Alcohol use within the sibship

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Abstract

With over 100,000 alcohol-related hospitalisations every year, risky drinking within Australia is a major health issue (Pascal, Chikritzhs, & Jones, 2009). Typically health advocates focus on parental and peer influence as a source of excessive drinking; leaving out the often overlooked role of siblings. Using consumer socialisation theory (Ward, 1974), the adoption of alcohol related behaviours between siblings was examined. Using a sample of 257 young adults alcohol behaviours were examined between sibship groups. The results revealed that alcohol type similarity was significant for siblings of who were of the same gender, but not significant for siblings of opposite genders. The results suggest that in order for an older sibling to influence a younger brother or sister they must be of the same gender and that there must be a relatively large age gap between them. This suggests that power in sibling relationships could play an important factor in alcohol behaviours.

Introduction

Social marketing has long been associated with campaigns aimed at reducing harmful behaviours (Kotler & Lee, 2008). A major health issue within Australia is excessive alcohol consumption, with over 100,000 alcohol-related hospitalisations and 3,400 deaths per year (Pascal et al., 2009; Begg, Vos, Barker, Stanley, & Lopez, 2007). A greater number of people died from short-term acute harm rather than from long-term chronic conditions, with deaths from acute causes being most common among young people (National health and medical research council, 2007; National preventative health taskforce, 2008). Alcohol was estimated to cost the Australian community some $15 billion in 2004/05 – about twice the social cost of illicit drug use (Collins & Lapsley, 2008). Due to these problems, and increased community, media, and political concerns, governments have been trying to stem the problem through the use of legal and educational techniques (NPHT, 2008). However, these approaches have proven largely unsuccessful in convincing risky drinkers to become more responsible and moderate their drinking, especially in the 20 to 29 year age group (Australian Institute of Health and Welfare, 2008).

Social marketing, as an alternative to legal and educational approaches (Rothschild, 1999), applies commercial marketing techniques to influence the voluntary behaviour of target audiences in order to improve their personal welfare and that of society (Andreasen, 1995). Whilst not a new approach, social marketing is underutilised within the Australian health sector and thus could hold potential as an alternative, or in addition to, current approaches. However, as part of developing a suitable social marketing programme, insights into the behaviour of the target market are needed as a first step (Andreasen, 2002; French & Blair-Stevens, 2006). Prior research has identified siblings as a strong source in drinking alcohol, with parents having a significant but weaker effect on alcohol use (Needle et al., 1986; Trim, Leuthe, & Chassin, 2006; McGue, Sharma, & Benson, 1996). However, similarity between siblings, in terms of alcohol type similarity, has not been investigated.

Consumer Socialisation & Sibling similarity

Consumer socialisation posits that people acquire skills, knowledge, and attitudes relevant to their functioning as consumers from interactions with socialisation agents (Ward, 1974; Sigh, Kwon, Pereira, 2003). Consumer socialisation explains how individuals learn a variety of marketing related activity such as knowledge of products, brands, advertising, decision-making strategies, and consumption motives and values (John, 1999). Socialization agents are usually models that the target looks up to and are normally parents, siblings, or peers, but can also include mass media (Dotson & Hyatt, 2005).

This study focuses on the often overlooked role of siblings. Siblings can serve as powerful role models, as adolescents spend so much time with their sisters and brothers that their influence extends from the family to the peer domain (Fagan & Najman, 2005; McHale & Crouter, 1996). Siblings influence each other's development above and beyond the contributions of shared genetics and parenting (Whiteman, McHale, & Crouter, 1996). As such, it is likely that alcohol behaviour will be similar between siblings. Some researchers have found that the dominant influence of adolescent substance use behaviour appears to be from older siblings to younger siblings and not from parents to offspring (Boyle, Sanford, Szatmari, Merikangas, & Offord, 2001). Others have found adolescents alcohol use to be minimally affected by the environmental consequences of parent problem drinking and family function, but substantially by sibling environmental effects (McGue et al., 1996).

Given that siblings will copy the behaviours displayed by their older brother or sister it is also likely that the younger sibling may choose similar types of alcohol as their older sibling. As older siblings participate in the consumer socialisation of younger siblings, it is likely that they will acquire certain knowledge and attitudes related to alcohol (Solomon, Dann, Dann, Russell-Bennett, 2007). Solomon et al. (2007) believes that the 'passing down' of product preferences helps create brand loyalty; again, reinforcing the notion that siblings will share similarities in their alcohol behaviour. Previous research has found age distance and gender to be important factors in determining alcohol use concordance amongst siblings. Previous research has found age distance and gender to be important factors in determining alcohol use concordance between siblings (Fagan & Najman, 2005; McHale & Crouter, 1996). Consensus about sibling alcohol use has led researchers to find older siblings, who drink and are of them same gender and within two years of age are most likely to influence the younger sibling to drink alcohol (Boyle et al., 2001; McGue et al., 1996; Trim et al., 2006). As such, this research seeks to explore the relationship between age distance and beverage choice.

Method

A total of 300 surveys were handed out to male and female students at a Queensland university who had older siblings, and 257 were received back, representing a response rate of 86%. Students were chosen as the sample population as this age group is most likely to drink at risky levels (Hingson, Heeren, Winter, & Wechsler, 2005). The measures used include alcohol type, age gap between siblings, and gender match. Age gap and gender match were calculated based on date of birth of the respondent, and their older sibling's gender and date of birth. Alcohol type asked which type of alcohol the respondent preferred (i.e. Alcopops, beer, wine, spirits, or self-mix spirits). It should be noted that respondents were recording

their perceptions of their own and their siblings' behaviour, older siblings did not fill out the survey. In order to remove some potential confounding effects, filter questions were added to determine if the subject had any step- or half-siblings. This reduced the usable sample from 257 to 141. To test the impact of age distance on beverage type similarity an independent-samples t-test was conducted.

Findings and Discussion

In regards to the descriptive statistics, the female to male proportion is a little high but not unsurprising at 57% for females and 43% for males. The majority of students were in the 18 to 23 age group, with over 90% studying full time. Only 15% of students were working full time, with 53% working part time, and 33% not working at all. Over 70% of students were domestic and 28% international. In terms of family structure, a large majority (80%) was either living or had lived with both biological parents. Most students were either living at home or in a share house. Income before tax was examined, with a quarter of students earning under $10,000 per year, and more than half earning between $10,000 and $29,000. The sibling dyad combination was also found. Males with an older male sibling made up 26% of the sample, females with an older sister represented 26%, males with older females made up 17%, and lastly, females with older brothers made up 32%.

The sample was split into two groups so that sibling dyads that were of the same gender formed one group, and subjects who were of a different gender to their older siblings formed another. In other words, sample A consisted of males with older brothers, and females with older sisters, whereas sample B contain males with older sisters, and females with older brothers. Using the separated samples, two independent-samples t-test were conducted to compare age distance for siblings who had the same beverage choice and those who had different beverage choices. In sample B, there was no significant difference in scores for those who had the same beverage choice (M = 5.33, SD = 2.39) and those who had different beverage choices (M = 5.26, SD = 4.93); $t(34.90) = .03$, $p = .98$ (two-tailed). The magnitude of the difference in the means (mean difference = .03, 95% CI: -1.91 to 1.97) was very small (eta squared = .00).

For sample A, there was a significant difference in age gap for those who had the same beverage choice (M = 5.80, SD = 4.07) and those who had a different beverage choice (M = 3.87, SD = 2.49); $t(33.80) = -2.16$, $p = .04$ (two-tailed). Using Cohen's (1998) guidelines the magnitude of the differences in the mean (mean difference = -1.93, 95% CI: -3.74 to -.11) was founds to be very large (eta squared = .18). For those subjects who are of the same gender as their older sibling, the mean age difference for having the same beverage choice is fairly high at 5.80 years. This suggests that older siblings can influence younger siblings to model their beverage choice but only when there is a large age gap. This is consistent with broader modelling theory that suggests there are two conditions necessary for learning: frequency of contact and attractive qualities (Bandura, 1977). Siblings have a high frequency of contact with each other and so are likely to model behaviour. However, this alone, does not explain why only same gender siblings are significant for the t-test, and also why the mean age gap for those who have the same beverage choice was so large, at 5.80 years.

A number of possible explanations could shed light on this issue. Firstly, in terms of gender, social learning models have shown that individuals are more influenced by people who are similar to themselves (Bussey & Bandura, 1984, 1992), so siblings of the same gender are more likely to similar in terms of their beverage choice. Age distance between siblings for

alcohol use modelling is typically around two years (Trim et al., 2006; Boyle et al., 2001). However, in this research, age gap and beverage choice was investigated and found to have a mean of 5.80 years, suggesting that older siblings, in the eyes of a younger sibling, possess power which can reinforce and encourage certain behaviours (Duncan, Duncan, & Hops, 1996; Furman, & Buhrmester, 1985; Trim, Leuthe, & Chassin, 2006). Siblings with small age gaps may see their older sibling as more of an equal than one who possess power, and will therefore be less likely to be influenced by them.

Social Marketing implications

There are a few social marketing implications that can be taken from this research. First and foremost, social marketers should be aware of the powerful role older siblings can play in influencing their younger brother's or sister's alcohol behaviour. Campaigns that focus on the family tend to concentrate their efforts on the parents and leave out strategies for siblings. As such, future campaigns should incorporate strategies concentrating on all points of possible alcohol influencers, particularly siblings. Past research has found that the effect of parental drug use on the younger sibling's own use can be ameliorated by having an older brother who did not serve as a model for drug use (Brook, Whiteman, Gordon, & Brook, 1990). Therefore, by involving the older siblings in a campaign their influence could potentially counteract any negative effects from the parent.

In terms of the marketing mix, a product could be developed in the form of a smart phone application. The app could allow users to input data on what they are drinking and how much, and then determine if the person is drinking below, at, or above, risky levels. In addition to a risky drinking calculator, and in order to make the app more entertainment friendly, the app could manipulate photos the user takes of themself, to show the effects of long-term excessive drinking. This would help to reinforce norms against risky drinking, and show instantly the negative repercussion of long-term risky drinking. A similar approach has already been taken to reduce methamphetamine use, with a website having been formed to relay the deterioration in physical appearance associated with use (See www.facesofmeth.us).

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