eat whilst drinking than British ($\chi^2_{[4]} = 9.606$; $p= 0.048$). British are more likely to eat after drinking. If they are not drinking at home, they are more likely to eat when back home than Brazilians ($\chi^2_{[4]} = 10.719$; $p= 0.030$) and the British do not eat for a long period of time more frequently than Brazilians ($\chi^2_{[3]} = 8.629$; $p= 0.035$).

Attitude towards regular drinking

Table 5. Difference attitude towards people who drink regularly between Brazilians and British (n=52)

| People who drink regularly... | Brazilians n | British n | Statistical Test | P Value |
|------------------------------------------|-----------------|--------------|---------------------------------|--------------|
| Have a better social life | 23 | 25 | $\chi^2_{[4]} = 4.210 \dagger$ | $p= 0.378$ |
| Are unhappy | 23 | 25 | $\chi^2_{[3]} = 1.783 \dagger$ | $p= 0.619$ |
| Are attractive to the opposite sex | 23 | 25 | $\chi^2_{[3]} = 3.717 \dagger$ | $p= 0.294$ |
| Are less mature than people who do not | 23 | 25 | $\chi^2_{[3]} = 7.491 \dagger$ | $p= 0.058$ |
| Are at more at ease in social situations | 23 | 24 | $\chi^2_{[3]} = 1.372 \dagger$ | $p= 0.712$ |
| Get into fights and cause trouble | 23 | 25 | $\chi^2_{[3]} = 4.338 \dagger$ | $p= 0.227$ |
| Are fun to be with | 23 | 25 | $\chi^2_{[3]} = 1.602 \dagger$ | $p= 0.659$ |
| Are damaging their health | 23 | 25 | $\chi^2_{[4]} = 4.814 \dagger$ | $p= 0.307$ |
| Feel more relaxed | 24 | 25 | $\chi^2_{[3]} = 3.863 \dagger$ | $p= 0.277$ |
| Feel sad and anxious | 24 | 25 | $\chi^2_{[4]} = 2.552 \dagger$ | $p= 0.635$ |
| Are more confident | 24 | 25 | $\chi^2_{[3]} = 10.845 \dagger$ | $p= 0.013^*$ |
| Often feel unwell | 24 | 25 | $\chi^2_{[4]} = 6.400 \dagger$ | $p= 0.171$ |
| Feel sexier | 24 | 25 | $\chi^2_{[3]} = 1.447 \dagger$ | $p= 0.695$ |
| Are more friendly | 24 | 25 | $\chi^2_{[3]} = 3.408 \dagger$ | $p= 0.333$ |
| Say things they regret later | 24 | 25 | $\chi^2_{[4]} = 4.080 \dagger$ | $p= 0.395$ |
| Are able to forget their problems | 24 | 25 | $\chi^2_{[4]} = 2.352 \dagger$ | $p= 0.503$ |
| Get into trouble with family and friends | 23 | 25 | $\chi^2_{[3]} = 2.068 \dagger$ | $p= 0.723$ |
| Take risks | 23 | 25 | $\chi^2_{[4]} = 6.394 \dagger$ | $p= 0.172$ |

Notes: † = Fisher's Exact Test; Shaded rows show statistically significant differences between the two nationalities; * = Statistically significant at level $p \leq 0.05$; ** = Statistically significant at level $p \leq 0.01$

Brazilians and British did not differ much regarding the way they generally perceive people who drink alcohol regularly except the item ‘who drink regularly are

more confident ($\chi^2_{[3]} = 10.845$ and $p = 0.013^*$). Brazilians tended to disagree with this statement, whilst the British tended to neither agree nor disagree that people who drink regularly are more confident. The questions were coded 1-Strongly agree to 5-Strongly disagree. There was a tendency of statistical significance difference for the item 'people who drink regularly are less mature than who do not', Brazilians tended to agree whilst British tended to disagree with the statement ($p = 0.058$),.

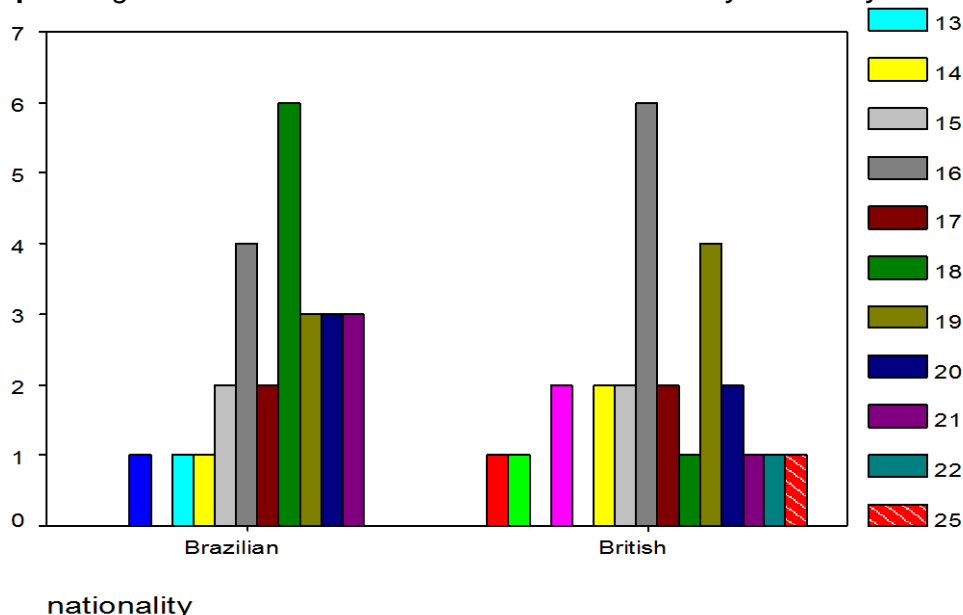
Analysis of Sexual Behaviour

All participants but one British male reported having had sexual intercourse.

Age of first sexual intercourse

The mean age of first sexual intercourse was 17.4 years old (S.D.= 2.64) for Brazilians and 16.6 years old (S.D.= 4.59) for British. See Graph 5. Comparing mean ages of first sexual intercourse within the nationalities, Brazilian males (mean age 16.1 years old, S.D.= 2.95) have had sexual intercourse earlier than Brazilian females (mean age 18.4 years old, s.d.=1.96; $t_{[24]} = -2.404$; $p = 0.024$). No significant differences for age of first sexual intercourse were recorded comparing British males to British females, neither comparing Brazilian with British females and Brazilian to British males.

Graph 5. Age first sexual intercourse males and females by nationality

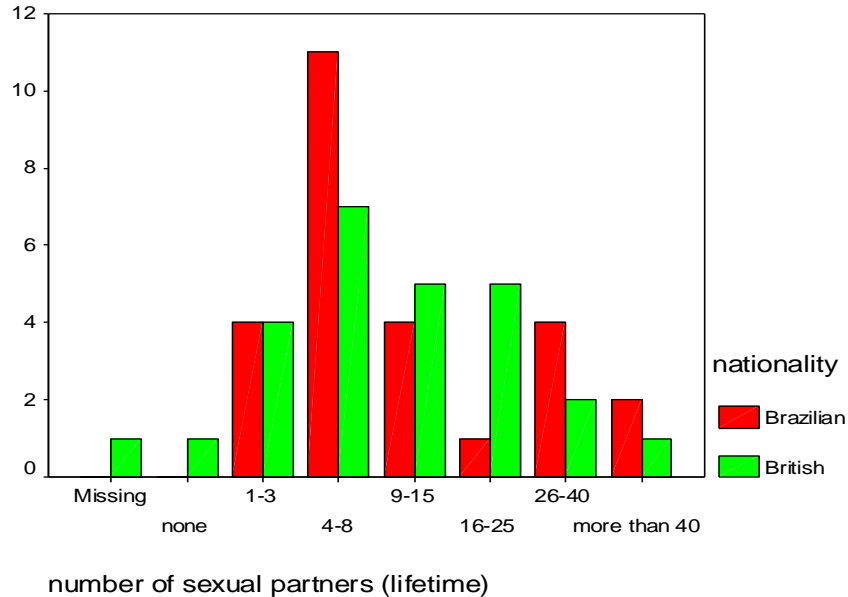


Number of sexual partners

Fifteen Brazilians (57.7%) and 11 British (48.0%) reported having had up to 8 sexual partners. Five Brazilians (19.2%) and ten British (40.0%) reported having had from 9 to 25 sexual partners and 23.1% of the Brazilians (n=6) and 12.0% of the British subjects (n=3) reported having had 26 or more sexual partners in their lifetime. See *Graph 6*.

Brazilian males reported having had more sexual partners (mean=21, S.D = 15.48) than British males (mean = 12; S.D.= 13.54), whilst comparing females between nationalities, British females (mean = 11, S.D.= 7.35) reported having had more sexual partners than Brazilian females (mean=7, S.D.= 4.16). Although reported number of lifetime sexual partners was different for Brazilians males comparing to British males and for Brazilian females comparing to British females they were not statistically significant.

GRAPH 6. Comparison of number of lifetime sexual partners (Brazilian and British)



Within nationality, Brazilian males reported having had more lifetime sexual partners, (average 21 partners; S.D.= 15.48) than Brazilian females (average 7 partners; S.D.= 4.16). For British, the mean number of lifetime partners for males was 12 (S.D.= 13.54) and for females was 11 (S.D.= 7.35). One Brazilian female

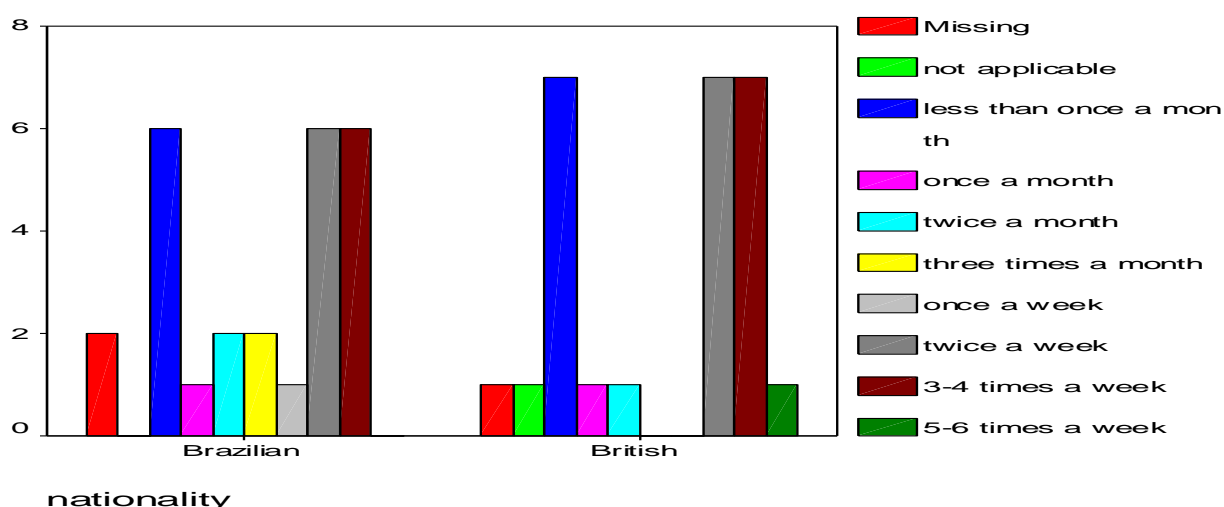
and two British females reported also having had sex with other women. One British male reported having had sexual intercourse only with men. No Brazilian males reported having had homosexual intercourse.

Number of sexual partners during the last 12 months was not significant different between the nationalities. Twenty-one Brazilians (55.3%) and seventeen (44.7%) British reported having had from one to three sexual partners over the past 12 months.

Current frequency of sexual intercourse

There was no significant difference in current frequency of having sexual intercourse between the nationalities. See Graph 7. Those subjects in a relationship (n=35) have sexual intercourse more frequently than those subjects who are not in a relationship (n=14) ($t_{47} = 6.721$; $p \leq 0.001$).

Graph 7. Current frequency of sexual intercourse between the nationalities



Contraceptive methods

Regarding contraceptive methods used during lifetime there was no difference for the diaphragm, and 'the pill' (fourteen Brazilians and twelve British reported its use). Brazilians reported more use of IUD/coil than British ($\chi^2_{(1)} = 3.184$; $p = 0.074$). For condoms as a contraceptive method, 24 British and 18 Brazilians

reported having used condoms. There was a statistically significant difference of condom use during lifetime ($\chi^2_{(1)} = 4.457$; $p = 0.035$). No recorded differences regarding reports of types of use of current contraceptive methods between the nationalities.

Significantly more Brazilians (n=13) reported having had unwanted pregnancies than British (n=1), [$\chi^2_{(1)} = 14.839$; $p \leq 0.001$] therefore prevalence of ever abortions was significantly higher for Brazilians than British ($\chi^2_{(1)} = 8.359$; $p = 0.004$). The number of pregnancies is also significant. Of those Brazilians (n=13) who have had unwanted pregnancies, nine reported having had abortions. The British female, who reported an unwanted pregnancy, also reported having had an abortion. The number of abortions between the nationalities is statistically significant. This report is peculiarly interesting due to the fact that abortion is an illegal practice in Brazil.

Methods to avoid Sexual Transmitted Diseases (STD)

For methods to avoid sexual transmitted diseases there were no differences between nationalities for lifetime use and last 12 months use. Six Brazilians and three British reported no condom use ever to avoid sexual transmitted diseases. Equal number of Brazilian and British subjects reported having had a sexual transmitted disease on some point in life. Only one participant (British) reported having had a sexual transmitted disease in the past 12 months. For HIV status one participant (British) reported being HIV seropositive, 38 subjects (24 Brazilians and 14 British) reported they were not HIV seropositive and 10 participants (one Brazilian and 9 British) did not know their HIV status.

Penetrative sex without using condoms

Twenty-five participants reported having had penetrative sex without using condoms in the last 30 days. Twenty-four participants reported having had

penetrative sex without using condoms with one person and one subject (British) reported having had penetrative sex without using condoms with three people in the last month. The number of people who reported sexual intercourse without condom use in the last month is correlate to the status of being in a relationship ($r = - 0.493$, $p \leq 0.001$).

Condom use

There were no significant differences between Brazilians and British for condom use with regular, casual and new sexual partners.

Fifteen participants (8 Brazilians and 7 British) reported having had used condoms without having drinking or taken drugs before sexual intercourse and found the condom had split. Of those, as reaction to the split condom, 8 (4 Brazilians and 4 British) did not do anything because they had realised afterwards. Six (4 Brazilians and 2 British) changed the condoms and one participant (British) could not remember their attitude. Seven participants (3 Brazilians and 4 British) reported having been through the same situation but having drunk alcohol before the sexual intercourse. Of those five (one Brazilian and 4 British) did not do anything because it was too late when they realised, one participant (Brazilian) carried on and one participant (Brazilian) stopped because there was no more atmosphere.

There was a tendency of significance ($\chi^2_{(4)} = 8.687$; $p = 0.069$) for frequency of alcohol drinking before sexual intercourse, British reported drinking alcohol before sexual intercourse more frequently than Brazilians. Three Brazilians reported 'often' drinking alcohol before sexual intercourse; 8 subjects reported 'sometimes', 8 'rarely' and 7 Brazilians reported 'never' drinking before sex. Six British reported having 'often' had drinking alcohol before sexual intercourse; 14 participants responded 'sometimes'; three 'rarely' and two British subjects reported 'never' drinking alcohol before sex.

TABLE 6. Sexual behaviour after drinking alcohol and without drinking alcohol prior to sexual occasions

| <u>AFTER drinking ALCOHOL</u> have you had sex with? | Brazilians n | British n | Chi-Square | P Value |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------|-------------------|----------------|
| Someone who uses injected drugs, WITHOUT using condoms. | 0 (0) | 0 (0) | --- | --- |
| Someone who uses injected drugs, using condoms. | 0 (1) | 1 (0) | 1.020 (1.020) | 0.313 (0.313) |
| Someone who is or has been a prostitute, WITHOUT using condoms. | 1 (1) | 0 (0) | 1.020 (1.020) | 0.313 (0.313) |
| Someone who is or has been a prostitute, using condoms. | 2 (1) | 1 (1) | 0.354 (0) | 0.552 (1.000) |
| Someone who was paying you to have sex with (WITHOUT condoms). | 0 (0) | 1 (0) | 1.020 (---) | 0.313 (---) |
| Someone who was paying you to have sex with (using condoms). | 0 (0) | 1 (1) | 1.020 (1.020) | 0.313 (0.313) |
| More than one person at the same day or night but in different occasions WITHOUT using condoms. | 0 (0) | 2 (1) | 2.080 (1.020) | 0.149 (0.313) |
| More than one person at the same day or night but in different occasions using condoms. | 2 (1) | 5 (3) | 1.486 (1.083) | 0.223 (0.298) |
| Someone that you don't know or remember their name(s), WITHOUT using condoms. | 1 (2) | 3 (2) | 1.083 (0) | 0.298 (1.000) |
| Someone that you don't know or remember their name(s), using condoms. | 2 (2) | 6 (2) | 2.364 (0) | 0.124 (1.000) |
| Someone (WITHOUT condoms) that when you woke up in the following morning you regretted or didn't even know what you (or the person) were doing there. | 3 (1) | 5 (0) | -0.591 (1.020) | 0.442 (0.313) |
| Someone (using condoms) that when you woke up in the following morning you regretted or didn't even know what you (or the person) were doing there. | 2 (1) | 6 (4) | 2.364 (1.991) | 0.124 (0.158) |

Notes: Values shown in brackets are the values for the same questions but WITHOUT having drinking alcohol prior to these occasions

As shown in Table 6, there was no significant difference between nationalities towards sexual behaviour after drinking and sexual behaviour without having drunk alcohol prior those sexual occasions. However, it is interesting to notice that there was less prevalence in sexual risk behaviour without drinking alcohol than on the occasions that subjects have drunk alcohol prior to sexual encounter. There were statistically significant correlations between sexual events '*without drinking*' prior to these occasions and '*after drinking*' for the following situations:

- Having sex with someone without using condoms and when waking up in the following morning the subject regretted or did not even know what they (or the other person) were doing there. [$r = 0.328, p = 0.017$].
- Having sex with someone using condoms and when waking up in the following morning the subject regretted or did not even know what they (or the other person) were doing there. [$r = 0.584, p \leq 0.001$].
- Having sex with someone without using condoms that the subject did not know or did not remember the other person's name. [$r = 0.458, p = p \leq 0.001$].
- Having sex with more than one person without using condoms in a 24-hour period. [$r = 0.700, p = p \leq 0.001$].

The difference in prevalence of risk behaviour after drinking and without having drunk among British tended to be more evident than among Brazilians.

Regarding influence of alcohol drinking in pressurising someone who did not want to have sexual intercourse with subjects without condoms or subjects being pressurised to have sex with someone they did not want to, the correlation is significant [$r = 0.566, p \leq 0.001$]. There was no significant difference between nationalities for these items.

Sexual events

For the sexual events ‘one night stand’ (using and without using condoms); ‘anal sex’ (using and without using condoms); ‘multiple partners’ (using and without using condoms); ‘wild (vigorous) sex’ (using and without using condoms); and ‘oral sex’ (using and without using condoms or any other protection), the findings were the following. See table

Table 7. Sexual lifetime events prevalence.

| Sexual event (lifetime) | Brazilians | British | Statistical Test | P Value |
|-------------------------------------------|------------|---------|------------------------|---------------|
| ‘one night stand’ using condoms | 14 | 15 | $\chi^2_{[1]} = 2.463$ | $p = 0.292$ |
| ‘one night stand’ WITHOUT using condoms | 13 | 12 | $\chi^2_{[1]} = 1.040$ | $p = 0.595$ |
| ‘anal sex’ using condoms | 5 | 4 | $\chi^2_{[1]} = 0.134$ | $p = 0.714$ |
| ‘anal sex’ WITHOUT using condoms | 9 | 7 | $\chi^2_{[1]} = 0.488$ | $p = 0.485$ |
| ‘multiple partners’ using condoms | 2 | 3 | $\chi^2_{[1]} = 0.221$ | $p = 0.638$ |
| ‘multiple partners’ WITHOUT using condoms | 0 | 1 | $\chi^2_{[1]} = 1.020$ | $p = 0.313$ |
| ‘wild sex’ using condoms | 2 | 8 | $\chi^2_{[1]} = 7.200$ | $p = 0.027^*$ |
| ‘wild sex’ WITHOUT using condoms | 8 | 13 | $\chi^2_{[1]} = 1.705$ | $p = 0.192$ |
| ‘oral sex’ using condoms | 5 | 6 | $\chi^2_{[1]} = 0.115$ | $p = 0.734$ |
| ‘oral sex’ WITHOUT using condoms | 25 | 24 | $\chi^2_{[1]} = 0.354$ | $p = 0.552$ |

Notes: Shaded rows show statistically significant differences between the two nationalities.
 * Statistically significant with $p \leq 0.05$
 ** Statistically significant with $p \leq 0.01$

Table 8. Sexual events past twelve months prevalence.

| Sexual event (past 12 months) | Brazilians | British | Statistical Test | P Value |
|-------------------------------------------|------------|---------|------------------------|---------------|
| ‘one night stand’ using condoms | 5 | 11 | $\chi^2_{[1]} = 3.250$ | $p = 0.071$ |
| ‘one night stand’ WITHOUT using condoms | 2 | 6 | $\chi^2_{[1]} = 2.364$ | $p = 0.124$ |
| ‘anal sex’ using condoms | 2 | 2 | $\chi^2 = .a$ | $p = 1.000$ |
| ‘anal sex’ WITHOUT using condoms | 6 | 1 | $\chi^2_{[1]} = 4.127$ | $p = 0.042^*$ |
| ‘multiple partners’ using condoms | 0 | 1 | $\chi^2_{[1]} = 1.02$ | $p = 0.313$ |
| ‘multiple partners’ WITHOUT using condoms | 0 | 1 | $\chi^2_{[1]} = 1.02$ | $p = 0.313$ |
| ‘wild sex’ using condoms | 1 | 3 | $\chi^2_{[1]} = 3.348$ | $p = 0.188$ |
| ‘wild sex’ WITHOUT using condoms | 5 | 7 | $\chi^2_{[1]} = 0.339$ | $p = 0.560$ |
| ‘oral sex’ using condoms | 4 | 3 | $\chi^2_{[1]} = 0.165$ | $p = 0.685$ |
| ‘oral sex’ WITHOUT using condoms | 24 | 20 | $\chi^2_{[1]} = 2.364$ | $p = 0.124$ |

Notes: Shaded rows show statistically significant differences between the two nationalities; * = Statistically significant with $p \leq 0.05$; ** = Statistically significant with $p \leq 0.01$

Brazilians and British differed in terms of sexual event lifetime prevalence and sexual events past 12 months prevalence. More British subjects reported having had 'wild sex' (using and without using condoms) than Brazilians. On the other hand, prevalence of 'anal sex' without condoms was higher among Brazilians. 'Wild sex' (vigorous) is risk behaviour due to the fact that involves certain vigour which can hurt the people's genitalia or even, cause bleeding. 'Anal sex' is high risk behaviour due to the delicate tissue with great number of blood vessels in the rectum and lack of natural lubrication. It was recorded the prevalence of this risk behaviour among Brazilians, which was higher than among British, in the past 12 months.

There were no differences in number of occasions of sexual events in the past 12 months between nationalities. However, '*one night stand using condoms*' and '*one night stand without using condoms*' shown tendency to significance ($\chi^2_{[4]} = 8.916$ [$p= 0.063$] and $\chi^2_{[2]} = 5.056$ [$p= 0.080$], respectively) British reported higher frequencies than Brazilians for these two events in the past year.

The following section investigates the relationships between sexual risk behaviour events and alcohol consumption. The section is structured as follows: lifetime prevalence, prevalence in the past 12 months, number of occasions, alcohol consumption on or before these occasions and perceived alcohol influence on the likelihood of engaging in the behaviour.

'ONE NIGHT STAND' (using condoms)

Twenty-nine subjects (15 British and 14 Brazilians) reported having had a 'one night stand' sexual encounter using condoms. Of those, 11 British and 5 Brazilians had a 'one night stand' using condoms in the past 12 months. The frequency of drinking on or before these occasions was significant different comparing the responses of both populations ($\chi^2_{[4]} = 11.333$, [$p= 0.023$]). British tended to report having drunk alcohol '*always*' and '*often*' (n=9) on or before these

sexual occasions, while Brazilians only reported '*sometimes*' and '*rarely*'. The perceived influence of alcohol on likelihood of engaging in the behaviour was significantly different ($\chi^2_{[4]} = 13.667, [p= 0.008]$). Brazilians did not perceive any influence of alcohol on their behaviour, whilst most of the British did (3 British reported '*a little influence*'; 5 '*a reasonable influence*' and 2 reported '*very much so*'). Frequency of drug taking on or before these occasions was not different between the populations, neither was the perception towards drug taking effects on likelihood in engaging in the behaviour with the average response being '*a little influence*'.

Correlating the variables mentioned above, there were found statistically significant correlations for number of occasions, having drunk alcohol before the event and influence of alcohol. The more frequent someone had 'one night stand' using condoms, the more likely they were to have had drunk on or before these occasions ($r = 0.726, p \leq 0.01$). And also the more they have drunk, the stronger was the correlation for perceived influence of alcohol on the behaviour ($r = 0.521, p \leq 0.01$). Further more, there was a correlation between number of occasions of 'one night stand' using condoms and influence of alcohol on the behaviour ($r = 0.612, p \leq 0.01$).

'ONE NIGHT STAND' (without using condoms)

Twenty-five subjects (13 Brazilians and 12 British) reported having had a 'one night stand' without using condoms. Of those, two Brazilians and six British reported having had a 'one night stand' without using condoms in the past year. The number of 'one night stand' occasions (without using condoms) in the last 12 months was not statistically significant different for Brazilians and British. All twelve participants (3 Brazilians and 9 British) who had a 'one night stand' without using condoms in the past 12 months had drunk on or before these occasions. However, the average frequency was not significant comparing the two groups. Only two participants

(Brazilians) reported '*no influence at all*' of alcohol drinking on their behaviour of having a 'one night stand' without condoms. The other ten subjects reported some level of influence (1 British reported '*a little influence*', 3 British and 1 Brazilian reported '*a reasonable influence*', 4 British reported '*very much so*' and finally, one British reported that '*it would be impossible*' to have had 'one night stand' without using condoms without having drunk alcohol. Although drug taking on or prior the event was not high, most participants reported some level of drug influence on their behaviour.

Correlations were found for the same variables as '*one night stand*' using condoms but they were stronger for '*one night stand*' without using condoms. The more occasions they have had been, the more likely they are to have had drunk alcohol ($r = 0.772, p \leq 0.01$) and the higher was the influence of alcohol on their behaviour ($r = 0.758, p \leq 0.01$). The more they had drunk, the higher was the influence of alcohol ($r = 0.685, p \leq 0.01$). Strong correlations were also found for drug taking.

'ANAL SEX' (using condoms)

Five Brazilians and 4 British reported lifetime 'anal sex' using condoms, of those " 2 Brazilians and 2 British have had 'anal sex' using condoms over the past 12 months. No differences in number of occasions, alcohol drinking prior to these occasions and perceived alcohol influence between the nationalities.

'ANAL SEX' (without using condoms)

Sixteen subjects (9 heterosexual Brazilians and 7 British, being 6 heterosexual and one homosexual) reported having had 'anal sex' without using condoms. Of those, six Brazilians and only one British reported prevalence for the past 12 months. There were significantly more reports by the Brazilians ($\chi^2_{(1)}=4.127,$

[$p= 0.042$]). No significant difference was observed on reported number of occasions of 'anal sex' in the past year for both nationalities. Of those six Brazilians who reported having had 'anal sex' in the past year, 4 reported having '*never*' had alcohol consumption on or before the sexual event. The only British, reported having had '*always*' drunk alcohol on or before these events. Only the British reported the extent of the alcohol influence as '*very much so*' for the perceived influence of alcohol on the behaviour. No participants reported drug taking on or before 'anal sex' without using condoms.

'MULTIPLE PARTNERS' (using condoms)

Two Brazilians and three British reported having had 'multiple partners' using condoms. Of those, only one subject (British) reported having had 'multiple partners' in the past year.

'MULTIPLE PARTNERS (without using condoms)

Only one subject (British) reported lifetime 'multiple partners' without using condoms and having had 'multiple partners' without using condoms in the past year.

'WILD SEX' (using condoms)

Ten participants (2 Brazilians and 8 British) reported having had 'wild sex' using condoms. The difference in prevalence between the nationalities is significant at level $p \leq 0.05$ ($\chi^2_{[2]} = 7.200$, [$p= 0.027$]). Of those, one Brazilian and three British reported having had 'wild sex' using condoms in the past 12 months. Due to the few reports given for the last 12 months, the further findings are not relevant.

'WILD SEX' (without using condoms)

Twenty-one subjects (8 Brazilians and 13 British) reported lifetime prevalence of 'wild sex' without using condoms. Of those, 5 Brazilians and 7 British, reported having had 'wild sex' without using condoms in the past 12 months. There were no reported differences in frequency of event in the past year. For alcohol consumption prior to the sexual occasions, 4 Brazilians and one British reported having had 'rarely' drunk alcohol, whilst 6 British reported having '*sometimes*' had drunk alcohol and one Brazilian reported no alcohol consumption on or before these occasions ($\chi^2_{[3]} = 8.809, [p= 0.032]$). The difference of influence between the nationalities was not statistically significant (subjects reported '*reasonable influence*' and '*very much so*').

'ORAL SEX' (using condoms or any other protection)

Eleven subjects reported having practised 'oral sex' using condoms or any other protection. Of those, 4 Brazilians and 3 British reported having had 'oral sex' with condoms or any other protection in the past year. There were no significant differences in number of occasions in the past 12 months comparing the two nationalities. The frequency of alcohol consumption on or before these occasions and its influence on the behaviour were not significant between the nationalities.

'ORAL SEX' (without using condoms or any other protection)

Forty-nine subjects (25 Brazilians and 24 British) reported having had practised 'oral sex' without using condoms or any other protection. In the past year, 24 Brazilians and 20 British reported having had 'oral sex' without using any protection. No differences were recorded in number of occasions over the past year between the nationalities. There was a tendency of significance for frequency of alcohol consumption prior to these occasions comparing the nationalities, where Brazilians reported alcohol drinking prior to these occasions less frequently than

British ($\chi^2_{[4]} = 8.778, [p = 0.067]$). For most participants (12 Brazilians and 10 British) alcohol drinking had no influence at all on their behaviour. Three Brazilians and Five British reported 'a little influence', and one Brazilian and 4 British reported that alcohol consumption had 'a reasonable influence' on their behaviour to engage in 'oral sex' without using condoms or any other protection. There was a positive correlation for alcohol drinking and influence of alcohol on the behaviour (Pearson Correlation = 0.548 and $p \leq 0.01$). Drug consumption on or before these occasions were less frequent among Brazilians than British, with a tendency of statistical significance ($\chi^2_{[3]} = 7.455, [p = 0.059]$). Reported drug influence was not statistically significant comparing the populations.

Analysis of Drug Consumption

Lifetime Drug use

Forty-two participants (80.8%) reported lifetime drug use. Of these, 69.2% of the Brazilians (n=18) and 92.3% of the British (n=24). The highest prevalence of lifetime use among the participants was for cannabis with 73.1%, closely followed by tobacco 71.2%. Lifetime cocaine hydrochloride (cocaine powder) use was reported by 25.0%, 23.1% reported lifetime MDMA-ecstasy use and amphetamines by 21.2% of the participants. 19.2% reported lifetime inhalants/solvents use, LSD lifetime use was reported by 17.3%, 9.6% reported lifetime use of magic mushrooms, 5.8% lifetime use of benzodiazepines and 1.9% (n=1) reported lifetime use of heroin. Other drugs lifetime use was reported by 11.5%. Participants who have reported lifetime use of other drugs were asked to specify them. Two Brazilians reported having used 'ayahuasca' tea*. Three British reported having used other drugs, specified amyl nitrate (n=2) and opium (n=1).

¹ 'Ayahuasca' tea known as the 'Santo Daime tea' is a hallucinogen tea that is made from a combination of two native plants found in the Amazon. Several communities in the Amazon (in Brazil) drink this tea as part of a religious cult called 'Santo Daime' where they give reverence to the forest, God and liveliness.

The British reported higher prevalence of lifetime drug use and the statistically significant frequency differences between the two nationalities regarding lifetime use of some drugs, e.g. tobacco, amphetamines and MDMA- ecstasy, are shown in Table 9. There were no statistically significant differences between the nationalities for lifetime use of cannabis; cocaine; benzodiazepines; heroin (1 British, no Brazilians); LSD; magic mushrooms; inhalants/solvents (5 Brazilians and 5 British) and finally, no difference for other drugs. There were no reports of use of crack cocaine nor methadone.

Table 9. *Reported lifetime drug use.*

| Lifetime use | Brazilian (n=26) | British (n=26) | Total | Statistical test | P Value |
|----------------------------|------------------|----------------|-------|--------------------------------|---------|
| Reported lifetime drug use | 18 (69.2%) | 24 (92.3%) | 42 | $\chi^2_{(1)}=4.457$ | 0.035* |
| Tobacco | 14 (53.8%) | 23 (88.5%) | 37 | $\chi^2_{(1)}=7.589$ | 0.006** |
| Cannabis | 16 (61.5%) | 22 (84.6%) | 38 | $\chi^2_{(1)}=3.519$ | 0.061 |
| Cocaine powder | 4 (15.4%) | 9 (34.6%) | 13 | $\chi^2_{(1)}=2.564$ | 0.109 |
| Crack cocaine | 0 | 0 | 0 | --- | --- |
| Benzodiazepines | 1 (3.8%) | 2 (7.7%) | 3 | $\chi^2_{(1)}=0.354^{\dagger}$ | 0.552 |
| Heroin | 0 | 1 | 1 | $\chi^2_{(1)}=1.020^{\dagger}$ | 0.313 |
| Amphetamines | 1 (3.8%) | 10 (38.5%) | 11 | $\chi^2_{(1)}=9.339$ | 0.002** |
| MDMA (Ecstasy) | 3 (11.5%) | 9 (34.6%) | 12 | $\chi^2_{(1)}=3.900$ | 0.048* |
| Methadone | 0 | 0 | 0 | --- | --- |
| LSD | 4 (15.4%) | 5 (19.2%) | 9 | $\chi^2_{(1)}=0.134^{\dagger}$ | 0.714 |
| Magic mushrooms | 1 (3.8%) | 4 (15.4%) | 5 | $\chi^2_{(1)}=1.991^{\dagger}$ | 0.158 |
| Inhalants/Solvents | 5 (19.2%) | 5 (19.2%) | 10 | $\chi^2_{(1)}=0.000$ | 1.000 |
| Other drugs | 2 (7.7%) | 4 (15.4%) | 6 | $\chi^2_{(1)}=0.754^{\dagger}$ | 0.385 |

Notes: Computed only for a 2x2 table; The percentage shown is within nationality; † = Fisher's Exact Test; * = Statistically significant at level $p \leq 0.05$; ** = Statistically significant at level $p \leq 0.01$
 Shaded rows show statistically significant differences between the two nationalities;

Regarding drug injecting behaviour only one participant (British) reported had injected drugs (amphetamines) in their lifetime but had never shared injecting

equipment (needles and syringes). No reports of injecting behaviour in past twelve months.

Age of first drug use

The British also reported having had earlier onset of drug use than Brazilians, as shown in the Table 10.

Table 10. Age of first time drug use.

| Psychoactive Substance | Age range among Brazilians | Mean age | S.D. | Age range among British | Mean age | S.D. | Statistical test | P Value |
|------------------------|----------------------------|----------------|-------|-------------------------|----------------|------|-------------------|---------|
| Tobacco | 8 to 26 (13/ 26) | 17.1 | 5.19 | 7 to 22 (22/ 26) | 15.2 | 3.32 | $t_{[33]}=1.290$ | 0.206 |
| Cannabis | 13 to 25 (14/ 26) | 19.6 | 3.82 | 14 to 23 (21/ 26) | 17.3 | 2.85 | $t_{[33]}=2.093$ | 0.044* |
| Cocaine powder | 20 to 25 (04/ 26) | 22.3 | 2.63 | 16 to 26 (17/ 26) | 20.3 | 2.96 | $t_{[11]}=1.110$ | 0.290 |
| Crack cocaine | --- (00/ 26) | 0 ^a | --- | --- (00/ 26) | 0 ^a | --- | --- | --- |
| Benzodiazepines | 24 (01/ 26) | 24.0 | --- | 17 and 23 (02/ 26) | 20.0 | 4.24 | $t_{[1]}=0.770$ | 0.582 |
| Heroin | --- (00/ 26) | 0 ^a | --- | 21 (01/ 26) | 21.0 | --- | --- | --- |
| Amphetamines | 25 (01/ 26) | 25.0 | --- | 16 to 19 (10/ 26) | 17.4 | 0.97 | $t_{[9]}=7.501$ | 0.000** |
| Ecstasy | 18 to 29 (03/ 26) | 24.0 | 5.57 | 15 to 25 (09/ 26) | 19.6 | 3.32 | $t_{[10]}= 1.720$ | 0.116 |
| Methadone | --- (00/ 26) | 0 ^a | --- | --- (00/ 26) | 0 ^a | --- | --- | --- |
| LSD | 18 to 25 (04/ 26) | 20.5 | 3.32 | 16 to 19 (04/ 26) | 17.5 | 1.29 | $t_{[6]}= 1.686$ | 0.143 |
| Magic mushrooms | 18 (01/ 26) | 18.0 | --- | 16 and 21 (02/ 26) | 18.5 | 2.89 | $t_{[3]}= -0.155$ | 0.887 |
| Inhalants/solvents | 14 to 18 (05/ 26) | 16.6 | 1.67 | 14 to 17 (05/ 26) | 15.2 | 1.10 | $t_{[8]}= 1.565$ | 0.156 |
| Other drugs | 18 and 30 (02/ 26) | 22.0 | 11.31 | 17 to 19 (04/ 26) | 15.3 | 4.92 | $t_{[4]}= 1.100$ | 0.333 |

Note: Numbers in brackets refer to number of participants out of the total subjects within the population; S.D. = Standard Deviation; Shaded rows show statistically significant mean differences between the two nationalities; * = Statistically significant at level $p \leq 0.05$; ** = Statistically significant at level $p \leq 0.001$; ^a = t cannot be computed because at least one of the groups is empty.

Drug consumption over the past twelve months (prior completion of the questionnaire date) was reported by 44.2% for tobacco, 32.7% for cannabis, 13.5%

for cocaine, 13.5% for MDMA-ecstasy, 7.7% for amphetamines, 3.8% for benzodiazepines and the same percentage 3.8% for 'other drugs'. For LSD and magic mushrooms both were reported by 1.9% of the participants. No reported use of crack cocaine, heroin, methadone nor inhalants/ solvents over the past year.

Lifetime consumption prevalence is higher than past year's consumption for all drugs as shown in the Table 11.

Table 11. *Reported drug use over the past 12 months.*

| Use over the past 12 months | Brazilian (n=26) | British (n=26) | Total | Statistical test | P Value |
|-----------------------------|------------------|----------------|-------|------------------------------|---------|
| Tobacco | 7 (26.9%) | 16 (61.5%) | 23 | $\chi^2_{(1)}=6.315$ | 0.012 * |
| Cannabis | 8 (30.8%) | 9 (34.6%) | 17 | $\chi^2_{(1)}=0.087$ | 0.768 |
| Cocaine powder | 2 (7.7%) | 5 (19.2%) | 7 | $\chi^2_{(1)}=1.486^\dagger$ | 0.223 |
| Crack cocaine | 0 | 0 | 0 | --- | --- |
| Benzodiazepines | 0 | 2 (7.7%) | 2 | $\chi^2_{(1)}=2.080^\dagger$ | 0.149 |
| Heroin | 0 | 0 | 0 | --- | --- |
| Amphetamines | 0 | 4 (15.4%) | 4 | $\chi^2_{(1)}=4.333^\dagger$ | 0.037 * |
| MDMA (Ecstasy) | 2 (7.7%) | 5 (19.2%) | 7 | $\chi^2_{(1)}=1.486^\dagger$ | 0.223 |
| Methadone | 0 | 0 | 0 | --- | --- |
| LSD | 1 (3.8%) | 0 | 1 | $\chi^2_{(1)}=1.020^\dagger$ | 0.313 |
| Magic mushrooms | 1 (3.8%) | 0 | 1 | $\chi^2_{(1)}=1.020^\dagger$ | 0.313 |
| Inhalants/Solvents | 0 | 0 | 0 | --- | --- |
| Other drugs | 1 (3.8%) | 1 (3.8%) | 2 | $\chi^2_{(1)}=0.000^\dagger$ | 1.000 |

Notes: The percentage shown is within nationality; Computed only for a 2x2 table; Shaded rows show statistically significant differences between the two nationalities; * = Statistically significant with $p \leq 0.05$; ** = Statistically significant with $p \leq 0.01$; † = Fisher's Exact Test;

Participants reported consumption of tobacco, cannabis, cocaine powder, benzodiazepines, amphetamines, MDMA-ecstasy, and prescribed medication during the past 30 days prior to completion of the questionnaire. Although the drug consumption over the past 30 days is less frequent among Brazilians than among British, there was no statistically significant differences between the groups. Tobacco

consumption showed a trend of significance with $p=0.061$ regarding differences in numbers of days of consumption between the two nationalities. See Table 12.

Table 12. Drug consumption over the past 30 days.

| Psychoactive substance | Brazilians (n=26) | Mean number of days | S.D. | British (n=26) | Mean number of days | S.D. | Statistical Test | P Value |
|------------------------|-------------------|---------------------|-------|----------------|---------------------|-------|----------------------|---------|
| Tobacco | 3 | 20.33 | 16.74 | 14 | 28.93 | 2.89 | $t_{[15]} = - 2.022$ | 0.061 |
| Cannabis | 2 | 10.50 | 13.44 | 8 | 6.25 | 6.23 | $t_{[8]} = 0.715$ | 0.495 |
| Cocaine powder | 1 | 1.00 | --- | 4 | 1.50 | 1.00 | $t_{[3]} = - 0.447$ | 0.685 |
| Benzodiazepines | 0 ^a | --- | --- | 2 | 4.50 | 3.54 | --- | --- |
| Amphetamines | 0 ^a | --- | --- | 1 | 2.00 | --- | --- | --- |
| MDMA-ecstasy | 1 | 1.00 | --- | 2 | 7.50 | 6.36 | $t_{[1]} = - 0.834$ | 0.557 |
| Prescribed medication | 1 | 30.00 | --- | 2 | 22.00 | 11.31 | $t_{[1]} = 0.577$ | 0.667 |

^a . *t* cannot be computed because at least one of the groups is empty.

Drug consumption with alcohol

Lifetime drug consumption with alcohol on the same occasion was reported by 40.4% of the participants (n=21) with statistically difference significance between the nationalities at level $p \leq 0.05$ ($p= 0.048$). There was also a statistical significant difference between Brazilians and British on alcohol and drugs consumption on the same occasion over the past twelve months at level $p \leq 0.01$ ($p= 0.010$). See TABLE 13. Of those who reported consumption of alcohol and drugs on the same occasion over the past twelve months also responded the question of frequency of these occasions during the past 12 months (5-point scale, never to always). One participant reported that had “*always*” consumed drugs with alcohol, 3 reported that had “*often*” consumed drugs with alcohol, 3 participants had “*sometimes*” consumed drugs with

alcohol in the past year and 3 had “rarely” consumed alcohol and drugs on the same occasion in the past twelve months.

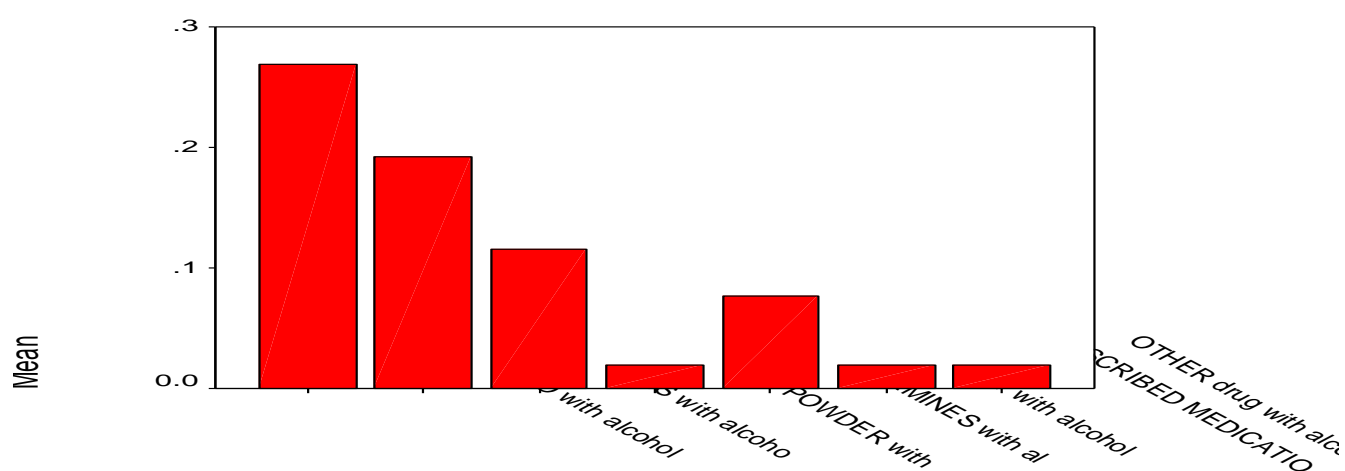
TABLE 13. Consumption of alcohol and drugs on the same occasion. (Lifetime and past 12 months)

| | Brazilians | British | Pearson Chi- Square | P Value |
|--------------------------------------------------------|------------|------------|----------------------|----------|
| Ever used drugs and alcohol on the same occasion | 7 (26.9%) | 14 (53.8%) | $\chi^2_{[1]}=3.914$ | 0.048 * |
| Past 12 months, drugs and alcohol on the same occasion | 2 (8.0%) | 10 (38.5%) | $\chi^2_{[1]}=6.573$ | 0.010 ** |

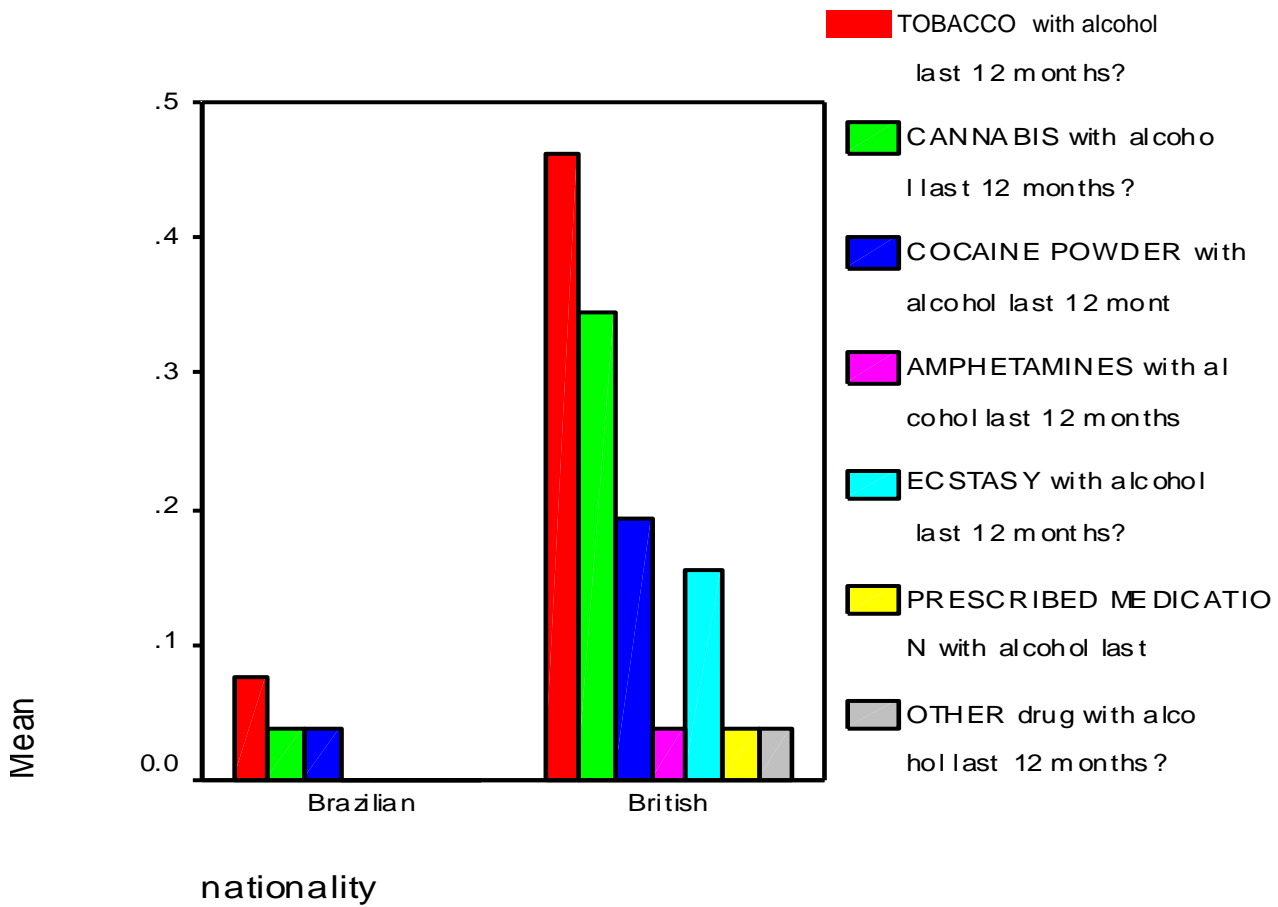
Notes: The percentage shown is within nationality; Shaded cells show statistically significant differences between the two nationalities; * = Statistically significant at level $p \leq 0.05$; ** = Statistically significant at level $p \leq 0.01$

The most frequent drugs consumed with alcohol were: tobacco, reported by 26.9% of the participants; followed by cannabis with 19.2% of the reports. Cocaine powder had 11.5% of the reports, 7.7% of the participants reported using MDMA (ecstasy) with alcohol on the same occasion. Use of amphetamines, prescribed medication and “other” drugs (amyl nitrate) with alcohol on the same occasion during the past year was reported by 1.9% of the participants for each latter 3 types of drugs. See Graph 8.

GRAPH 8. Frequency of types of drugs consumed with alcohol in the past year in the whole sample.



Graph 9. Frequency of different drugs consumed with alcohol on same occasion in the past year by nationality.



The statistically significant differences between the nationalities of consumption of drugs with alcohol on the same occasion in the past year were present for tobacco ($\chi^2_{(1)} = 9.774$ and $p = 0.002$), cannabis ($\chi^2_{(1)} = 7.924$ and $p = 0.005$) and MDMA-ecstasy ($\chi^2_{(1)} = 4.333$ and $p = 0.037$). See Graph 9.

DISCUSSION

This study has explored psychoactive substance use (especially alcohol) and sexual risk behaviour in a sample of Brazilians and British. Data collection focused on the respondents' lifetime and past 12 months psychoactive substance use and sexual behaviour and also on their perceived influence of alcohol on the likelihood of engaging in specific sexual practices.

Demographics

The Brazilian sample was not matched to the British sample regarding level of education; occupation, therefore different sources of income; and religion.

According to Instituto Brasileiro de Geografia e Estatística - IBGE (1991), 15% of the Brazilian population aged 15 or more are illiterate and approximately only 800,000 Brazilians among those aged 30-34 have a degree qualification (Brazil's total population in 1996 was 157,070,163, therefore, roughly only 0.5% has got degree qualification). The United Kingdom's total population according to Government Statistical Service (GSS) last numbers (1995) was 58,600,000 and roughly 1,200,000 British (2% of the population) were in higher education courses (provisional for 1996).

The high education qualification of Brazilians in this study is not representative of Brazilian population in Brazil, neither is representative the difference of education qualification between the samples.

Although there is a great variety of ethnic groups in Brazil (55% is white (IBGE,1991), 73% of the Brazilian participants reported belonging to white ethnic group. Seventy-three per cent of the British subjects described themselves as white and the white population in Great Britain, roughly 90% (GSS,1995).

Regarding religion the samples are also different, 46% of the Brazilians in the sample are Catholics and 35% of the British subjects belong to Church of England.

Although the main source of income of Brazilian subjects was grant (average monthly income £850) it was higher than the standard of living of the Brazilian population in Brazil. According to IBGE (1996) 73% of the Brazilians have a monthly income up to £ 400 (R\$ 1200, converted from Brazilian Reais to Sterling Pounds). The average monthly income of the British subjects was \$1000, while the average income for the population in Great Britain was £1400 (GSS, 1996). Obviously, some factors (cost of living and average income of the target population, for example) have to be considered to compare standard of living in London-UK and Brazil. Unfortunately, this comparison is beyond the scope of this study.

Alcohol Consumption

Alcohol consumption patterns among British subjects in this study was significantly different comparing to the Brazilians subjects. From the observed outcomes, British tended to drink larger amounts of alcohol and more frequently than Brazilians. British also reported having got drunk more frequently than Brazilians.

British subjects in this study had higher scores for the AUDIT than Brazilian participants. The AUDIT total score cut-off point is eight, thirteen British subjects scored 8 or more, while only one Brazilian participant did so.

Considering AUDIT as a screening questionnaire, its scores should be combined to other instruments to assess alcohol problems (assessment interviews, medical examination, other questionnaires). Alcohol problems cannot be defined only by how much the subjects drink, but it is important to assess how they use alcohol, their attitude towards drinking and to which extent alcohol interferes in their lives. Therefore, AUDIT scores in this study act only as a guide that may only suggest possible harmful drinking patterns.

Mood Function and Social/ Contextual Function

The attitudes towards alcohol drinking of the participants in this study shown interesting differences in the Social/contextual Functions from the point of view of 'reasons' or 'explanations' to drink.

The British subjects reported drinking alcohol more frequently to help them feel more comfortable in social as well as in sexual situations than the Brazilian subjects did.

The British reported drinking considerably more than Brazilians, either in frequency as in quantity. This difference may be due to the cultural background, but the difference on mean age between Brazilians (30 years) and British (26.5 years) subjects must be considered. The British sample was younger than the Brazilian sample and according to Alcohol Concern, young people have the highest rates of signs suggesting alcohol problems.

The Brazilian subjects reported eating more before or while drinking, which might also influence the lower frequency of getting drunk than British. This might be due to cultural background.

Sexual Behaviour

Brazilian males in this study had considerably more sexual partners than Brazilian females. There was no difference regarding number of sexual partners within the British sample. The difference in number of sexual partners between Brazilian males and Brazilian females might be due to cultural background, where conservatively and generally speaking, males in Brazil are expected to be very sexually experienced, and on the other hand, females are expected to play the 'naïve character' (having had less sexual experiences).

Contraceptive Methods and Condom use

British have used condoms as a contraceptive more often than Brazilians, having safer sexual practices as sexual intercourse without using condoms is considered risk behaviour for infection of sexual transmitted diseases.

Although Brazilians have reported other forms of contraception, there was a higher prevalence of unwanted pregnancies and abortions among Brazilians than British, which is interesting because as a whole Brazilians reported less prevalence of sexual risk behaviours and because in Brazil, abortion is illegal. This is worth mentioning because being abortion an illegal practice and regarding religion (Catholicism), not acceptable. Though it becomes even more stressful for those who choose this alternative to deal with an unwanted pregnancy, because there is little support for women in these circumstances. Due to ethical considerations, not all doctors agree to perform the operation, those who agree charge considerably and/or might not be sufficiently skilled. Having said that, prevention methods should be seriously considered.

Conversely, prevention campaigns in Brazil are not very efficient. Brazilian population is not well informed or motivated towards safe sexual practices. It would be worthwhile to investigate context and age of the subjects at that time and if contraceptive methods had been used before the pregnancies and abortions, because Brazilians tend to 'learn' when something happens to them, with their own experience. Brazilians do not have the 'prevention mentality' until something happens to them. While British Health System seem to be very concerned regarding prevention promoting easy access to information. Similar investigation should be carried out for sexual transmitted diseases, to assess the context and reasons of likelihood for these events to happen.

HIV status

Responses to HIV status brought up some kind of doubt because only one Brazilian reported not knowing their HIV status and nine British subjects did. The question is whether the thirty-eight subjects who reported being HIV seronegative actually know their status because they have been tested or because they have assumed themselves to be HIV seronegative according to their perception of their behaviour. Or furthermore, because as they have not been tested and they do not have the diagnosis of HIV seropositive they assume they are not HIV seropositive. The same question for those who reported 'not knowing' their status. Would it be because as they have not been tested they cannot ensure or because according to their behaviour they think they might have been at risk of being infected? The questionnaire did not ask if subjects had been tested.

Penetrative sexual intercourse

Penetrative sex without using condoms was associated with the status of being in a stable relationship. This correlation must be considered 'a priori' as risk behaviour, because being in a relationship does not mean not being at risk (Rhodes,1995).

Although number of subjects was not enough for significant statistical analysis, it has been observed in the total sample that alcohol drinking prior to sexual events influences the behaviour of engaging in risk behaviours. Prevalence of sexual risk behaviour among British was higher than among Brazilians, and influence of alcohol drinking on sexual behaviour was more evident among British than among Brazilians.

Considering prevalence of risk behaviour, whether the subjects have had experienced the various sexual activities, in addition to number of occasions, it would have been worth asking number of people the subjects have had been with on these occasions.

Although overall Brazilian subjects seemed to engage less frequently in sexual behaviour than British subjects, 'anal sex' is highly risky behaviour. Higher prevalence of heterosexual anal sex practices among Brazilians might also be due to cultural background. Brazilians pay attention to this part of the body, considering it highly sexually appealing and compassionately regard this part of the body as 'national preference'.

'Oral sex' seemed to be a common practice in both nationalities equally. Even though, 'oral sex' is not considered high-risk behaviour, the risk of infection still exists. It has been reported HIV infection exclusively by 'oral sex'. Some Brazilian and British subjects reported having had 'oral sex' using condoms or any other protection but the great majority reported oral sex practices more frequently without using condoms.

Influence of Alcohol on Engaging in Sexual Behaviour

The British subjects reported more frequently perceived influence of alcohol on likelihood in engaging in sexual behaviours than the Brazilian subjects. This finding might be due to quantity of alcohol consumption and possible consequent perceived intoxication.

The Brazilians subjects in the sample drink less than the British subjects, therefore the degree of intoxication might be different. Not only due to the amount consumed but also due differences in patterns of drinking. Drinking alcohol 'on an empty stomach' increases the blood alcohol concentration more quickly therefore the appearance and perception of intoxication happens sooner.. As Brazilians reported eating before or on drinking session it might be less noticeable for them the degree of intoxication.

Another aspect that would have been worth investigating is how long before the sexual occasion alcohol consumption and its quantity had taken place.

Drug Consumption

British subjects reported earlier onset of drug consumption, wider range of experience regarding variety of types of consumed drugs and higher prevalence and frequency of drug taking than the Brazilian subjects did. The most frequent drugs ever used reported by the subjects in the sample as a whole were cannabis, tobacco and cocaine hydrochloride. The British subjects also reported more frequent drug use with alcohol on the same occasion than the Brazilian subjects. The most frequent drugs consumed with alcohol on the same occasion were tobacco, cannabis, cocaine hydrochloride and MDMA (ecstasy).

The British subjects in the study reported higher frequency and quantity of alcohol consumption. AUDIT scores for 50% of the British in the sample suggest drinking harmful pattern. The British in the sample reported having got drunk more frequently than the Brazilian and drinking for social function, for example: “to feel more comfortable in a social situation” and “to feel more comfortable in a sexual situation”.

Regarding sexual behaviour, the British sample reported higher prevalence of sexual risk behaviour and risk behaviour after drinking than Brazilians did. The Brazilians reported higher prevalence and frequency a highly risk sexual behaviour, ‘anal sex’ (heterosexual) without using condoms than British.

The British sample also reported more frequently perceived influence of intoxication due to alcohol consumption.

CRITIQUE

There are several issues to be considered and discussed about this study. Therefore, the critique is going to be presented under subtitles.

Disadvantages of the Study Design and Bias

This study has various limitations regarding the extent to which it could be representative of each population of the study, especially where the Brazilians are concerned. The design of the study and the conclusion reached are based on people recruited from London.

The Brazilian people who live in London are believed to have higher social-economic and educational status than the Brazilian population in Brazil, therefore, they do not represent the Brazilians in Brazil. As it has been said, most of the population in Brazil are poor and have no easy access to information, education, health and basic care, which are important variables when talking about behaviour, risk behaviour and prevention.

The period of time that the Brazilians subjects have been living in London might also have been a bias for the study, assuming that the longer they have been abroad and living in London, the more likely they are to be adapted to the British culture and customs. Therefore, they are more likely to experience new things, to adopt new habits and different routine and life style. The Brazilian sample was not homogenous regarding this aspect.

Thus, the Brazilian population in London represents itself a bias for this study. The study was not able to control for differences that might be due to social-economic status (both, people in full time employment and those with no formal work).

The sampling was not a randomised and the number of participants was smaller than the expected number of cases to meet the power calculation. Therefore,

the sampling procedure and sample size were factors of the study that might contribute to subjects who participated not being representative of the general Brazilian and British populations.

Research Measures

The research measure instrument was a self-completion questionnaire in English that may not have been popular with the subjects and this may have discourage subjects to fill it in entirely.

Advantages of Self-Report Questionnaire

Self-report questionnaire, regarding to the topics that have been assessed in this study, had some advantages. Sex and drugs are issues perceived as 'taboo', people might have felt more comfortable to respond the questions about sexual behaviour and drug and alcohol consumption with no one knowing their answers, ensuring privacy, anonymity and confidentiality.

Disadvantages of Self-Report Questionnaire

Some participants have not answered all the questions or might have not taken their participation in the study very seriously because of the subject matter, taking it for granted as nobody was 'supervising' their answers and attitudes towards the study. However, the findings were very informative. An interview situation as an alternative make subjects feel more inhibited to take their participation for granted. Another reason is that in a interview situation the interviewer asks questions, he/she might be able to ensure if the participant understands the questions, the same way that the participant can more easily clarify any doubts with the interviewer if he/she does not understand any questions.

Procedure

Contacting the Association of Brazilian Post-Graduate Students (ABEP) might also have been a bias because ABEP is an association where most or all of the associated students are doing PhD, which might help to explain the high level of educational qualification among Brazilian subjects. In addition, in snowballing procedure, subjects refer to other subjects some way alike as they have some kind of contact, be it professional or personal. Regarding subjects who have might referred their partners to the study, for instance, the results could have been influenced in terms of sexual activity (current frequency of sexual activity, types of sexual practices) reports of lifetime pregnancies, abortions; and alcohol consumption due to similar environment.

Consequently, snowballing procedure may also be considered as 'bias' for the study outcomes. Subsequently, it has not been an appropriate sampling procedure. The populations were not matched for several items e.g., gender, and level of education qualification and current occupation, for example.

Disadvantages of Time Limit

There are numerous disadvantages due to the short time to do this study. One of them is the sampling. If time were not so short, the sample would have been randomised for both populations, the cohort size would be larger and all the variables for the study to be representative would be analysed and followed. Both populations would be equally correlated. Both populations' data would be gathered in the country of origin. For example, the Brazilian population's data would have been collected in Brazil. Reliability of the study, validity of instruments and measurement scales would be more rigorous. Settings and procedure could also have been more accurate.

Difficulties Encountered Due To Time Limit

There were encountered difficulties to gather the total number of subjects expected. As the majority of the intended population was students, at this period of the year, either students were away on holidays or extremely busy writing up their thesis. Thus, the response was not as high as expected neither was the sample as matched as desirable.

The research instrument should have been more accurately designed and piloted in larger number of subjects. The research measure instrument included a very large number of variables that would have been more extensively explored.

RECOMMENDATION FOR FURTHER STUDIES

Recommendation for further studies include the remained unanswered questions proposed for this study. An investigation towards reasons and contexts of consumption of psychoactive substances should be taken in depth. Reasons and circumstances of risk taking behaviour should also be assessed by relevant and clear measures in order to achieve a better understanding of people's perception of risk and its consequences. In addition, whether 'intoxication' plays a role of 'explanation' or 'legitimator' of behaviour that individuals would not engage if not intoxicated. It would be extremely useful if the investigation measures could assess individual response to external stimuli with the purpose to figure out how motivate individuals to respond positively to prevention campaigns adopting safer behaviours.

Further investigations might be made to assess the reasons why people stop using condoms with a regular partner. When, in which point of the relationship, how long after the first encounter do they become regular partners? Is it just an emotional decision? One Brazilian specified 'blood test' as 'other' method to avoid sexual transmitted diseases. To whom would they ask for the blood test? Only for regular partners? Sexual transmitted diseases, especially HIV/AIDS play an interesting role in relationships where partners might put themselves at risk for the sake of the relationship, intimacy, trust and partnership (Rhodes, 1995).

BENEFITS OF THE STUDY

The casual model of how substance use influences health risk taking behaviour rests on the assumption that intoxication leads individuals to make poor judgements and therefore engage in activities that they would not do under normal circumstances.

As a correlation between substance use and risky sexual behaviour has relatively been found, the study is useful for prevention programmes. The factors that discourage psychoactive substance users from adopting safer sex practices affect the general heterosexual population as a whole. Health promotion and harm reduction interventions would therefore be more effective if they could discourage individuals from becoming intoxicated at such a level that judgement is impaired. Health risk taking would therefore be reduced.

CONCLUSION

The sample size of the study was small and the research measures open to interpretation and therefore, it was not possible to demonstrate a strong correlation of influence culture in the relationship between psychoactive substance use and likelihood of engaging in risk behaviour.

Nevertheless, the relationship of intoxication and likelihood of engaging in risk behaviour is somehow associated to cultural background in the sample. Perception of 'risk' seems to depend on intoxication with alcohol, psychological and emotional state, social context and previous experiences. Ideally to demonstrate statistical significance larger number of subjects are required.

REFERENCES

- ALMEIDA-FILHO, N., SANTANA, V. S., PINTO, I. M., de CARVALHO-NETO, J. A. (1991) Is There An Epidemic Of Drug Misuse In Brazil? A Review Of The Epidemiologic Evidence (1977-1988), *International Journal of Addictions* (1991), Vol. 26, No. 3, pp 355-369.
- BELLAH, R. N., MADSEN, R., SULLIVAN, W. M., SWIDLER, A. & TIPTON, S. M. (1985) *Habits of the Heart*. New York: Harper & Row.
- BERNE, E. (1964) *Games People Play: the Psychology of Human Relationships*. New York: Mentor Books.
- BLAKEY, V., WHITBREAD, C., BLOOR, M. & KEENE, J. (1997) Illicit Drug Use and Risky Sexual Behaviour - Summary findings from a literature review. *Hybu Iechyd Cymru- Health Promotion Wales. Briefing Report No. 11*
- BOYS, A., MARSDEN, J., GRIFFITHS, P., FOUNTAIN, J., STILLWELL, G & STRANG, J. (1999) Substance Use Among Young People: the Relationship Between Perceived Functions and Intentions. In *Addiction* (1999) Vol. 94 (7), p.p. 1043-1050.
- BROWNE, J. & MINICHELLO, V. (1994) The Condom: Why More People Don't Put it On, *Sociology of Health & Illness* (1994), Vol. 16, No. 2, pp 229-251.
- CHEN, K., KANDEL, D. (1995) The Natural History of Drug Use from Adolescence to the Mid-Thirties in a General Population Sample, *American Journal Public Health*, 85, 41-47.
- CLAPPER, R. L. & LIPSITT, L. P. (1991) A Retrospective Study of Risk-Taking and Alcohol-Mediated Unprotected Intercourse, *Journal of Substance Abuse* (1991), Vol. 3, pp 91-96.
- COOPER, M. L. (1992) Alcohol and Increased Behavioral Risk for AIDS, *Alcohol Health & Research World* (1992), Vol.16, No. 1, pp 64-72.

- FERNANDES, M. E. (1990) The AIDS epidemic in Brazil, Voeller, Bruce R. (Ed); Reinisch, June Machover (Ed) et al (1990) *AIDS and sex: An integrated biomedical and behavioral approach. Kinsey Institute Series, Vol. 4, pp 197-203.* New York, NY, USA: Oxford University Press. xv, 449pp.
- GRAVES, K. L. & LEIGH, B. C. (1995) the Relationship of Substance Use to Sexual Activity Among Young Adults in The United States, *Family Planning Perspectives (1995), Vol. 27, pp 18-22 & 33.*
- GRAVES, K. L. & HINES, A. M. (1997) Ethnic Differences in the Association Between Alcohol and Risky Sexual Behavior with a New Partner: an Event-Based Analysis, *AIDS Education and Prevention (1997) Vol. 9, No. 3, pp 219-237.*
- HALPERN-FELSHER, B. L., MILLSTEIN, S. G. & ELLEN, J. M. (1996) Relationship of Alcohol Use and Risky Sexual Behavior: A Review and Analysis of Findings, *Journal of Adolescent Health (1996), Vol. 19, pp 331-336.*
- HEATH, D. B. (1986) Concluding remarks. In Babor, T. F., ed. Alcohol and Culture: Comparative Perspectives from Europe and America. *Annals of the New York Academy of Sciences (1986) 472, pp 234-237.*
- LAUCHLI, S., HEUSSER, R., TSCHOPP, A., GUTZWILLER, F. & THE RESEARCH GROUP OF THE SWISS HIV PREVENTION STUDY (1996) Safer Sex Behavior and Alcohol Consumption, *Annals of Epidemiology (1996), Vol. 6, pp 357-364.*
- LINTON, R. (1947) *The Study of Man New York: Appleton.*
- LIGHT, D. Jr. & KELLER, S. (1985) *Sociology.* New York: Knopf
- MARSDEN, J., GOSSOP, M., STEWART, D. BEST, D., FARRELL, F., LEHMANN, P. & STRANG, J. (1998) The Maudsley Addiction Profile (MAP): A Brief Instrument for Assessing Treatment Outcome. In *Addiction (1998), Vol. 93, pp 1857-1867.*
- McEWAN, R. T., McCALLUM, A., BHOPAL, R. S. & MADHOK, R. (1992) Sex and the Risk of HIV Infection: the Role Of Alcohol, *British Journal of Addiction (1992), Vol. 87, pp 577-584.*

- MEASHAM, F., PARKER, H., ALDRIDGE, J. (1998) The Teenage Transition: From Adolescent Recreational Drug Use to the Young Adult Dance Culture in Britain in the Mid-1990s, *Journal of Drug Issues*, Vol. 28(1), 9-32.
- ORLANDI, M. A. (1992) The Challenge of Evaluating Community-Based Prevention Programs: A Cross-Cultural Perspective, *Cultural Competence for Evaluators - A Guide for Alcohol and Other Drug Abuse Prevention Practitioners Working With Ethnic/Racial Communities*, pp 1-22. OSAP (Office for Substance Abuse Prevention) Cultural Competence Series.
- PARKER, H., ALDRIDGE, J., MEASHAM, F. (1998) Illegal Leisure -The Normalization of Adolescent Recreational Drug Use. *Adolescence and Society Series*. London, Routledge
- PICCINELI, M., TESSARI, E., BORTOLOMASI, M., PIASERE, O., SEMENZIN, M., GARZOTTO, N., TANSELLA, M. (1997) Efficacy Of The Alcohol Use Disorders Identification Test As A Screening Tool For Hazardous Alcohol Intake And Related Disorders In Primary Care: A Validity Study. In *British Medical Journal*, (1997) 314: 420-4
- PLANT, M. A. (1990) Alcohol, Sex and AIDS, *Alcohol and Alcoholism (1990)*, Vol. 25, No. 2/3, pp 293-301.
- PLANT, M. & PLANT, M. (1997) *Risk-Takers Alcohol, Drugs, Sex and Youth*. London, Tavistock/Routledge.
- PLANT, M. A. (1996) Contemporary Research: Alcohol, Drugs, HIV/AIDS and Risk Taking, *Journal of Substance Misuse (1996)* Vol. 1, pp 32-37.
- PLANT, M. A. (1989) Sex Work, Alcohol, Drugs, and AIDS, *Chapter 1*, pp 1- 17.
- RHODES, T. (1996) Culture, Drugs and Unsafe Sex: Confusion About Causation, *Addiction (1996)*, Vol. 91 (6), pp 753-758.
- RHODES, T. (1997) Risk Theory in Endemic Times: Sex, Drugs and the Social Organisation of 'Risk Behaviour', *Sociology of Health & Illness (1997)*, Vol. 19, No. 2, pp 208- 227

- RHODES, T. (1995) Researching and Theorising 'Risk': Notes on the Social Relations of Risk in Heroin Users' Lifestyles. In Aggleton P, Hart G, Davies P (eds) *AIDS: Sexuality, Safety and Risk*. London: Taylor and Francis. Chapter 9, pp 125-143
- RHODES, T. & STIMSON, G. V. (1994) What is the Relationship Between Drug Taking and Sexual Risk? Social Relations and Social Research, *Sociology of Health & Illness* (1994), Vol. 16, No. 2, pp 209-228.
- RHODES, T. J., DONOGHOE, M. C., HUNTER, G. M. & STIMSON, G. V. (1993) Continued Risk Behaviour Among HIV Positive Drug Injectors in London: Implications for Intervention, *Addiction* (1993), Vol. 88, pp 1553-1560.
- RODRIGUES, A. & COMREY, A. L. (1974) Personality Structure in Brazil and United States, *Journal of Social Psychology* (1974), Vol. 92, No. 1, pp 19-26.
- SENF, J. H. & PRICE, C. Q. (1994) Young Adults, Alcohol and Condom Use: What is the Connection? *Journal of Adolescent Health* (1994), Vol. 15, No. 3, pp 238-244.
- STALL, R. & LEIGH, B. (1994) Understanding the Relationship Between Drug or Alcohol Use and High Risk Sexual Activity for HIV Transmission: Where Do We Go From Here?, *Addiction* (1994), Vol. 89, pp 131- 134.
- STIMSON, G. V. (1990) AIDS and HIV: The Challenge for British Drug Services, *British Journal of Addiction*, Vol. 85, pp 329-339.
- STINSON, F. S. & DEBAKEY, S. F. (1993) Prevalence of Alcohol Problems Among Selected AIDS Risk Groups: United States, 1988, *Addiction* (1993) Vol. 88, pp 1139-1147.
- STRANG, J. & STIMSON, G. (1992) *AIDS and Drug Misuse*. London, Routledge.
- STRUNIN, L. & HINGSON, R. (1991) Alcohol Use and Risk for HIV Infection, *Alcohol Health & Research World* (1993), Vol. 17, No. 1, pp 35-38.
- TEMPLE, M. T., LEIGH, B. C. & SCHAFER, J. (1993) Unsafe Sexual Behaviour and Alcohol Use at the Event Level: Results of a National Survey, *Journal of Acquired Immune Deficiency Syndromes* (1993), Vol. 6, No. 4, pp 393-401

TRÆEN, B. & KVALEM, I. L. (1996) Sex Under The Influence Of Alcohol Among Norwegian Adolescents, *Addiction* (1996) Vol. 91, NO. 7, pp 995-1006.

YATES, J. F. & STONE, E. R. (1992) The Risk Construct. In Yates J. F. (ed.) *Risk Taking Behaviour*. West Sussex, Willey Editorial Offices.

Information Sheet

The influence of culture on the relationship of psychoactive substance use and the likelihood of engaging in risk behaviour.

What is the study about?

The purpose of this study is to investigate and compare the influence of psychoactive substance use on decision making in engaging in risk behaviour between two different nationalities. We hope that the results will give us a better understanding of people's behaviour on this topic area and help to design effective prevention programmes.

Confidentiality and Anonymity

The participants' names WILL NOT be written in the questionnaire. No individual information about participants will be available, as each questionnaire response will only be identified by a code number.

Taking part in the study

I very much hope that you will agree to take part in the study. It is important to note that participation is completely voluntary. You are perfectly entitled to refuse to take part or withdraw from the study at anytime without giving reasons.

THANK YOU.

For more information about the study, please contact the investigator:

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