A tri-country social marketing study of young university women’s alcohol consumption and the perceived influence of their peers’ attitudes

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Abstract

Purpose: The study focused on the proneness of young women attending university to be influenced by their peers’ attitude in terms of the consumption of alcohol. Specifically, the purpose of our study is two-fold. First, to assess if the perceived attitude towards alcohol consumption of young university women’s peers’ varied by country; and second if there is a relationship between young university women’s attitude towards alcohol consumption and their perceived peers’ attitude towards alcohol consumption by country.

Design/methodology/approach: The paper uses a quantitative methodology, with self-reported data from a quota sample of 18 - 24 year old women attending university. Data from a convenience sample of three universities consisting of a regional university in Australia (n=305), a rural university in Germany (n=323) and a city university in Wales (n=361) was analysed.

Findings: First, young women attending university in Wales thought that their peers held the most favourable attitudes towards consuming five or more standard drinks in a single session. Second, evidence was found of a relationship between the respondents’ attitude towards alcohol consumption and their perceptions of their peers’ attitudes towards alcohol consumption in all three countries.

Originality/value: The findings from this study not only address a gap in the known literature, but provide a useful platform for strategic interventions by universities to address alcohol consumption among their young, female students.

Keywords: Attitude; alcohol consumption; peer influence; social marketing.

JEL Classification: M31 ; N30
PsycINFO Classification: 2990 ; 3000
FoR Code: 1505

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Introduction

Excessive alcohol consumption is problematic in many OECD nations, including Australia, Germany and Wales (AMA, 2012; Alcohol Statistics in Europe, 2010; WHO, 2011; Health, 2006). Harmful levels of alcohol consumption have physical consequences such as cirrhosis of the liver, inflammation of the gut and pancreas, heart and circulatory problems (AMA, 2009). Furthermore, negative social consequences of alcohol are apparent and include assaults, accidental injuries, legal problems, hospitalisations, drink driving, vandalism and suicide (Kraus et al., 2009; Chatterji et al., 2004; Schilling et al., 2009).

Social marketing entails the application of marketing theory to social causes and public health issues; seeking to understand and bring about benefits to the quality of people’s lives and society as a whole (Andreasen, 2006; Kotler and Zaltman, 1971). Today, excessive alcohol consumption among young women is one of the public health issues dominating social marketing. A sound understanding of the drivers of alcohol consumption is required to develop effective social marketing interventions. As a prominent public health issue, empirical studies have revealed that excessive alcohol consumption is apparent in three cohorts: a) young adults 18 to 24 year of age; b) university students and c) young women (Australian Institute of Health and Welfare (AIHW), 2004, 2005; Chikritzhs et al., 2003; Leung, 2003; Wechsler et al., 2003). As such, our study amalgamates these cohorts, investigating alcohol consumption among young women between the ages of 18 to 24 years who attend university.

In particular, our interest is around the proneness of young women attending university to peer group influences. This is a gap in the literature as empirical evidence to date can only confirm this for university students in general (Bauerle 2003; Shim and Maggs 2005). Our tri-country study also seeks to provide a broader perspective of alcohol consumption among young female university students than is available in the current literature. Specifically, our study centres on the following two research questions: RQ1 Does the perceived attitude towards alcohol consumption of young university women’s peers’ vary by country?; and RQ2 Is there a relationship between young university women’s attitude towards alcohol consumption and their perceived peers’ attitude towards alcohol consumption by country?

Alcohol consumption among young women

Excessive alcohol consumption is evident in several countries (Eliasen et al., 2009; D’Alessio et al., 2006), with exceptions being the eastern Mediterranean region (Alcohol Statistics in Europe, 2010). Notably, it has been found, and validated across countries, that women who start drinking at a younger age were significantly more likely to drink alcohol excessively (Eliasen et al., 2009; McNamara et al. 2010). Alcohol use is generally high during the teen years and early twenties and starts to drop as people begin to assume adult roles such as employment and family (Wong et al., 2008; Maggs and Schullenberg, 2004/2005). Excessive alcohol consumption and the associated problems have generally been reported to be higher among university students than in the general public (Morawska and Oei, 2005).

The World Health Organisation 2011 reported that in most countries alcohol consumption among 18-25 year olds increased (WHO, 2011). Women’s drinking behaviour has emerged as a major issue (Beckwith, 1987; ESPAD, 2007; AIHW, 2008) and this is problematic as it has been found that women are more susceptible to alcohol-related harm than men which can be attributed to biological/physical differences as well as social norms (Bongers et al., 1998). Generally women suffer the risk of health problems such as breast cancer, infertility, complications with pregnancies, diabetes, heart disease and liver disease with alcohol abuse (Blume and Resor, 2007). Furthermore, social disapproval of alcohol abuse is generally greater for women than for men (Gutgesell et al., 2003).

The reasons behind excessive alcohol consumption among young people are many and varied (IAS Factsheet, 2010). The belief that people hold about the effects and outcomes of drinking alcohol is termed as alcohol expectancies (Shell et al., 2010; George et al., 1995). Positive alcohol expectancies include beliefs that drinking will result in benefits such as increased level of assertiveness, increased sociability, feeling bold and courageous, being happy, enjoyable, energetic, and tension reduction. In contrast, negative expectancies include increased risk and aggression, negative self-perception, and cognitive/behavioural impairment (Zamboanga and Ham,
2008; Bot et al., 2005; Barnow et al., 2004; IAS Factsheet, 2010). Negative alcohol expectancies were found by Cox et al. (2006) to be more strongly associated with excessive alcohol consumption among university students.

Excessive alcohol consumption

While there are some variations, generally excessive alcohol consumption is defined as consumption of five or more drinks in a single session (Kraus et al., 2009; Courtney and Polich, 2009; Sun et al., 2008; Wechsler et al., 1998) or, more broadly, high intake of alcohol in a single drinking occasion (IAS Factsheet, 2010). Those who drink less than twice per year are regarded as non-drinkers, the people who drink in a range of 3 - 4 times a year to 3 - 4 times per week are regarded as social drinkers and heavy drinkers have 3 - 4 excessive alcohol consumption drinking episodes per week (D’Alessio et al., 2006).

Excessive alcohol consumption is a major problem among university students with nearly 2 in 5 undergraduate students’ drinking alcohol excessively (see Buettner et al., 2010; Carlson et al., 2010; Ray et al., 2009; Zamboanga and Ham 2008; Odo et al., 1999). University students who drink excessively are more likely to have academic and/or vocational problems, engage in unplanned and unsafe sex resulting in unintended pregnancies and sexually transmitted infections, fatal and non-fatal injuries as a result of vehicle accidents, overdoses, violence, assault and aggressive behaviour, trouble with police, various social and psychological problems and drive while intoxicated (Courtney and Polich, 2010; Miller et al., 2007; White and Jackson, 2004/2005; Weschler et al., 1995). The issue of excessive alcohol consumption among university students has drawn significant attention from student services personnel, campus authorities and administrators, community members, college counsellors, government agencies and the researchers (Lewis and Gouker, 2007). Overall, universities as a whole and the community at large recognise that excessive alcohol consumption is problematic and are seeking to understand the issues so they may engage students in protective remedies and interventions to stem the behaviour and its consequences (Ray et al., 2009).

The influence of peers

The influence of peers is well-known, with individuals often acting in accordance with an allied social group (Bearden and Etzel, 1982; Childers and Rao, 1992). Peers, like other reference groups can be a group or an individual, who exerts some influence over the evaluations, aspirations and behaviours of another (Park and Lessig, 1977). The reason why this occurs is because peers are a comparison for self-appraisal and a source for personal norms, attitudes and values (Childers and Rao, 1992). In the context of our study, it is known that while attending university, young students are more susceptible to peer influences as they are at a critical stage in life when they are seeking to define themselves as individuals (Park and Lessig, 1977).

There is evidence that the influence of peers extends to health behaviour, such as alcohol consumption, which is often being guided by perceptions of the beliefs and behaviour of others (Rimal and Real, 2003; Broadwater et al., 2006; Turrisi et al. 2007). It has been noted that the influence of peers is more important than parental influence on adolescents’ alcohol use (Hayes et al., 2004; Kim et al., 2009; Zamboanga et al., 2009). To date, it is known that university students frequently overestimate the quantity in addition to the frequency of peers’ consumption of alcohol (Broadwater et al. 2006; Maddock and Glanz, 2005; Perkins, 2002; Borsari and Carey, 2001, 2003). Along these lines, our study investigates the influence of perceived peers’ attitudes towards alcohol consumption on the attitude towards drinking of young women attending university - an apparent gap in the literature.

Research questions

This study draws from the theory of planned behaviour and social learning theory. Theory of planned behaviour suggests that human behaviour is guided by three kinds of considerations: beliefs about the likely consequences, beliefs about the normative expectations of other people, and beliefs about the presence of factors that may help or hinder performance of the behaviour (Ajzen, 2006, 2001). Further, social learning theory postulates that the interaction of behavioural, personal, and environmental factors influence a persons’ behaviour (Connors et al., 2001). Thus, as applied to the context of our study, young university women’s attitude towards alcohol consumption is likely
to be influenced by their perceptions of their peers’ attitude towards alcohol consumption across the three countries of interest. This study, therefore, aims to investigate the following research questions:

**RQ1** Does the perceived attitude towards alcohol consumption of young university women’s peers’ vary by country?

**RQ2** Is there a relationship between young university women’s attitude towards alcohol consumption and their perceived peers’ attitude towards alcohol consumption by country?

**Method**

Using existing scales related to alcohol consumption from the National Drug Strategy Household Survey (AIHW, 2005), a self-administered questionnaire was developed. Scales to measure attitude towards alcohol consumption and peer influence were adapted from the work of Ajzen (2006, 2001), Bagozzi and Warshaw (1990) and Maheswaran and Meyers-Levy (1990).

The questionnaire was subject to an expert panel review (n=6) and pre-testing (n=45) prior to administration at a regional university in Australia, a rural university in Germany and a city university in Wales. A standard drinks table was included as an attachment to the questionnaire to help respondents identify how many standard drinks they typically consume; thus alleviating any bias in the reporting of alcohol consumption. Furthermore, participants were instructed not to discuss their answers with other people while completing the survey to limit the likelihood that respondent’s would overstate their alcohol consumption.

In the absence of an appropriate sampling frame, quota sampling was used which was advantageous in that it ensured control of the age (18 years to 24 years) and gender characteristics (female only) of the target population (Moser, 1952). As recommended by Sudman and Kalton (1986), selection bias was minimised by collecting data on various days, at various times and in various locations around the campuses. In total, the useable sample from Australia that totalled 305 responses. Germany (n=323) and Wales (n=361) also produced samples of a comparable size. For analysing the data, statistical techniques including descriptive statistics, analysis of variance and linear regression were used.

**Results**

First, the data was examined to ascertain respondents’ perceptions of their peers’ attitude towards alcohol consumption, following which the research questions were addressed. As presented in Table 1, eight items were used to measure perceived peers attitude towards alcohol consumption using a 7-point scale. Table I presents the mean and standard deviation scores for each item as they related to Australia, Germany and Wales.

Appraising the results, it can be seen that the mean scores for six of the items were highest among students from Wales, followed by Australia and Germany. Furthermore, the item ‘most people who are important to me think that my drinking 5 or more standard drinks in a single session would be (1 = undesirable, 7=desirable) was lowest among young women attending university in Germany. Together, these findings suggest that young women attending university in Germany perceived that their peers were less likely to participate in or condone excessive alcohol consumption when compared to their counterparts in Australia and Wales, respectively.
Table 1:
Perceived Peers’ Attitude towards Alcohol Consumption by Country

<table>
<thead>
<tr>
<th>Items</th>
<th>Australia</th>
<th>Germany</th>
<th>Wales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (StDv)</td>
<td>Mean (StDv)</td>
<td>Mean (StDv)</td>
</tr>
<tr>
<td>Most people who are important to me think that I should not/should drink 5 or more standard drinks in a single session (1=I should not, 7=I should)</td>
<td>3.17 (1.69)</td>
<td>2.94 (1.41)</td>
<td>3.29 (1.46)</td>
</tr>
<tr>
<td>The people who are important to me do not consume/consume 5 or more standard drinks in a single session (1=do not consume, 7=consume)</td>
<td>4.08 (1.83)</td>
<td>3.79 (1.47)</td>
<td>4.09 (1.57)</td>
</tr>
<tr>
<td>If I drink 5 or more standard drinks in a single session most people who are important to me would (1=disapprove, 7=approve)</td>
<td>3.90 (1.53)</td>
<td>3.56 (1.35)</td>
<td>3.54 (1.34)</td>
</tr>
<tr>
<td>Think about your peers at university. How much would they agree that drinking 5 or more standard drinks in a single session is a good thing to do? (1=not at all, 7=completely)</td>
<td>4.59 (1.56)</td>
<td>3.84 (1.48)</td>
<td>4.99 (1.50)</td>
</tr>
<tr>
<td>Most people who are important to me think that my drinking 5 or more standard drinks in a single session would be (1=undesirable, 7=desirable)</td>
<td>3.67 (1.56)</td>
<td>3.41 (1.30)</td>
<td>3.58 (1.36)</td>
</tr>
<tr>
<td>How many of your peers at university would think that drinking five or more standard drinks in a single session is a good thing to do? (1=none, 7=all)</td>
<td>4.49 (1.58)</td>
<td>3.72 (1.54)</td>
<td>4.97 (1.48)</td>
</tr>
<tr>
<td>Think about your peers at university. What percentage of them do you think would drink five or more standard drinks in a single session? (1=0%, 7=100%)</td>
<td>5.19 (1.44)</td>
<td>4.59 (1.38)</td>
<td>5.67 (1.09)</td>
</tr>
<tr>
<td>How many of your peers at university would drink five or more standard drinks in a single session? (1=none, 7=all)</td>
<td>5.04 (1.54)</td>
<td>4.42 (1.43)</td>
<td>5.65 (1.15)</td>
</tr>
</tbody>
</table>

Respondents own attitude towards alcohol consumption was measured in terms of five semantic differential scales using a 7-point scale (see Table 2).

Table 2:
Respondents’ own Attitude towards Alcohol Consumption by Country

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
<th>Germany</th>
<th>Wales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (StDv)</td>
<td>Mean (StDv)</td>
<td>Mean (StDv)</td>
</tr>
<tr>
<td>Unenjoyable (1) to enjoyable (7)</td>
<td>4.62 (1.77)</td>
<td>3.89 (1.67)</td>
<td>4.92 (1.52)</td>
</tr>
<tr>
<td>Bad (1) to good (7)</td>
<td>3.84 (1.72)</td>
<td>3.26 (1.40)</td>
<td>3.77 (1.62)</td>
</tr>
<tr>
<td>Unfavourable (1) to favourable (7)</td>
<td>3.92 (1.64)</td>
<td>3.33 (1.40)</td>
<td>3.88 (1.53)</td>
</tr>
<tr>
<td>Unpleasant (1) to pleasant (7)</td>
<td>4.25 (1.76)</td>
<td>3.48 (1.55)</td>
<td>4.29 (1.49)</td>
</tr>
<tr>
<td>Unsatisfying (1) to satisfying (7)</td>
<td>4.22 (1.76)</td>
<td>3.44 (1.56)</td>
<td>4.36 (1.52)</td>
</tr>
</tbody>
</table>

As shown in Table 2, the mean scores for all aspects were lowest among German respondents compared to the students from Australia and Wales. This indicates that the attitude towards alcohol consumption of young women attending the German university sampled were less favourable than those of their Australian and Welsh counterparts. Following this preliminary analysis of the data, each research question was examined.

Examining RQ1: Does the perceived attitude towards alcohol consumption of young university women’s peers’ vary by country?

For RQ1, an analysis of variance was undertaken to test whether there is a difference in the perceptions of peers’ attitude towards alcohol consumption across the Australian, German and Welsh universities sampled. Table 3 presents the outcome of this analysis.
**Table 3:**
Research Question 1 Results

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Australia Mean</th>
<th>Germany Mean</th>
<th>Wales Mean</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Most people who are important to me think that I should not/should drink 5 or more standard drinks in a single session</strong></td>
<td>3.17</td>
<td>2.94&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.29&lt;sup&gt;a&lt;/sup&gt;</td>
<td>4.69**</td>
</tr>
<tr>
<td><strong>The people who are important to me do not consume/consume 5 or more standard drinks in a single session</strong></td>
<td>4.08&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.79&lt;sup&gt;h,c&lt;/sup&gt;</td>
<td>4.09&lt;sup&gt;c&lt;/sup&gt;</td>
<td>3.63*</td>
</tr>
<tr>
<td><strong>If I drink 5 or more standard drinks in a single session most people who are important to me would</strong></td>
<td>3.89&lt;sup&gt;d,e&lt;/sup&gt;</td>
<td>3.56&lt;sup&gt;d&lt;/sup&gt;</td>
<td>3.53&lt;sup&gt;e&lt;/sup&gt;</td>
<td>6.44**</td>
</tr>
<tr>
<td><strong>Think about your peers at university. How much would they agree that drinking 5 or more standard drinks in a single session is a good thing to do?</strong></td>
<td>4.59&lt;sup&gt;f,g&lt;/sup&gt;</td>
<td>3.84&lt;sup&gt;f,h&lt;/sup&gt;</td>
<td>4.98&lt;sup&gt;h&lt;/sup&gt;</td>
<td>49.51***</td>
</tr>
<tr>
<td><strong>Most people who are important to me think that my drinking 5 or more standard drinks in a single session would be</strong></td>
<td>3.66&lt;sup&gt;i&lt;/sup&gt;</td>
<td>3.40&lt;sup&gt;i&lt;/sup&gt;</td>
<td>3.57</td>
<td>2.77</td>
</tr>
<tr>
<td><strong>How many of your peers at university would think that drinking five or more standard drinks in a single session is a good thing to do?</strong></td>
<td>4.49&lt;sup&gt;l,k&lt;/sup&gt;</td>
<td>3.72&lt;sup&gt;l&lt;/sup&gt;</td>
<td>4.97&lt;sup&gt;k,l&lt;/sup&gt;</td>
<td>55.90***</td>
</tr>
<tr>
<td><strong>Think about your peers at university. What percentage of them do you think would drink five or more standard drinks in a single session?</strong></td>
<td>5.19&lt;sup&gt;m,n&lt;/sup&gt;</td>
<td>4.59&lt;sup&gt;n,o&lt;/sup&gt;</td>
<td>5.67&lt;sup&gt;n,o&lt;/sup&gt;</td>
<td>58.45***</td>
</tr>
<tr>
<td><strong>How many of your peers at university would drink five or more standard drinks in a single session?</strong></td>
<td>5.04&lt;sup&gt;p,q&lt;/sup&gt;</td>
<td>4.42&lt;sup&gt;p,r&lt;/sup&gt;</td>
<td>5.65&lt;sup&gt;q,r&lt;/sup&gt;</td>
<td>67.42***</td>
</tr>
</tbody>
</table>

**Note:** † stands for p < 0.10, * stands for p < 0.05, ** stands for p<0.01, and *** stands for p<0.001. The superscript 'a' suggests that there is a difference in means for this item between Australia and Germany at a p value of 0.05 or less.

The F-value results presented in Table 3 suggest that there is a significant difference in the perceptions of peers attitude towards alcohol consumption by country for seven out of the eight items considered in this study (F-values ranging from 3.63, p<0.05 to 67.42, p<0.001). The only item where no difference was found was ‘most people who are important to me think that my drinking 5 or more standard drinks in a single session would be desirable’ (F=2.77).

**Examining RQ2: Is there a relationship between young university women’s attitude towards alcohol consumption and their perceived peers’ attitude towards alcohol consumption by country?**

For RQ2, a composite index for respondent’s attitude towards alcohol consumption was calculated from the five items – unenjoyable to enjoyable, bad to good, unfavourable to favourable, unpleasant to pleasant, and unsatisfying to satisfying. This was considered as the dependent variable. The eight items used for measuring the perceived attitude of peers towards alcohol consumption were regarded as independent variables. The outcome of linear regression analysis using step-wise method for each country under study is presented in the following Table 4.
Table 4: Research Question 2 Results

<table>
<thead>
<tr>
<th>Perceived Peers’ Attitude Towards Alcohol Consumption</th>
<th>Respondents Attitude Towards Alcohol Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Australia</td>
</tr>
<tr>
<td>Most people who are important to me think that I should not/should drink 5 or more standard drinks in a single session</td>
<td>0.15*</td>
</tr>
<tr>
<td>The people who are important to me do not consume 5 or more standard drinks in a single session</td>
<td>0.18***</td>
</tr>
<tr>
<td>If I drink 5 or more standard drinks in a single session, most people who are important to me would disapprove</td>
<td>0.12*</td>
</tr>
<tr>
<td>Most people who are important to me think that my drinking 5 or more standard drinks in a single session would be undesirable</td>
<td>0.22***</td>
</tr>
<tr>
<td>How many of your peers at university would think that drinking five or more standard drinks in a single session is a good thing to do?</td>
<td>0.22***</td>
</tr>
<tr>
<td>How many of your peers at university would drink five or more standard drinks in a single session?</td>
<td>0.16**</td>
</tr>
<tr>
<td>Multiple R</td>
<td>0.71</td>
</tr>
<tr>
<td>R²</td>
<td>0.51</td>
</tr>
<tr>
<td>SE</td>
<td>1.11</td>
</tr>
<tr>
<td>F</td>
<td>61.90***</td>
</tr>
</tbody>
</table>

Note: * stands for p < 0.05, ** stands for p < 0.01 and *** stands for p < 0.001.

The results presented in Table 4 suggest that there is a strong relationship between respondents’ attitude towards alcohol consumption and their perceptions of their peers’ attitude towards alcohol consumption at the Australian university, German university and Welsh university. The coefficient of determination (R²) is similar in all countries, ranging from 0.49 to 0.51. The R² results show that around half of the variability in young, university women’s attitude toward alcohol consumption is explained by the variability in their perceptions of their peers’ attitude towards alcohol consumption.

Discussion

This study was interested in the proneness of young women attending university to peer group influences related to alcohol consumption. The relationship between young university women’s perception of their peers’ attitude towards alcohol consumption and the relationship of this on the young university women’s own attitude towards alcohol consumption was a gap in the existing literature addressed by this study. In addition, whether this relationship varied by country was also unknown and as such this tri-country study offers additional contributions to the related literature.

First, the study found that young women attending university in Wales thought that their peers held favourable attitudes towards consuming five or more standard drinks in a single session, that is engaging in excessive alcohol consumption. This was also found to be the case for the other two countries sampled, with the Australian sample reporting the second most favourable perceived peers’ attitude toward alcohol consumption. Those young women attending the German university thought their peers were least favourable of drinking excessively. These differences can probably be attributed to the cultural factors which is consistent with the findings of Eide and Acuda (1996) and Eide et al. (1998) in which they had reported a relationship between the level of alcohol use and cultural orientation.
Although in all countries under study, excessive alcohol consumption among university students is evident, the university students in Germany appeared to be less likely to condone or participate in excessive alcohol consumption based on the research participants’ own attitude and perceptions of attitudes of their peers when compared to the university students in Australia and Wales. This is perhaps explained by the fact that the students have easy access to alcohol in Germany and can drink almost anywhere in comparison to the drinking environment in Australia (Preventative Health Taskforce, 2008) and Wales (Factsheet Wales, 2010). Furthermore, drinking alcohol is an acceptable norm in Germany (Alcohol Statistics in Europe, 2010). By way of an explanation, this acceptable norm of drinking perhaps mitigates the urge for drinking excessive alcohol in one session among young women attending university in Germany.

Second, the study extended further to investigate whether there is a relationship between young university women’s attitude towards alcohol consumption and their perceived peers’ attitude towards alcohol consumption. We found strong evidence of a relationship between the respondents’ attitude towards alcohol consumption and their perceptions of their peers’ attitudes towards alcohol consumption. As such, the findings are consistent with the contentions of previous studies including Zamboanga et al., 2009; Kim et al., 2009; Yeh et al., 2006; Hayes et al., 2004; Turrisi et al., 2007 who examined different cohorts. This is an important finding and could be the basis of a number of strategic social marketing interventions to reduce the level of alcohol consumption among young women attending university in the three countries of interest. For example, encouraging young women to be aware of and resist peer influence and perhaps, that while they themselves may think their peers condone excessive drinking, that this may not necessarily be the case. A number of fundamental questions that could be raised from this finding for consideration in social marketing interventions include: “Should university students be careful in choosing their friends? If they should, should they hang out with people who drink less or do not drink alcohol at all? Is this a workable solution? If not, should we keep accepting the role of peers in influencing one’s drinking behaviour and do nothing? Alternatively, can educational programs be developed that help alleviate this public health issue?”

Limitations and future research

This research, like all studies, had a range of limitations and these should be considered when assessing the findings. Our study was cross-sectional, collecting data at one point in time from a particular age group of young women attending a convenience sample of selected universities. The study sampled young women attending university in a single campus in Australia, Wales and Germany. A quota sample was used and assessed self-reported behaviour on a self-administered quantitative questionnaire. Irrespective of the limitations that these aspects impose on the findings, the strengths and novelty of the research are that this has addressed a gap in the literature and a topical area.

From this research, a number of areas of future research may be derived. Future research may include conducting this study at other Australian and overseas universities to assess the robustness of the findings. Also a comparison of the attitude towards alcohol consumption of university and non-university young women would be fruitful.

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