RESEARCH ONLINE

University of Wollongong
Research Online

Faculty of Health and Behavioural Sciences - Papers (Archive)

Faculty of Science, Medicine and Health

2012

A hangover and a one-night stand: Alcohol and risky sexual behaviour among female students at an Australian University

Heidi Gilchrist
University of Wollongong, heidig@uow.edu.au

Kylie Smith
University of Wollongong, kyliesm@uow.edu.au

Christopher A. Magee
University of Wollongong, cmagee@uow.edu.au

Sandra Jones
University of Wollongong, sandraj@uow.edu.au

Publication Details

Gilchrist, H., Smith, K., Magee, C. A. & Jones, S. (2012). A hangover and a one-night stand: Alcohol and risky sexual behaviour among female students at an Australian University. Youth Studies Australia, 31 (2), 35-43.

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au

RESEARCH ONLINE

A hangover and a one-night stand: Alcohol and risky sexual behaviour among female students at an Australian University

Abstract

There is a growing body of research in Australia exploring the alcohol consumption behaviours of young people and the attendant health and social risks associated with excessive use of alcohol (Chikritzhs et al. 2003; Mancina-Pena & Tyson 2007). A number of studies from countries such as the United States and New Zealand indicate that university students tend to drink at riskier levels than the broader population (see for example Wechsler et al. 1994; Kypri, Stephenson & Langley 2005; Wechsler & Nelson 2008). Data from Australia are limited, although the few studies that have been conducted suggest that Australian university students are also more likely to consume alcohol at risky levels (Davey, Davey & Obst 2002; Johnston & White 2004; Utpala-Kumar & Deane 2010)

Keywords

among, female, students, australian, university, night, stand, alcohol, risky, hangover, sexual, one, behaviour

Disciplines

Arts and Humanities | Life Sciences | Medicine and Health Sciences | Social and Behavioral Sciences

Publication Details

Gilchrist, H., Smith, K., Magee, C. A. & Jones, S. (2012). A hangover and a one-night stand: Alcohol and risky sexual behaviour among female students at an Australian University. Youth Studies Australia, 31 (2), 35-43.

This journal article is available at Research Online: http://ro.uow.edu.au/hbspapers/2329

A hangover and a one night stand: alcohol and risky sexual behaviour among female students at an Australian University

Background

There is a growing body of research in Australia exploring the alcohol consumption behaviours of young people, and the attendant health and social risks associated with excessive use of alcohol (Chikritzhs et al. 2003; Mancina-Pena and Tyson 2007). A number of studies from countries such as the United States (US) and New Zealand (NZ) indicate that university students tend to drink at riskier levels than the broader population (see for example Wechsler et al. 1994; Kypri et al. 2005; Wechsler and Nelson 2008). Data from Australia are limited, although the few studies that have been conducted suggest that Australian university students are also more likely to consume alcohol at risky levels (Davey et al. 2002; Johnston and White 2004; Utpala-Kumar and Deane 2010).

There is also evidence of a strong relationship between alcohol consumption and risky sexual behaviour among female university students (Ullman et al. 1999; Parks and Fals-Stewart 2004; WHO 2005; Parks et al. 2008). The majority of these studies have been conducted in the US, with an absence of published research from other countries; however because of the similarities between university students in Australia and the US these findings are relevant. For example, in a study of 12 US universities, 17% of female respondents reported that they "drank more than normal" at least once in the previous year to make sex easier; 25% of these individuals engaged in unsafe sex (Anderson and Mathieu 1996). Similarly, Poulson et al. (1998) found that 39% of female university students surveyed used alcohol to enhance their sexual experiences, with 70% indicating that they were less likely to use condoms when they consumed alcohol prior to engaging in sexual activity (Poulson et al. 1998). Other studies have also found higher levels of alcohol consumption to be associated with lower levels of condom use among both male and female students (McNair et al. 1998). Another study found students who consumed alcohol prior to sex were 34% more likely to engage in unprotected vaginal sex than non-drinkers; these effects appeared more pronounced for encounters involving casual partners (Brown and Vanable 2007).

In addition to risky sexual behaviour, alcohol consumption has been associated with an increased risk of sexual assault and aggression. For example, in the US, approximately half of sexual assaults where a female university student was the victim involved alcohol consumption by the victim, the perpetrator, or both parties (Abbey et al. 1998; Abbey et al. 2000; Abbey 2002). Furthermore, 40% of female binge drinkers have reported unwanted

sexual behaviour (Wechsler et al. 1994), while other studies have shown that female university students are 10 to 20 times more likely to be involved in sexual or physical aggression on days when they consume a large amount of alcohol (LaBrie et al. 2008; Parks et al. 2008). It has been hypothesised that alcohol may increase the risk of unwanted/risky sexual behaviour by affecting both inhibitions and perceptions of sexual intent (Abbey et al. 1998; Abbey et al. 2000; Davis et al. 2010; Griffin et al. 2010). Some males may also consciously or sub-consciously consume alcohol prior to committing a sexual assault as a way to justify their behaviour (Abbey et al. 2003).

An association between alcohol consumption and sexual behaviour (both consensual and non-consensual) for female university students has important ramifications for women's health and well-being (WHO 2005). For example, short-term consequences can include unintended pregnancies and an increased risk of sexually transmissible infections (STIs). This latter point is particularly important given that the rates of STIs continue to rise among young Australian adults (NCHECR 2009). In both the short and the longer term, the negative physical and emotional effects of non-consensual sex are also of great concern.

Very few studies have investigated the consequences of excessive alcohol consumption among Australian female university students. In particular, there has been little research examining the drinking behaviours of young women, and the relationship between alcohol consumption and sexual behaviour. Recently, Borlagdan et al. (2010) conducted focus groups with young people aged 14-24 and found that drinking alcohol provided some young women with an "excuse" to transgress gender norms and to be more sexually forward. O'Brien (1999) found that the nature of drinking cultures at university combined with changing gender expectations have a significant impact on women's attitudes and behaviour However there has been little other research regarding the types of drinking undertaken specifically by young women in Australia; also lacking is an in-depth understanding of the associated risk behaviours that impact or involve women.

This research is needed because public health intervention programs aimed at reducing alcohol consumption and associated risk behaviours generally focus on predominantly male oriented behaviours such as speeding and drink driving (Keane 2009). Although recent campaigns such as the Australian Federal Government's "Drinking Nightmare" campaign suggest a link between excessive alcohol consumption and unwanted sexual behaviour for women, this link has only been explored by researchers in countries other than Australia (Abbey 2002; Oswalt et al. 2005; Cashell-Smith et al. 2007; Connor et al. 2010; Griffin et al. 2010). Our project, a survey of young females enrolled at a large, regional university, is an attempt to gather evidence from young females themselves about their drinking behaviour and to focus particularly on one related risk factor, namely sexual

risk taking. The data provides an insight into the association between frequent alcohol consumption, single episode heavy drinking and both engaging in and experiencing risky sexual behaviour (e.g. unprotected sex, unplanned sex, sexual assault) among female university students. The findings will provide a basis for further, more qualitative research into the nature of these associations and the social and cultural practices young females are negotiating.

Method

Participants

Participants were recruited via a study advertisement placed on a university website frequented by students. This advertisement invited students to complete a short online survey (10-15 minutes to complete) assessing alcohol consumption, experiences and consequences of drinking. Participants who chose to complete the study accessed the online survey via a weblink placed at the end of the study advertisement. They were directed firstly to the participant information sheet which explained the study would be asking questions regarding sexual behaviour and provided several contact details (counselling, sexual health service etc.) if the survey raised any concerns for them. The survey was active for a total of four weeks (split into two-week periods six months apart) during which time 317 online surveys were completed. Although only females were asked to complete the survey, a small number of participants indicated they were male (4.6%), and consequently were excluded from the analyses. We also excluded those who indicated they had not been sexually active in the past 12 months (n=6) (this is because the present study looked at alcohol consumption and sexual behaviours and experiences), and those who did not provide complete data for all independent and dependent variables (except condom use, for which non responses were collected in a third category “not answered”), which resulted in a sample size of 235 females. A number of checks were performed on the data (IP address, demographic information, date of completion) to ensure that participants did not complete twice. This study received approval from the University’s Human Research Ethics Committee.

Measures

The questionnaire assessed demographic characteristics such as age, sex, country of birth (coded as “Australia” and “other”) and living arrangements (coded as “living with a parent/guardian”, “living in a residence hall/ sharing a house/flat”, or “other” [living on own/boarding etc]). Alcohol consumption was assessed via several standard questions. Participants were first asked to indicate whether they had consumed alcohol in the past 12

months, and if so to indicate the number of days they had consumed alcohol in a typical four-week period (i.e. frequency of alcohol consumption). Participants who had consumed alcohol in the past year were also asked to indicate the number of days in a typical-four week period they had consumed six or more drinks in a single occasion. Six or more drinks was used as the primary measure of "single episode heavy drinking frequency" (often described as "binge drinking"). This measure was chosen as similar measures have been used by researchers in this field in the US and New Zealand (Wechsler et al. 2002; Kypri et al. 2009). This measure was also chosen as it is well above the current National Health and Medical Research Guidelines recommendations, which recommend that women consume no more than four standard alcoholic drinks on any one occasion (NHMRC 2009)..

The Risky Sex Scale (O'Hare, 2001) was used in this study to measure three aspects of risky sex: alcohol expectancies of enhanced sexual experience, risky sexual behaviours and gender-based perceptions. The Risky Sex Scale has been shown to provide a reliable and valid indication of risky sex behaviours and attitudes in university students (O'Hare, 2001; O'Hare, 2005) and also demonstrated good internal consistency for the subscales in this study (see below). The 14-item Risky Sex Scale includes three subscales. The Risky Sex Expectancies subscale (Cronbach's α = .85) includes 7 items assessing whether females believe that alcohol will make them enjoy sex more, make them a better lover, and make them more romantic (e.g., 'I enjoy sex more if I have had some alcohol'). The Risky Sex Behaviours subscales (Cronbach's α = .86) examines whether females would take engage in more risky sexual behaviours because of consuming alcohol (e.g., 'If I have been drinking I am probably more likely to engage in unprotected sex'). The Gender-Based Perceptions of Risky Sex subscale (Cronbach's α = .70) assesses beliefs regarding male and female behaviours associated with drinking alcohol (e.g., 'Men are more likely to commit sexual assault if they have been drinking'). Each of the 14 items was measured on a 5-point scale from strongly agree to strongly disagree. We reverse scored each item so that a higher score on each scale indicated greater Risky Sex Expectances, Risky Sex Behaviours, and higher Gender-Based Perceptions of risky sex.

A number of items addressed participants' recent sexual experiences, such as whether they were sexually active, their sexual orientation, number of sexual partners in the previous 30 days[1] and the frequency with which their male partner used a condom: "never",

[1] A slightly different timeframe was used to consider sexual experiences as the measure was drawn from the American College Survey Wechsler, H., Davenport, A., Dowdall, G. W., Moeykens, B. and Castillo, S. (1994). "Health and behavioral consequences of binge drinking in college: A national survey of students at 140 campuses. ." Journal of the American Medical Association **272**(21): 1672-1677., whereas alcohol consumption measures were based on a large NZ survey which was more

“rarely”, “sometimes”, “always”, “not answered”. Participants were asked to indicate whether they had experienced any of the following adverse consequences resulting from drinking alcohol in the past four weeks: “unprotected sex”, “a sexual situation I later regretted”, “a sexual situation I was not happy about”, and whether they had ever been the victim of rape, or of an unwanted sexual advance.

Data Analysis

The associations between the frequency of alcohol consumption in a typical four-week period and each of the Risky Sex subscales (i.e., risky sex expectancies, risky sex behaviours and gender-based perceptions of risky sex) were examined using General Linear Modelling. In each model, the frequency of consumption was entered as the independent variable, with each of the risky sex subscales entered separately as dependent variables. We included age, country of birth, and place of residence as covariates. As described in the participants section above, the data were collected at two different time points. In order to control for any potential biases associated with when the data were collected, ‘wave’ (i.e., whether individuals participated in the first or second data collection phase) was included as an additional covariate.

In the second stage of the analysis, we added separate interaction terms to examine whether the association between frequency of alcohol consumption and each Risky Sex Subscale varied by age, country of birth, or place of residence. In order to test these interactions, we centred all relevant continuous predictors for all stages of the analyses. This analytic approach was replicated with heavy episodic drinking as the independent variable.

Logistic regression was performed to test whether frequency of alcohol consumption was associated with (a) condom use (coded as not answered, use a condom never/rarely/sometimes, or always use a condom) and (b) negative sexual experiences associated with alcohol consumption which was based on a combination of unprotected sex, an unhappy sexual situation, a sexual situation later regretted, victim of rape, or victim of an unwanted sexual advance (responses coded as ‘yes’ and ‘no’). Multinomial logistic regression was performed to examine condom use since there were three variable categories, and binary logistic regression was used for negative sexual experiences which had two categories.

---

relevant to our population and used a typical four week period or the past four weeks Kypri, K., Paschall, M., Langley, J., Baxter, J., Cashell-Smith, M. and Bordeau, B. (2009). "Drinking and alcohol-related harm among New Zealand university students: Findings from a national web-based survey." Alcoholism: Clinical and Experimental Research **33**(2): 307-314..

In each model, age, country of birth, and place of residence were included as covariates. Interaction terms were added separately, and examined whether the association between frequency of consumption and each outcome varied by age, country of birth, and place of residence. The significance of each interaction term was examined using a likelihood ratio test, comparing models with and without the interaction terms. This analytic approach was replicated for heavy episodic drinking as the independent variable.

All data analyses were performed using SPSS version 18, and results are reported as βcoefficients, with statistical significance determined by a p value of < .05.

Results

Patterns of alcohol consumption

The sample consisted of 235 female university students aged 18 to 25 years (M = 21.50, SD = 1.66), of which 88.6% were born in Australia. Participants indicated that on average they consumed alcohol on 4.97 (SD = 5.03) days per month and engaged in single episode heavy drinking on 2.62 (SD = 4.03) days per month. One quarter (24.9%) indicated that they consumed alcohol ≥ 8 days a month (i.e. ≥ 2 times a week), and 23.2% engaged in single episode heavy drinking 4 or more times a month. Almost half (44.3%) of respondents indicated that they never, rarely or sometimes used a condom during sex. Furthermore, 23.2% of participants indicated that they had experienced one or more adverse consequence(s) associated with alcohol consumption in the previous 12 months

Relationship between alcohol consumption and risky sex attitudes

As shown in Table 1, frequency of alcohol consumption was significantly associated with greater Risky Sex Behaviours (β = .163, p < .01) but was not related to Risky Sex Expectancies or Gender-based Perceptions of risky sex The relationship between frequency of alcohol consumption and Risky Sex Behaviours varied significantly by age ($F_{1, 228}$ = 5.456, p = .020), with the association significant in females aged ≤ 21 years (β = .219, p = .003) but not in those aged 22 years and over (β = .076, p = .287). None of the other interaction terms for frequency of alcohol consumption were significant.

Single episode heavy drinking was significantly associated with greater Risky Sex Expectances (β = .222, p < .01) and risky sex behaviours (β = .310, p < .01), but not Gender-based Perceptions of risk sex. These findings did not vary significantly by age, country of birth, or place of residence.

Alcohol Consumption, Condom Use, and Negative Sexual Experiences

As shown in Table 1, more frequent alcohol consumption was significantly associated with reports of negative sexual experiences (β = .077, p < .01) but was not related with condom use. The association between frequency of alcohol consumption and negative sexual experiences varied significantly by place of residence (χ^2_2 for interaction = 6.552, p = .038) and was significant for females living in a shared house/residential hall (b = .097, p = .028) or with parents (b = .108, p = .026) but not for those with other living arrangements (b = -.138, p = .514).

Single episode heavy drinking was related with not using condoms (β = .087, p < .05) and negative sexual experiences (β = .129, p < .01). These relationships did not vary significantly by age, country of birth, or place of residence.

Table 1. Associations between alcohol consumption and Risky-Sex Subscale Scores, condom use and negative sexual experiences.

	Frequency of Consumption	**Episodic Heavy Drinking**
Risky Sex Expectancies	.112	.222**
Risky Sex Behaviours	.163**	.310**
Gender Perceptions	.001	.033
Condom Use	-.015	.087*
Negative Sexual Experiences[a]	.077**	.129**

* p < .05, ** p < .01

[a] Negative sexual experiences included one or more of the following in the previous 12 months: unprotected sex, unhappy sexual situation, a sexual situation later regretted, victim of rape or an unwanted sexual advance

Discussion

In the present study, we found that alcohol consumption beyond recommended levels was common among female university students. For example, 23% reported four or more occasions of single episode heavy drinking per month and 25% indicated that they drank very frequently (i.e. eight or more times a month). These findings are consistent with studies conducted both in Australia (which also demonstrated that university students were consuming alcohol at higher levels that the broader population) (Davey et al. 2002; Roche and Deehan 2002) and overseas (Wechsler et al. 1994; Kypri, Stephenson and Langley 2005; Wechsler and Nelson 2008). This suggests that a large proportion of the present sample of young female university students are drinking at harmful levels for their health and well being (NHMRC 2009).(NHMRC 2009)(NHMRC 2009)(NHMRC 2009)(NHMRC 2009)(NHMRC 2009)(NHMRC 2009)(NHMRC 2009)(NHMRC 2009)These findings support a growing amount of evidence regarding the drinking behaviour of young women at university in Australia and alone are enough cause for concern.

In addition, we found that alcohol use was associated with ‘negative’ sexual behaviours with more frequent and/or heavy consumption of alcohol associated with increased likelihood of engaging in risky sexual behaviours. These findings are consistent with research conducted in the US (Poulson et al. 1998), but importantly this is the first time to our knowledge that this connection has been demonstrated in a female university population in Australia.

The second finding of concern is the strong association between alcohol consumption and adverse consequences, such as unprotected sex, rape and unwanted sexual advances. Risky sexual practices were also found to be related to alcohol consumption in US and NZ studies (Brown and Vanable 2007; Connor et al. 2010). This study provides the first evidence that young women in Australian universities experience adverse sexual outcomes associated with high levels of alcohol consumption.

There was no evidence that alcohol consumption was associated with the Risky Sex Expectancies or Gender-Based Perceptions of Sex subscales of the Risky Sex Scale. Some studies with US female college students have found that many young women drink in order to gain sexual benefits such as feeling more attractive (Anderson and Mathieu 1996; Poulson et al. 1998). This suggests that alcohol consumption may be linked with sexual expectancies. The fact that we did not observe this in the present study could be due to different measures of alcohol consumption and of risky sex expectancies. In regards to gender-based perceptions of the effects of alcohol on sexual behaviour, and in contrast to other research (O'Hare 2001), the present study’s findings suggest that these may not differ according to alcohol consumption and that gender perceptions of effects of alcohol

consumption for this population are unrelated to actual alcohol use. This does not suggest that the nature of the behaviours described here are not highly gendered in nature and indeed other, more qualitative research has revealed that women are using alcohol as a means of expressing female agency (O'Brien 1999; Lyons and Willott 2008).

This cross-sectional study was conducted on a small, non-random sample at one university in Australia, which limits the generalisability of these findings to other student populations. However, the similarities in reported alcohol consumption between our sample and those in previous studies suggest that our sample of female university students was not dissimilar to the general Australian female university population. Future studies could utilise larger samples from a diverse range of universities to determine whether the link between alcohol consumption and risky sex is consistent across different geographic locations and institutions. Measuring personally sensitive information regarding alcohol and sexual behaviour is always difficult and self-report measures can be unreliable; although use of an online questionnaire addresses this issue in part (Kypri et al. 2004).

The key finding that this relationship exists for female university students in Australia (as has previously been found to be the case in the US) is relevant to the design of sexual health programs for young women at university and further qualitative research in the field is imperative to explore the socio-cultural nature of this complex relationship and to give context and meaning to the behaviours described in this paper.

We recognise that women are not responsible for the behaviours of others and harm experienced by women cannot be addressed in isolation but should be seen as part of a whole community (in this case, campus community) approach. However, just as females have agency to make choices regarding their alcohol and sexual behaviours it is this very agency that makes women the best advocates of their own well-being. It is important to recognise that research into sexual violence more broadly has revealed it to be a complex, socially constructed issue with many contributing factors (Kelly and Radford 1990; Gavey 1991; Gavey 2005). Furthermore, the issue is complicated by feminist debates about the nature of female empowerment and the influence of ‘raunch culture’ (Levy 2005; Armstrong et al. 2010). However, the current research into alcohol consumption by university students suggests that there is a link between alcohol and risky sexual behaviour/sexual violence that is poorly understood.

Despite some limitations, the present study provides two pieces of important information for future policy development in Australia. Firstly, it appears that young female Australian university students who consume alcohol at harmful levels are more likely to experience potentially harmful sexual situations, the outcomes of which could include

unintended pregnancy, contracting an STI, and physical and emotional harm from unwanted sexual contact; these outcomes must be included in any estimation of alcohol related harm. Secondly any intervention to improve the sexual health of young women at university must address the issue of hazardous alcohol consumption in order to be effective. This research provides much needed information regarding the alcohol consumption and risk taking behaviours of young women at an Australian university, and will provide a basis for further research and the development of protective strategies.

References

Abbey, A. (2002). "Alcohol-related sexual assault: a common problem among college students." Journal of Studies on Alcohol **14**: 118-128.

Abbey, A., Clinton-Sherrod, A. M., McAuslan, P., Zawacki, T. and Buck, P. O. (2003). "The Relationship Between the Quantity of Alcohol Consumed and the Severity of Sexual Assaults Committed by College Men " Journal of Interpersonal Violence **18**(7): 813-833.

Abbey, A., McAuslan, P. A. M. and Ross, L. T. (1998). "Sexual assault perpetration by college men: The role of alcohol, misperception of sexual intent, and sexual beliefs and experiences." Journal of Social and Clinical Psychology **17**: 167-195.

Abbey, A., Zawacki, T. and McAuslan, P. A. M. (2000). "Alcohol's Effects on Sexual Perception(*).(Statistical Data Included)." Journal of Studies on Alcohol **61**(5): 688.

Anderson, P. B. and Mathieu, D. A. (1996). "College students' High-risk sexual behavior following alcohol consumption " Journal of Sex & Marital Therapy **22**(4): 259-264.

Armstrong, E. A., Hamilton, L. and England, P. (2010). "Is hooking up bad for young women?" Contexts **9**(3): 22-27.

Borlagdan, J., Freeman, T., Duvnjak, A., Lunnay, B., Bywood, P. T. and Roche, A. M. (2010). From Ideal to Reality: Cultural contradictions and young people’s drinking. . Adelaide, National Centre for Education and Training on Addiction, Flinders University.

Brown, J. L. and Vanable, P. A. (2007). "Alcohol use, partner type, and risky sexual behavior among college students: Findings from an event-level study." Addictive Behaviors **32**: 2940 - 2952.

Cashell-Smith, M. L., Connor, J. and Kypri, K. (2007). "Harmful effects of alcohol on sexual behaviour in a New Zealand university community." Drug and Alcohol Review **26**: 645-651.

Chikritzhs, T., Catalano, P., Stockwell, T., Donath, S., Ngo, H., Young, D. and Matthews, S. (2003). Australian Alcohol Indicators, 1990-2001: Patterns of alcohol use and related harms for Australian states and territories,. Perth, Western Australia, National Drug Research Institute, Curtin University of Technology.

Connor, J., Gray, A. and Kypri, K. (2010). "Drinking history, current drinking and problematic sexual experiences among university students." Australian and New Zealand Journal of Public Health **34**(5): 487-494.

Davey, J., Davey, T. and Obst, P. (2002). "Alcohol consumption & drug use in a sample of Australian university students. (Peer Reviewed Paper)." Youth Studies Australia **21**(3): 25(28).

Davis, K. C., Norris, J., Hessler, D., Zawacki, T., Morrison, D. M. and George, W. H. (2010). "College women's sexual decision making: Cognitive medicatio of alcohol expectancy effects." Journal of American College Health **58**(5): 481-489.

Gavey, N. (1991). "Sexual victimisation prevelance among New Zealand university students." Journal of Consulting and Clinical Psychology **59**(3): 464-466.

Gavey, N. (2005). Just sex? The cultural scaffolding of rape. London and New York, Routledge.

Griffin, J. A., Umstattd, M. R. and Usdan, S. L. (2010). "Alcohol use and high risk sexual behaviour among collegiate women: A review of research on alcohol myopia theory." Journal of American College Health **58**(6): 523-532.

Johnston, K. L. and White, K. M. (2004). "Binge drinking in female university students." Youth Studies Australia **23**(2): 22.

Keane, H. (2009). "Intoxication, harm and pleasure: an analysis of the Australian National Alcohol Strategy." Critical Public Health **19**(2): 135-142.

Kelly, L. and Radford, J. (1990). "'Nothing really happened': the invalidation of women's experiences of sexual violence." Critical Social Policy **10**: 39-53.

Kypri, K., Gallagher, S. J. and Cashell-Smith, M. L. (2004). "An internet survey method for college student drinking research." Drug and Alcohol Dependence **76**(1): 45-53.

Kypri, K., Paschall, M., Langley, J., Baxter, J., Cashell-Smith, M. and Bordeau, B. (2009). "Drinking and alcohol-related harm among New Zealand university students: Findings from a national web-based survey." Alcoholism: Clinical and Experimental Research **33**(2): 307-314.

Kypri, K., Stephenson, S. C. R. and Langley, J. (2005). "Episode-centred analysis of drinking to intoxication in university students." Alcohol and Alcoholism **40**: 447-452.

LaBrie, J. W., Hutching, K., Tawalbeh, S., Pederson, E. R., Thompson, A. D., Shelesky, K., Larimer, M. and Neighbors, C. (2008). "A Randomized Motivational Enhancement Prevention Group Reduces Drinking and Alcohol Consequences in First-Year College Women." Psychology of Addictive Behaviors **22**(1): 149-155.

Levy, A. (2005). Female chauvinist pigs: Women and the rise of raunch culture. Melbourne, Schwartz Publishing.

Lyons, A. C. and Willott, S. A. (2008). "Alcohol consumption, gender identities and women's changing social positions." Sex Roles **59**: 694-712.

Mancina-Pena, E. and Tyson, G. A. (2007). "'I'm gonna sounds like a drunk here": Constructions of volume consumption." Youth Studies Australia **26**(2): 35-42.

McNair, L. D., Carter, J. A. and Williams, M. K. (1998). "Self-esteem, gender, and alcohol use: relationships with HIV risk perception and behaviors in college students." Journal of Sex & Marital Therapy **24**: 29-36.

NCHECR (2009). HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia: Annual Surveillance Report, National Centre in HIV Epidemiology and Clinical Research.

NHMRC (2009). Australian Guidelines to Reduce Health Risks from Drinking Alcohol. Canberra, National Health and Medical Research Council, Commonwealth of Australia.

O'Brien, S. (1999). Is the future of Australian feminism 'feral'? Australian Youth Subcultures. R. White. Hobart, Australian Clearinghouse for Youth Studies.

O'Hare, T. (2001). "Substance abuse and risky sex in young people: the development and validation of the risky sex scale." Journal of Primary Prevention **22**(2): 89-101.

Oswalt, S. B., Cameron, K. A. and Koob, J. J. (2005). "Sexual regret in college students." Archives of Sexual Behaviour **34**(6): 663-669.

Parks, K. A. and Fals-Stewart, W. (2004). "The Temporal Relationship Between College Women's Alcohol Consumption and Victimization Experiences." Alcoholism: Clinical and Experimental Research **28**(4): 625-629.

Parks, K. A., Hsieh, Y.-P., Bradizza, C. M. and Romosz, A. M. (2008). "Factors Influencing the Temporal Relationship Between Alcohol Consumption and Experiences With Aggression Among College Women." Psychology of Addictive Behaviors **22**(2): 210–218.

Poulson, R. L., Eppler, M. A., Satterwhite, T. N., Wuensch, K. L. and Bass, L. A. (1998). "Alcohol consumption, strength of religious beliefs, and risky sexual behavior in college students." Journal of American College Health **v46**(n5): p227(226).

Roche, A. M. and Deehan, A. (2002). "Women's alcohol consumption: Emerging patterns, problems and public health implications." Drug and Alcohol Review **21**(2): 169-178.

Ullman, S. E., Karabatsos, G. and Koss, M. P. (1999). "Alcohol and sexual assault in a national sample of college women." Journal of Interpersonal Violence **14**: 603-625.

Utpala-Kumar, R. and Deane, F. (2010). "Rates of alcohol consumption and risk status among Australian university students vary by assessment questions." Drug and Alcohol Review **29**(January): 28-34.

Wechsler, H., Davenport, A., Dowdall, G. W., Moeykens, B. and Castillo, S. (1994). "Health and behavioral consequences of binge drinking in college: A national survey of students at 140 campuses. ." Journal of the American Medical Association **272**(21): 1672-1677.

Wechsler, H., Lee, J. E., Kuo, M., Seibring, M., Nelson, T. F. and Lee, H. (2002). "Trends in college binge drinking during a period of increased prevention efforts; findings from 4 Harvard

School of Public Health College Alcohol Study Surveys: 1993-2001.(Statistical Data Included)." Journal of American College Health **50**(5): 203(215).

Wechsler, H. and Nelson, T. (2008). "What we have learned from the Harvard School of Public Health College Alcohol Study: Focusing attention on college student alcohol consumption and the environmental conditions that promote it." Journal of Studies on Alcohol and Drugs **69**(July): 1-10.

WHO (2005). Alcohol use and sexual risk behaviour: A cross-cultural study in eight countries. Geneva, World Health Organisation.