Appetite 96 (2016) 408–415

Contents lists available at ScienceDirect

Appetite

journal homepage: www.elsevier.com/locate/appet

Factors influencing young people's use of alcohol mixed with energy drinks

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ARTICLE INFO

Article history:
Received 29 May 2015
Received in revised form
28 August 2015
Accepted 30 September 2015
Available online 9 October 2015

Keywords:
Alcohol
Energy drinks
AMED
Young adults
Qualitative
Australia

ABSTRACT

A growing evidence base demonstrates the negative health outcomes associated with the consumption of energy drinks (ED) and alcohol mixed with energy drinks (AMED), especially among young people. Work to date has focused on the physiological effects of ED and AMED use and the motivations associated with consumption, typically among college students. The present study adopted an exploratory, qualitative approach with a community sample of 18–21 year olds to identify relevant barriers, motivators, and facilitators to AMED use and to explicate the decision-making processes involved. The sensitisation method was used to collect data from a cohort of 60 young adult drinkers over a period of six months via individual interviews, focus groups, and introspections. The findings indicate that there may be a general understanding of the negative consequences of AMED use, and that these consequences can constitute barriers that serve to discourage frequent consumption among young people. This outcome suggests the potential application of positive deviance and social norms approaches in interventions designed to reduce AMED use among this population segment. The results are promising in the identification of a large number of concerns among young adults relating to AMED use. These concerns can constitute the focus of future communications with this target group. The results are likely to have relevance to other countries, such as the US and the UK, that share similar alcohol cultures and where energy drinks have achieved comparable market penetration rates.

1. Introduction

The relatively recent advent of alcohol mixed with energy drinks (AMED) has resulted in limited knowledge of relevant decision-making criteria used by consumers (Burrows, Pursey, Neve, & Stanwell, 2013; Marzell, Turrisi, Mallett, Ray, & Scaglione, 2014). The potential harm caused by this product combination and the rapidly increasing size of the market indicate the need to better understand relevant choice processes (Pennay & Lubman, 2012). In particular, data are needed in relation to decision making processes of young adults who are the primary AMED user market and the target of extensive marketing for the energy drink (ED) product category (Babu, Church, & Lewander, 2008; Breda et al., 2014; Pomeranz, Munsell, & Harris, 2013; Reissig, Strain, & Griffiths, 2009; Zucconi et al., 2013).

Much work on EDs has focused on their negative physiological effects, which include agitation, elevated blood pressure, sleep disturbance, increased susceptibility to addiction, dental caries, miscarriage, arrhythmia, and even death (Arria & O'Brien, 2011; Avci, Sarıkaya, & Büyükcam, 2013; Babu et al., 2008; Berger & Alford, 2009; Breda et al., 2014; Burrows et al., 2013; Clauson, Shields, McQueen, & Persad, 2008; Duchan, Patel, & Feucht, 2010; Finnegan, 2003; Greenwood et al., 2010; Marshall et al., 2003; Sepkowitz, 2013). Increasing concerns about the effects of EDs have resulted in calls for changes to policy and practice in this area, especially in relation to use by young people (Babu et al., 2008; Budney & Emond, 2014; Schneider et al., 2011; Seifert, Schaechter, Hershorin, & Lipshultz, 2011; Van Batenburg-Eddes,

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http://dx.doi.org/10.1016/j.appet.2015.09.037
0195-6663/

Lee, Weeda, Krabbendam, & Huizinga, 2014). However, progress has been slow, hampered by a lack of research providing definitive evidence of a causal relationship between the consumption of energy drinks and adverse physiological effects for young drinkers (Harris & Munsell, 2015).

In the smaller field of AMED research, the focus has also been on young drinkers (Arria et al., 2010; Attila & Çakir, 2011; Berger, Fendrich, & Fuhrmann, 2013; Brache & Stockwell, 2011; Costa, Hayley, & Miller, 2014; Curry & Stasio, 2009; Droste et al., 2014; Hamilton, Boak, Ilie, & Mann, 2013; Jones, Barrie, & Berry, 2012; Kponee, Siegel, & Jernigan, 2014; Marzell et al., 2014; O'Brien, McCoy, Rhodes, Wagoner, & Wolfson, 2008; Penning, de Haan, & Verster, 2011; Varvil-Weld, Marzell, Turrisi, Mallett, & Cleveland, 2013; Velazquez, Poulos, Latimer, & Pasch, 2012; Woolsey, Waigandt, & Beck, 2010). Work to date suggests that AMED use in children predicts higher rates of alcohol consumption in the future (Miyake & Marmorstein, 2015). AMED use has also been associated with increased alcohol consumption, alcohol dependency, alcohol-related harms, risky behaviour, and suicidal ideation among some users (Berger & Alford, 2009; Bonar et al., 2015; Brache & Stockwell, 2011; Marczinski, Fillmore, Henges, Ramsey, & Young, 2013; Martz, Patrick, & Schulenberg, 2015; McKetin, Coen, & Kaye, 2015; Patrick & Maggs, 2014; Peacock & Bruno, 2015; Thombs et al., 2010; Woolsey et al., 2015).

US studies suggest that prevalence rates are high, with around half of underage drinkers aged 13–20 years reporting consuming AMED in the last 30 days (Kponee et al., 2014). Research examining user motivations has found staying awake, enhanced intoxication, sociability, and taste to be primary factors (Costa et al., 2014; Droste et al., 2014; Jones et al., 2012; Marczinski, 2011). At least some users demonstrate awareness of the dangers associated with AMED (Jones et al., 2012), although there is little understanding of how young people negotiate the perceived benefits and risks of combining the two substances.

The present study contributes to the limited knowledge on young adults' AMED-related decision-making. A qualitative approach was used to explore attitudes to AMED, the various contexts in which AMED is used, and the factors that influence consumption decisions. This approach reflects the need to identify and describe the complex processes involved with these kinds of consumption choices (Bunting, Baggett, & Grigor, 2013). It also acknowledges the limited prior research in this field and hence the need to utilise exploratory methods to lay the groundwork for future work (Jones et al., 2012). The study was conducted in Australia, where one in two young adults report AMED use (Foundation for Alcohol Research and Education, 2013) and the ED market quadrupled over the decade to 2010 (Canadean, 2011).

2. Method

Data relating to young adults' ED use were captured as part of a larger study investigating alcohol-related beliefs and behaviours among regular alcohol drinkers aged 18–21 years. Regular drinking was defined as consuming alcohol at least two days per month. The study employed the sensitisation approach (Pettigrew & Pescud, 2013), which involves using multiple qualitative methods to collect data over a period of six months from a cohort of individuals exhibiting characteristics of interest (in this case, young adult drinkers). The aim of the sensitisation approach is to generate deep insights over and above what may be shared in a single interview or survey.

Sixty young people were recruited to participate in individual interviews, focus groups, and fortnightly emailed introspections. During these data collection episodes, participants were invited to discuss their beliefs and behaviours in relation to ED and AMED use. Ethics approval for the study was obtained from the Curtin University Human Research Ethics Committee and all participants provided informed consent.

2.1. Participants

A social research agency recruited participants by disseminating invitations to their database members who met the eligibility criteria of age (18–21 years), alcohol consumption status (minimum of two drinking episodes per month), and place of residence (Perth, Western Australia). The invitation offered the opportunity to "participate in a study about alcohol consumption". In addition to the emailed invitations, recruitment advertisements were placed on various websites and social media platforms. Of the 380 individuals who responded to the invitation/advertisements, 106 were excluded due to ineligibility or full gender/age quotas, and a further 197 indicated that they were unable to commit to the study for the full six months. Of the remaining 77 potential participants, 17 withdrew upon initial contact with the researchers, resulting in a final sample of 60 drinkers. Average daily alcohol consumption for each participant was calculated using the method adopted in national alcohol intake surveys (Australian Institute of Health and Welfare, 2011, 2014). This involved participants reporting the frequency with which they consumed alcohol in the previous 12 months and the number of standard drinks consumed on a typical drinking occasion. One-third of the sample members reported typical alcohol intake levels classified as low risk for long-term alcohol-related harm (i.e. an average of no more than two drinks per day (National Health and Medical Research Council, 2009). The other two-thirds were classified as being at high risk because their reported average alcohol consumption exceeded this level.

The study participants were classified into three segments according to their ED usage (i.e., ED in any form, with or without alcohol): non-users (n = 17), infrequent users (n = 22), and frequent users who consumed at least weekly (n = 21). Those in the non-user category included participants who had never consumed EDs or had tried them in the past but subsequently decided to abstain. Those in the infrequent user category considered themselves to be current users but reported consuming EDs less frequently than weekly. The groups were of similar size, with around one-third of the sample falling into each segment (see Table 1).

2.2. Procedure

The sensitisation method involved participants providing a total of 15 data inputs over six months: two individual interviews, one focus group, and 12 introspections. Participants were remunerated up to $AUD600 across the six months if all data collection tasks were completed (an average of $AUD40 per data collection episode). Most participants completed most data collection tasks over the study period, with 49 participants completing at least 12 tasks.

The interviews were conducted at the start and middle of the study, and the focus groups were conducted at the end. The topics of EDs and AMED were raised in all interviews and focus groups, which were conducted in a semi-structured format. Participants' fortnightly introspections constituted emailed notes about their thoughts and feelings pertaining to any alcohol-related topic of their choice. Reminders were distributed via email each fortnight to enhance compliance and encourage ongoing participation in the study. The aim of the introspection component was to allow participants to consider topics in their own time, thereby giving them the opportunity to reflect on relevant issues and provide more considered responses (Gould, 1995). Participants received a list of