

## Why (not) alcohol energy drinks? A qualitative study with Australian university students

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### Abstract

**Introduction and Aims.** Alcohol energy drinks (AEDs) are a recent entry to the ready-to-drink market, but there is an absence of research into the reasons young people consume these products and their consumption-related experiences. The aim of the current study was to investigate university students' perceptions of, and experiences with, pre-mixed AEDs. **Design and Methods.** Four focus groups with undergraduate university students in a large regional city in New South Wales; with transcripts coded for key themes. **Results.** Participants reported a number of benefits of AED consumption, many of which were similar to other ready-to-drinks, such as taste and image. However, the primary benefits of AEDs related to their capacity to wake the drinker up at the beginning of the evening and facilitate partying and drinking over a longer period. Many of the participants reported experiencing or observing negative effects from drinking AEDs, some quite severe, but this did not appear to act as a deterrent to their consumption. **Discussion and Conclusions.** Given the popularity and perceived benefits of AEDs—and evidence from previous research that their consumption is associated with increases in intoxication levels, risky behaviours and harmful alcohol-related consequences—there is a need to consider a range of strategies to reduce harmful consumption of AEDs. While educational interventions may be of benefit, there is also a role for regulation of the packaging and marketing of a product that is associated with substantial harms. [Jones SC, Barrie L, Berry N. Why (not) alcohol energy drinks? A qualitative study with Australian university students. *Drug Alcohol Rev* 2011]

**Key words:** alcohol energy drink, young people, alcohol-related harm, alcohol marketing.

### Introduction

#### *Alcohol energy drinks*

Energy drinks have rapidly become a major segment of the soft drink market since they first hit the market in the late 1990s, particularly among younger drinkers [1]. Within 2 years of their introduction, energy drinks had also become a popular mixer for spirits (especially vodka), followed in 2003 with the introduction of pre-mixed alcohol energy drinks (AEDs) [2], which are packaged in a similar style to non-alcoholic energy drinks, that is, in small, narrow cans with colourful labels, raising concerns that they may be difficult to distinguish from soft drinks (particularly for parents and teachers) [1,3].

In Australia, AEDs are available at the upper end of the alcohol strength continuum [such as Fairy Bomb at

8.2% alcohol by volume (ABV) and Elevate at 8.0% ABV] and contain between 1.5 and two standard drinks per 300 mL can. A recent audit study [4] found that the 20 most widely available ready-to-drinks (RTDs) in New South Wales ranged from 4.8% to 8.0% ABV, with only seven above 5.0% and only two above 7.0%.

Early research on energy drinks (i.e. those containing caffeine and taurine but *not* alcohol) found that they stimulate cognitive performance and feelings of well-being [5], and improve reaction time among 'sleepy' drivers [6]. However, more recent studies on the effects of AEDs found that they reduced subjective perceptions of alcohol intoxication with no impact on objective measures [7]. An experimental study found that consuming caffeine with alcohol had no effect on the degree to which alcohol increased errors, but did reduce participants' *perceptions* of alcohol intoxication [8]. Further, as both energy drinks and alcohol are

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dehydrating, the combination of both can result in reduced ability to metabolise alcohol and thus increase toxicity [9]. In the USA, concerns have been raised about the potential for the consumption of AEDs to lead to uncharacteristic aggressive behaviours [10] and to have the same effect as 'date rape' drugs, with anecdotal reports of young women attending hospitals following blackouts and alleged non-consensual sex [11,12].

### *Consumption of AEDs*

Emerging evidence suggests that the consumption of AEDs (either pre-mixed or self-mixed) is associated with heavier drinking and higher prevalence of adverse events associated with intoxication [13–15]. For example, one large study conducted in the USA found that the association between consumption of AEDs and higher prevalence of adverse events, such as being the victim of sexual or physical assault or travelling with an intoxicated driver, persisted after controlling for absolute volume of alcohol consumed [15]. The most recent study, also from the USA, examined intoxication levels and driving intentions among 802 patrons leaving a college bar, and found that those who had consumed alcohol mixed with energy drinks were three times as likely as those who drank alcohol alone to have a blood alcohol concentration above 0.08, and four times as likely to intend to drive [16].

These studies all suggest that the combination of alcohol with energy drinks may increase young people's propensity to engage in risk taking behaviour. This is perhaps because the active ingredient in energy drinks mitigates the soporific effects of alcohol.

There has been no investigation of young people's motivations for or experiences with consuming AEDs either in Australia or overseas. Given the significant associations found between AED consumption and increased drinking and drunkenness, as well as the higher prevalence of alcohol-related harms found in the US studies, it is important to further examine AED consumption in order to determine what makes them attractive to young people. As the literature has suggested AEDs may be targeted particularly at young adults [1], it is especially important to explore their use among this population group. The aim of the current study was to investigate perceptions of, and experiences with, pre-mixed AEDs amongst 18- to 25-year-olds.

## **Method**

### *Focus groups*

Semistructured focus group interviews were selected to investigate the use of AEDs amongst young adults. The

use of focus groups enabled us to observe participants' interactions as they discussed their experiences and perceptions of AEDs. Focus groups are known to be particularly useful for investigating social phenomena, such as recreational drinking, because they make use of social interaction to uncover issues and themes that might not otherwise be exposed [17].

### *Recruitment*

A convenience sample of 18- to 25-year-olds was recruited from the main campus of a regional university. Posters inviting students to participate in a study about alcohol use were placed on notice boards close to areas in which students usually congregate (e.g. food court, lawns). Volunteers were screened to ensure that they were enrolled at the university, aged between 18 and 25 years old and drank alcohol socially. Those who were eligible were sent a Participant Information Sheet and a Consent Form, which was collected before the focus group discussions commenced. Participants were offered a \$30 gift voucher in compensation for their time.

### *Data collection*

Four focus groups, each comprised of four to six people, were conducted with a total of 21 students; of these, nine were male and 12 were female. Focus groups were conducted in tutorial rooms on the university campus and ran for approximately 1 h. Although the participants were encouraged to interact freely and the discussion allowed to range widely, the moderator (L. B.) used a discussion guide to ensure that all of the areas of interest were thoroughly explored. Participants were encouraged to discuss their knowledge and experience of AEDs; their perceptions of the risks and benefits of consuming AEDs; the role AEDs play in social situations; and their sources of information about the product category. The selection of these themes was informed by the literature addressing the use of other kinds of pre-mixed alcoholic beverages by people in this age category [18–22]. Given that AED products are not heavily advertised in broadcast media and we were interested in investigating whether the participants were familiar with AED products, no stimulus material was used to prompt participants' recollections.

Participants were forthcoming with their responses and interacted well as a group. Most students were able to build rapport with one another, which meant that they willingly and enthusiastically shared their experiences with AEDs. Those that did not drink these particular products still knew of friends who consumed them and were not left out of the discussion. Based on the interactions of the group, participants felt

comfortable expressing their attitudes, whether they were consistent with or contrary to others in the group.

A digital voice recorder was used to record the discussion amongst participants. In addition, the moderator noted any changes in body language or group dynamic that might be expected to inform the analysis. The recordings were transcribed in full using a commercial transcription service and checked for accuracy before analysis commenced.

The study protocol was approved by the university's Human Research Ethics Committee.

#### Data analysis

Data collection and analysis were conducted sequentially. Thematic analysis was undertaken applying the constant comparison method [23]. Initially, S. J. and L. B. each coded the transcripts independently of one another. The discussion guide was used to develop provisional themes. Inductively derived codes were then generated as the analysis continued. Discussion of the researchers' provisional coding schemes continued until agreement was reached on the primary codes. A more detailed hierarchical coding scheme was developed on the basis of this initial analysis. During the coding, detailed code descriptors were developed and revised following further discussion. Responses that were inconsistent with emerging patterns were sought and are reported where they occurred. Recording and continually reflecting on this development ensured transparency in the process.

Verbatim quotations, reported using pseudonyms, are used to illustrate patterns in the participants' responses and, as is the custom with qualitative research, the results and discussion are presented simultaneously [24].

#### Results

The majority of respondents indicated that they had consumed AEDs in the past and linked AEDs to positive social experiences with friends either at pre-going out venues or in a nightclub setting. This is consistent with research addressing alcohol use in young people. There did not appear to be any distinct differences between male and female participants in consumption patterns or in the reasons for drinking AEDs. The key themes identified in the focus group discussions were: drinking to get drunk, drinking to be part of the crowd, convenience, and the negative effects of AEDs. The moderator noted that participants appeared to be very comfortable sharing their experiences about AEDs with others in the group. Participants often had several stories or experiences that they shared with the group (some were clearly humorous to other participants), which prompted further discussion or recollections of a

similar experience from a different participant. This relaxed, conversational style contributed to the richness of the data, with the moderator rarely needing to prompt discussions or encourage participants to join the discussion.

#### Drinking to get drunk

The majority of participants reported drinking AEDs to help them remain awake and alert so that they could keep drinking and socialising longer. For example, one respondent said that AEDs were attractive, '*When you want to get drunk and stay awake longer*' (Female, FG2); and another '*when I've been going out, had a few beers, feel a bit tired so I just need a bit of a boost*' (Male, FG3). This strategy was used both during the night, to make the night 'last longer' and at the beginning of an evening to provide an initial energy boost or 'pick me up' for the night ahead, particularly amongst those trying to balance studying and socialising. One participant commented that '*. . . being like, uni students as well we're all really tired so, like you think that the caffeine's going to bump you up and then, 'cause the alcohol, you can have two drinks and be wanting to go to sleep but if you think you can have an energy drink with it then it will pump you up a bit more.*' (Female, FG1). This phenomenon may at least partially explain the increased alcohol intake observed with the use of AEDs [14].

Measham and Brain [25] discuss the increased popularity of youth binge drinking as the 'new culture of intoxication', characterised by the pursuit of intoxication itself (determined drunkenness) as an integral part of leisure. Viewed in this context, the comments reported above appear to suggest that young people choose AEDs precisely because they enable them to enjoy a more intense psychoactive effect of alcohol for a longer period of time.

A number of our participants mentioned that AEDs' relatively high alcohol content, compared to other RTDs, made them an attractive alternative to other RTDs, especially when the aim of their drinking was to get drunk. For example, one respondent commented, '*I bought them just because they had a higher alcohol content, the Pulses and stuff, they had a higher alcohol content. They tend to, well I found they were more, they had a bigger effect on me, I felt as though, yeah, like you get more energy and stuff.*' (Female, FG4). Participants were even able to recall the specific alcohol content of the AEDs they consumed; for example '*because it fits in such a small can and it's got a 1.7 [standard drinks] and that, yeah, it's more concentrated*' (Male, FG2). Thus, young people may be choosing AEDs for their higher alcohol content per unit—perhaps because fewer purchases are required to achieve intoxication—as well as for the effects of their caffeine/guarana ingredients.

Other commonly mentioned advantages of AEDs align closely with those found in previous research regarding RTDs more generally [18–22]. Primary among these was the sweetness of the energy drink and/or the soft drink components, which masked the taste of the alcohol and made them more palatable [14]. This was especially important for younger drinkers. One respondent observed, *'It doesn't taste like alcohol so they're really easy to down and that, like, that's appealing to kids because they don't like the taste of alcohol, they just want to be drunk'* (Female, FG4).

It is significant that all of these perceived advantages of AEDs are associated with achieving intoxication. Some, such as the sweetness of the energy drink component making them more palatable and so easier to drink and drink quickly, are not unique to AEDs. However, the young people interviewed reported choosing AEDs because of specific characteristics that differentiate them from other RTDs. In particular, AEDs enabled the participants to stay awake, and therefore continue drinking, for longer; and the higher alcohol contents of AEDs compared with other RTDs enabled participants to experience a stronger effect from each unit. This is consistent with Measham and Brain's [25] observation that young people view intoxication itself as a recreational activity (rather than a facilitator of other recreational activities) and suggests that AEDs may be so attractive to young people because they offer an extra psychoactive effect: the capacity to achieve and maintain higher levels of intoxication than are achievable without the addition of stimulants such as caffeine or guarana.

In two of the groups, participants noted that AEDs not only contained the same desired features as other RTDs, but the addition of caffeine or guarana made them more attractive. The higher alcohol content and an extra active ingredient was viewed by some participants as adding an exciting dimension to drinking behaviour. One participant was particularly eloquent on this, stating *'and it's the sort of, it's the whole over the top thing, like everyone wants to have something more, some extra thing to whatever they're doing, like so it's not just drinking, it's drinking, it's more standard drinks, it's got the alcohol, the, the energy drink, it's what everyone's doing, like. So it's not, it's not boring'* (Female, FG1). This element of excitement appears to be a feature of AEDs that differentiates them from other RTDs in the minds of these consumers and makes them more attractive than other RTDs. Another participant referred to this 'extra' component of AEDs, and thus preference for them over other RTDs, as a feeling of control or invincibility: *'Well no, you, you are drunk because the alcohol is there . . . it's more the sensation of being awake [other participant: Awake and drunk, yeah.] So you feel like you can control that drunkenness (sic) because you have the*

*energy, like, it's more, it's, it's, it's probably more of a, I'm invincible thing happening'* (Male, FG4). These comments suggest that the respondents find AEDs attractive because they offer an extra psychoactive ingredient. This suggests that AEDs might be viewed by young people as RTDs with added product features (caffeine/guarana).

#### *Symbolic attractiveness of AEDs*

It was also agreed that this type of drink is associated with being popular or being the 'cool' drink to have. This is also consistent with the results of research addressing young people's use of RTDs [21,22]. It is important to note that the participants did not express a belief that using AEDs would create popularity for them (i.e. that being seen drinking AEDs would give them social status or make them appear to be more attractive or interesting). Rather, they felt that being seen drinking an AED might signify to others that they were popular or 'cool' (i.e. they perceived themselves to already hold this status, and that drinking AEDs was merely an indicator to those outside their circle of their confirmed membership of the in-group). These comments suggest that fashion is an important influence on young people's choice and consumption of AEDs as it is for other RTDs. Further, particularly in relation to self-mixed AEDs, participants described them as *'definitely a together drink'* (Male, FG3); that is, the consumption experience itself is seen as a socially bonding activity: *'everyone sort of does it together . . . there's even a countdown, like one, two, three'* (Male, FG3).

There was consensus among the participants across all four of the groups that the physical appearance of the cans is part of what makes them attractive, particularly for younger drinkers. Furthermore, across all groups, participants believed that AEDs were targeted specifically at young people, both above and below the legal alcohol purchasing age. For example, one participant commented that she thought AEDs were *'like maybe a teenager thing'* (Female, FG4). As this result is consistent with the results of research investigating young people's use of other RTDs [19,20], it is difficult to ascertain whether this is a particular characteristic of AEDs or simply a function of their being a pre-mixed product.

The perception of AEDs as fashionable and exciting appears to be effectively engendered and exploited by the marketing strategies employed for these products. The participants were familiar with various AED products but they consistently stated that they had not seen any 'above the line' advertising (e.g. television, newspaper, magazines). The majority could, however, recall seeing posters in bottle shops and behind the bar at clubs and pubs. Participants also recalled various

promotions in clubs and pubs that (in their view) directly targeted young people. These were seen as being an effective way to reach the target population because they formed part of the social milieu; these promotions seemed to create a situation in which responding to the promotion became about feeling included. For example, one participant observed, 'Mmm. 'Cause when you, when it's in the pub, it's not just the free stuff, it's being of part of like the event' (Female, FG1).

Interestingly, a number of participants mentioned that AEDs did not need to be advertised as the combination of word-of-mouth and their close association with regular energy drinks is sufficient to influence young people to buy AEDs. Thus this 'image' association of a product that is for 'cool' people like themselves appears to be facilitated, rather than hindered, by the absence of mainstream advertising. These responses are consistent with the strategy articulated by the communications director of Anheuser-Busch who was quoted as saying: 'We know consumers like to discover new things and be the first to share this news with their friends, so we are building interest for Spykes mainly through word-of-mouth . . . This is by design to help spread the news for this brand' [2].

#### Convenience

Participants in this study reported that they found pre-mixed AEDs to be convenient for a number of reasons. One respondent mentioned that AEDs are easy to obtain, noting that 'It's easier, I think to get your hands on the, odd can of pre-mixed drink when you're underage' (Female, FG1). Other respondents mentioned that AEDs are easy to carry and conceal, 'I found with Pulses, if you wanted to sneak them in somewhere like a club or something you can fit it in your handbag' (Female, FG4), and to consume, 'Because you can just open it, you don't need your glasses there that you can mix your vodka with, your Coke or you know young people don't really drink beer as well and wine' (Female, FG3). These responses are consistent with research addressing the use of other pre-mixed beverages [22]. Convenience is important to young drinkers and it appears that part of the appeal of AEDs is their pre-mixed, single serve presentation.

#### Negative effects of AEDs

Despite the appeal of these products, participants agreed that there were several negative characteristics about AED products. Interestingly, the most frequently mentioned of these negative characteristics aligned directly with the unique 'positive' characteristics of AEDs. These included unwittingly drinking too much

and having trouble sleeping as a result of the energy drink component. One participant noted that, 'They don't really make you think that you're as drunk as you really are. You kind of realise the next morning that you have had way too much' (Female, FG1) and another commented that, 'Getting to sleep afterwards sometimes can be pretty bad too' (Male, FG2).

Participants spontaneously mentioned the mood-altering properties of AEDs as a negative consequence of using them. They noted a distinct difference in behaviour as a result of drinking AEDs, beyond that usually associated with alcohol consumption alone, and focused particularly on uncharacteristically aggressive or violent behaviour. One participant observed that, 'One minute you could be really, really happy and then something just, something trivial and you, and you lash out' (Female, FG3). Another participant recalled that she'd experienced this uncharacteristic behaviour saying, 'I've sort of experienced it myself and seen people, like just, like go a bit mental from it' (Female, FG4). One participant suggested that while people seemed to be 'less angry on energy drinks', they were also less inhibited—'ready to do something about it'—and this was her explanation for the increased aggression she had observed when AEDs were consumed (FG1). It is possible that the increased aggression observed with the (over)consumption of AEDs is the result of being able to achieve higher levels of intoxication before falling asleep. It is also possible that, as aggression is a 'known' risk of AED consumption, drinkers may feel less inhibited as they can reduce personal responsibility for their behaviour by attributing their aggression to the product.

There were, however, a number of adverse affects that participants felt were unique to AEDs. In each group, at least one person was able to recall a negative health consequence they had experienced or witnessed as a result of consumption of AEDs, ranging from waking up with a worse than usual hangover to being admitted to hospital. However, by far the most common aspects in these stories were having heart palpitations, black outs and unintentionally consuming an excessive amount of alcohol due to not 'feeling drunk'. For example, one participant told of a time when 'I got, yeah, incredibly drunk and really sick and was like vomiting . . . not only that but I was blacking out and sort of freaking out' (Female, FG4). Another participant told a particularly evocative story from her own experience with drinking AEDs:

*Then I went into town, then I started on the energy drinks and I started twitching, like just looked like I was having a fit basically, but standing up walking along twitching and the bouncers actually called me an ambulance for it 'cause they weren't, like I was spewing, but they weren't*

*worried about that 'cause they've seen me like that before, as bad as that is . . . the ambulance people just said, yeah, she's just had too much energy drink and too much alcohol as well, of course (Female, FG1).*

Clearly, this respondent felt that the people who observed her condition, including the ambulance officers who attended her, noticed symptoms that are not usually evident in individuals who are merely intoxicated and attributed these to the consumption of energy drinks.

It was clear from our focus group participants that AEDs are a popular pre-mixed drink choice for young adults, providing both the positive characteristics of other RTDs (taste, appearance, convenience) and additional unique benefits (or selling points). The primary benefit was—as would be expected—the additional energy provided by these products, both the initial energy boost to get them going at the beginning of the evening and a continual energy enhancement to enable them to continue partying (and drinking) throughout the night. This led to increased alcohol consumption which may itself at least partially explain the increased adverse events associated with the combination of alcohol with energy drinks observed elsewhere.

## Conclusion

Despite calls for health warnings on AED labels [26] and limits on the sale of these products, the formal response to this issue by government has been limited to 'information' rather than regulatory approaches, such as a Media Release by the Victorian Minister for Consumer Affairs cautioning consumers that 'these products may pose particular risks to consumers' health and wellbeing' [27]. However, this approach is unlikely to be effective amongst a target audience that views the achievement of high levels of intoxication as a product benefit [25,28–30]; and a benefit that largely outweighs the risks. In this context, public health messages about 'risks' associated with AED use will lack credibility because they fail to acknowledge or validate young people's desire to achieve altered states of consciousness. Any effective public health response to the use of AEDs must be careful to address the drivers of binge drinking generally and AED use in particular.

Participants in this study had a high level of awareness of the different AED products, despite being unable to recall any mainstream advertising. A key finding of this study, which has not been the focus of the small number of quantitative studies in this area, is that many of the participants had experienced negative effects of AED consumption, ranging from having difficulty getting to sleep at the end of the night through to being admitted to hospital. They were aware that AED

consumption increased the amount of alcohol young people consume by masking the effects of intoxication and due to their higher alcohol volume per unit than other RTD products. There was also a perception that, for some people, AED consumption was associated with aggression and violence.

These findings have important implications for potential strategies to address harmful AED consumption. As mentioned above, there have been calls for the inclusion of warning labels on AEDs. Wilkinson and Room suggest that providing consumers with 'full information' about a product enables them to make informed purchase and consumption decisions; and the inclusion of a warning provides an important symbolic message about the nature of the product [31]. However, they also emphasise that warning labels need to be part of a broader intervention than simply labelling products themselves, and their effectiveness be evaluated in the context of their long-term impacts on social understandings of alcohol as a product rather than solely their short-term impact on drinking behaviours. Given this, it is unlikely that warning labels alone will be sufficient to reduce the high levels of harm associated with consumption of AEDs among young people in the current environment, although further research would be needed to determine whether this is the case. Similarly, the fact that these young people report having experienced (or at least witnessed) the negative effects of these products suggests that fear-based social marketing campaigns designed to reduce consumption by persuading them of these harms may be ineffective.

Thus, the 'solution' to the harms associated with AED consumption is a complex one. At one end of the spectrum, given the government's evident reluctance to increase regulation of the alcohol industry and Australia's long-standing commitment to harm reduction in relation to illicit drugs [32], some would argue that what is required is a longer-term commitment to educating young people about the harms associated with AED consumption, whilst acknowledging the perceived benefits. Others would argue for a regulatory response to AEDs, including bans on this product category—an approach that has been taken elsewhere. For example, in November 2010, the US Food and Drug Administration notified four manufacturers of AEDs that their products were 'a public health concern', resulting in the cessation of production of seven products. Determining where on this spectrum the answer lies will require the inclusion of the voices of the young people who consume these products, and a recognition that the problem of excessive drinking goes beyond a single product category or marketing strategy to the deeper psychological, social and cultural influences on alcohol consumption.

### Limitations

It is important to note that this was a small-scale, exploratory study—conducted with 21 young people aged 18 to 25 in a large regional city in New South Wales. While the participants were encouraged to engage in an open discussion, the use of a semistructured discussion guide means that some of the issues discussed could have received attention due to the prompting of the facilitator rather than being of underlying importance to the participants. Further, in several instances the participants referred to ‘other young people’s’ drinking (or to their own drinking when they were younger); thus, the themes identified do not necessarily reflect their own (or their current) drinking motivations and behaviours. Given the results of this study, further research with larger samples of young people is urgently needed to inform the debate on AEDs.

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