University students' beliefs about unit-based guidelines: a qualitative study

Article (Accepted Version)

Furtwängler, N.A.F., & de Visser, R.O. (2017). University students' beliefs about unit-based guidelines: A qualitative study. *Journal of Health Psychology, 22*, 1701-1711. doi: 10.1177/1359105316634449

note: accepted manuscript; the published version of this paper may differ

UK government guidance for alcohol consumption is expressed in "units" of alcohol. This study employed semi-structured interviews to explore university students' knowledge of, attitudes toward, and use of unit-based guidelines. Thematic analysis revealed that participants were not motivated to adhere to unit-based guidelines, and that they lacked the skills required to apply them to reduce their own drinking. Instead, interviewees used individual strategies to monitor their drinking. The results suggest that public health interventions should include provision of information, efforts to motivate young people to change their behavior, and strategies to develop skills for managing alcohol consumption.

The health and social costs of alcohol are well documented (Balakrishnan et al., 2009; Scarborough et al., 2011). Although alcohol is part of the social lives of people of all ages, concern has often been focused on young adults - especially students in higher education. Younger drinkers are more likely than older adults to engage in heavy episodic drinking, and many students in higher education

drink above the recommended guidelines (Piacentini and Banister, 2008; ONS, 2005).

To encourage people to reduce their alcohol intake, the UK government introduced the "sensible drinking" message in 1995, accompanied by guidelines for alcohol consumption expressed in "units" of 10mL/8g of ethyl alcohol (Department of Health, 1995; NHS, 2015a). Current advice is that men should not regularly drink more than 4 units and women should not regularly exceed 3 units per day (Department of Health, 1995; NHS, 2015a). In addition, people should have at least two alcohol-free days a week. Although weekly unit intake is not part of the government guidelines, researchers often measure whether men and women exceed 21 and 14 units per week, respectively. (Batty et al., 2009). Binge drinking (or heavy episodic drinking) is often defined as drinking more than twice the daily recommended maximum in one day - i.e., eight or more units for men; six or more units for women (Herring et al., 2008). Although most developed countries have some version of a unit-based system, there is no international consensus on unit size or recommended daily or weekly intake maxima (F and de Visser, 2013).

Understanding use and non-use of government alcohol guidelines

The Information-Motivation-Behavioural Skills Model (IMB) (Fisher and Fisher, 1992) suggests that to initiate and maintain healthy behaviours, individuals must possess relevant information, ideally including explanations of techniques to apply. Possessing information is necessary, but people must also be motivated to change. The model argues that well-informed, well-motivated individuals must also possess the necessary behavioural skills to enact healthy behaviours. When applied to alcohol research, existing literature shows that if "sensible drinking" messages are to have a positive impact, then it is essential that people understand unit-based guidelines, feel motivated to adhere to them, and have the skills required to do so (de Visser, 2015).

Research has shown that although most drinkers are aware of unit-based guidelines, few have accurate knowledge of them, and even fewer apply them to their own alcohol consumption. This lack of knowledge results in people making inaccurate estimates of how much they drink (de Visser, 2015; de Visser and Birch, 2012; Gill and O'May, 2007a, 2007b; ONS, 2015). In drink-pouring studies, participants often more than one standard drink or unit, and inaccurately estimate the amount of alcohol in a self-defined "usual" drink (de Visser, 2015; Kerr et al., 2005; Wilkinson et al., 2011).

Furthermore, many young people do not perceive unit-based guidelines to be useful and are not motivated to adhere to them (de Visser and Birch, 2012; White et al., 2005). Government guidelines have been derived with a predominantly health-focused message (Room and Rehm, 2012; Stockwell et al., 2012). This approach might not be the most effective for motivating young people, who tend not to be worried about health or consider their own alcohol intake to be harmful or dangerous (de Visser et al., 2013; Harrison et al., 2011). Further research is needed to determine why young people lack the knowledge, motivation, ad skills required to use unit-based guidelines. Qualitative methods are useful for examining what people think about health-related issues because they put the primary focus on people's knowledge and perceptions of unit-based guidelines, their motivation and capacity to adhere to them, and their experiences as drinkers. The aims of the study described here were to explore the knowledge of, attitudes toward, and use of unit-based guidelines among university students.

METHODS

The data presented here come from a mixed-methods study of university students in South-East England granted ethical approval by the host institution. The first phase of the study was a quantitative survey of alcohol use and knowledge of unit-based guidelines. Survey participants indicated whether

they would be willing to be interviewed on topics covered in the questionnaire. Interest participants were invited by email and offered remuneration of either £5 or research participation credits. Interviewees gave written informed consent before being interviewed. Twelve semi-structured interviews were carried out with 8 women and 4 men aged 19-28. Interviews were conducted by the first author on the university campus. They commenced with an exploration of students' motives for drinking and not drinking, and then explored participants' knowledge of, attitudes toward, and use of unit-based guidelines. Interviewees also described approaches that they felt could improve and/or replace unit-based guidelines. Recordings of interviews were transcribed verbatim, and all identifiers were replaced with pseudonyms.

Analysis employed an interpretative approach modelled on the procedures used in Interpretative Phenomenological Analysis (IPA: Smith et al., 2009). The priority was to understand individuals' experiences. The first author read the first interview and noted any observations, reflections and thoughts. The initial interview was re-read several times, and emergent themes were identified. These themes were organised in "clusters" in a table with quotations from the interview. A table of themes including quotations from the participants was created for each interview. The same process was applied for the 11 remaining interviews, and new themes were added to those identified in earlier data. A summary table including themes and quotations from all interviews. The results are presented under seven headings representing the major themes to emerge from the analysis.

RESULTS

Positive aspects of drinking

The most common reason interviewees gave for drinking was having fun and socialising with their friends. Many said that they like drinking because it helps lower their inhibitions and provides a confidence boost when meeting new people. Participants also mentioned that drinking alcohol helped them forget about their problems:

> Belinda: If you're going out then you can forget about all that week, deadlines, and just enjoy seeing your friends and just having a joke

Participants also found the effects of alcohol on theirs or their friends' behaviour entertaining and liked that when drinking, the unexpected could happen. They said that this aspect of drinking in excess was exciting and part of the fun when drinking and socialising:

> Chris: Strange things happen on a night out that wouldn't happen if you were sober, like people just being ridiculous and entertaining.

Negative aspects of drinking

All participants expressed a dislike of hangovers. Without exception it was the first thing they spontaneously reported as the main negative consequence of drinking alcohol. In addition to the physical side of the hangover, such as feeling sick and tired, the fact that it would take time the following day to recover was also mentioned, because it would make it difficult for them to fulfil work or study commitments:

> Amy: Not being able to do the work I need to do. I hate feeling like that. I can't get away with being like that anymore, 'cause I've got more stuff to do

The majority thought that alcohol could have a negative impact on their general health, and some mentioned conditions such as cirrhosis. In addition, many thought that their brain could be damaged: blackouts and memory loss were considered negative aspects of heavy drinking.

Although the risk of alcohol dependence was noted by some participants, none deemed their alcohol consumption problematic. A few admitted that although they might drink excessively at times, because of their young age, they were not concerned about their long-term health:

> Chris: I just hope that because I am young that at this stage it doesn't really matter, whereas it will matter more in the future. Like I wouldn't want to drink as much. If I drank as I did when I was 30 as I do now, I'd feel like something was wrong

Interviewees noted that having fewer responsibilities and enjoying the freedom of a student lifestyle helped explain why they could drink more than other young people. They tended to feel that even if they were currently drinking more than they should, when they left university, their alcohol intake would reduce (e.g., "I think that after uni when I am a little bit older, I'd like to think that I'll drink a lot less").

Some participants – predominantly, but not only, women - said that they were aware of the high calorie content of alcoholic beverages and were concerned about gaining weight by drinking too much (e.g., "I don't want to end up drinking loads and putting on weight"). On some occasions, participants tried to be healthier by drinking less alcohol, but they admitted that it was hard to find the right balance between enjoying drinking and having fun, and simultaneously adopting a healthier lifestyle:

> Amy: "I have been trying to drink a bit less and be healthier and stuff, but obviously at the same time it's something that I enjoy, and I feel I have to get that balance between being healthy and also enjoying your life

Participants also expressed concern about the negative impact of excessive alcohol consumption on

people's behaviour. Interviewees noted that they disliked the fact that they or their friends could become an annoyance to others, and potentially ruin everybody else's night out. They also noted that they could hurt themselves or others by putting themselves in dangerous or vulnerable situations, or embarrass themselves by saying or doing things that they would later regret:

> Dina: If other people get too drunk, then they'll ruin the night 'cause they'll get kicked out or they'll be throwing up. So I think that's a bad thing when some people don't quite know, realise how much they are drinking and pass their boundaries

Attitudes towards unit-based guidelines

No participants felt that they were sufficiently knowledgeable about the government's unit-based alcohol consumption guidelines, even if they initially declared some familiarity:

> Dina: I feel like I am really familiar with them because I know I've heard them so many times, but at the same time I am not even sure what they are, so I am definitely not. It's really weird. I feel like I should know, but I don't

This lack of familiarity was reflected by a lack of knowledge of exactly what those guidelines were. The majority reported knowing the daily recommended maxima for men and women. However, participants had no motivation to adhere to the guidelines. Interviewees felt unable to relate the unit-based guidelines to their patterns of alcohol use. They did not feel concern about how much they were drinking at the moment, and they did not feel it would be possible to achieve their goal of getting drunk on a night out while drinking within the guidelines:

> Eric: The thing is you can drink within the recommended daily amount of units, but you don't get drunk on that. So socially it's almost a wasted enterprise, because if you're out to get drunk with your friends it's not much sense in just drinking a bit.

Some participants said that the likelihood of them adhering to the guidelines depended on their state of mind and the specific social context. When they were having a "quiet one" and not aiming at getting drunk, they felt it was not difficult to stay within the recommended guidelines:

> Amy: Obviously if you are having a quiet one then it's probably easier not to, but I think if you're going to a party then it's quite easy to get carried away

In addition to finding it hard to adhere to the guidelines, none of the participants showed motivation to adhere to the guidelines, and they felt that only very conscientious young people would deliberately try to drink within the daily intake limits:

> Dina: I don't think any young person is really going to - well unless they are really good – are going to

adhere to them ... it's just something that people don't think about. I think a lot of young people drink in that kind of situation because it is one of the main things that we can do to have fun now, and I think that with the guidelines they'll get ignored because “I want to have fun!” overrides the guidelines.

The only aspect of the recommendations that all participants agreed with was having at least two alcohol-free days a week. However, they felt that this was something that most students did anyway. articipants reported concentrating all of their drinking into one or two days, and did not drink at all on the other days of the week. In their eyes it was very important to give their “liver a break” from alcohol, and essential to give their body time to recover from any excess.

Dina: Having the 2 days which doesn't actually seem, to be honest, too much. I know that most people I know and myself have at least 2 days when we won't be drinking. So yeah, I think that's quite a good recommendation.

(Non-)use of unit-based guidelines

Participants stated that they never use the alcohol units system to monitor their alcohol intake while drinking. For example, Frank explained that his own personal definition of excessive intake does not contain any reference to units:

Frank: I am not doing the maths when I am having the drink. It's something I'd probably be much more aware of if I knew I was having a pattern of excessive, or what I view as excessive drinking continuously

The other main reason for not using the guidelines was the lack of understanding. Most interviewees found it hard to work out how many units are in a drink. They said that the whole process was too complicated and too difficult to remember. It was a recurrent complaint that the unit-based system was too abstract, and that they did not know, or could not remember, how many units were in the drinks they like to consume:

Grace: I find it quite hard to translate drinks to units. I kind of have looked into it and I always forget

Frank: I find the unit measurement actually quite cumbersome to work with in terms of judging what I am drinking

Most interviewees said that they had learnt about alcohol units at school or university. Many had also found information online on different websites, including that of the National Health Service. Half said that although they noticed the reports of units on bottle labels, they did not find the information useful in helping them to understand units, and that it did not motivate them to use the guidelines to monitor their alcohol consumption.

Helena: I guess you read it on the bottle if you are interested. It's kind of interesting, but it doesn't mean

anything to me.

Individual strategies to manage alcohol intake

Most participants stated that when they wanted to keep track of their alcohol intake, they would use strategies other than counting units. Interviewees reported that their most commonly used strategy for controlling alcohol intake was to "pay attention to how you feel". They stated that it was more relevant to them to stop drinking when they felt that they had enough to drink and based this decision on their own personal experience. All participants said they would slow down or stop drinking when they reached their own personal limit - as indicated by feeling too drunk, slurring their speech, or feeling like they could be sick. This was combined with the majority explaining that, based on their own experience and tolerance of alcohol, they knew how much they could handle:

> Dina: It is usually when I feel like I am already quite drunk. So if I feel like if I have anything else then it might tip me over the edge of feeling sick, then I won't drink anything else.

The notion of being in control and knowing one's own limits was apparent when participants explained that they liked to drink certain types of alcohol because they had gained a good knowledge of how it would affect them, and how much of it they could handle. Such strategies to control alcohol intake reflected most interviewees' belief that they were experts on how much and what they can drink, and their unwillingness to adhere to an externally-imposed limit perceived as irrelevant to them.

The second most popular strategy used instead of counting units was to count how many drinks had been consumed. Most participants were aware that it might not be the most accurate way to estimate how much alcohol they had, but they found this method easier than calculating the unit content of drinks - especially on a night out when they wanted to have fun. Participants suggested that this was easier than adding non-integer numbers of units:

> Frank: I don't think a lot of people use units as a way of measuring their drinking. I think a lot of people work on a much more generic "I've had a drink", which is really inaccurate and invites all sort of personal bias into kind of judging what that drink is.

Ideas for more effective health promotion messages

Given that participants did not use or intend to use the alcohol units system, it was important to examine their opinions about what would be a more effective approach to encourage and help young people to monitor their alcohol consumption. Most participants seemed unsettled, and initially were unsure about how to address it. A few even said that finding an effective message would be impossible, mainly because they were not at all motivated to limit their alcohol intake, and felt that no

people of their age would be either. Some participants argued that health promotion messages are irrelevant, as one should be able to use one's common sense (e.g., "It's common sense if you've had too much you've had too much") and that how much one wants to drink should be a personal decision (e.g., "It's your personal opinion of how much you want to drink and how drunk you want to get").

Despite their negative views of current unit-based guidelines, most interviewees said that they should be kept the same. Their main argument was that this system must have been set based on research and therefore should not be modified. One participant even said that it was good to have the guidelines even if they are ignored. A minority said that the unit limits should be increased so that it would be easier to adhere to them.

Most interviewees felt that campaigns should focus more on the negative consequences of excessive alcohol consumption, and should emphasise how alcohol affects the body, using tactics similar to those used to combat smoking. Participants also suggested that health promotion should focus more on messages that young people could relate to, such as stories of other young people who had experienced alcohol-related harm:

> Dina: Maybe more personalised testimonies from young people where it has affected them might be impactful 'cause it would be coming from a young person themselves who had to deal with the consequences of drinking too much.

Given the common view that the current system is too difficult to work with, one suggested solution was to standardize serving sizes of drinks (e.g., all servings of beer should be one unit). Another suggestion was to display in bars and pubs pictures of drinks that clearly show the unit content of each drink as a way of reminding people of the unit content of each drink that they may order:

> Kate: If you just giving people numbers, people don't listen to numbers. They need pictures of exactly what you are drinking and how much that is. I think people need to know exactly of what a bottle of this and how much you can have of it ... People aren't going to sit there and look at the numbers and work it out. Then you've got something to refer to if you're like sitting in a pub drinking with your mates and then you start to think about it no one in that state of mind is going to think about numbers.

One interviewee suggested that people could use portable electronic units calculators - perhaps in the form of a smart phone application to calculate how many units they had consumed (e.g., NHS, 2015b). At a broader level, half of the sample said that it was important to tackle Britain's drinking culture, because they thought it was socially accepted for people to drink excessively. One way to do that would be to promote alcohol-free activities and different ways to socialise:

> Frank: In the UK it's really hard to find non-alcohol environments if you want to go out. So in Canada all

> the coffee shops stay open quite late. There have been times when I've gone out to meet friends thinking "I don't really fancy having a drink tonight", and have paid the same for an orange juice and lemonade that they have paid for their pint and you're a bit like "I've been scammed really here".

Although the majority of the sample reported counting drinks rather than units, only two suggested that this approach should replace the unit system. However, these participants said that they would pay more attention to such a system, and that it would make it easier if the unit-based system were converted in numbers of drinks allowed per day or per week.

> Eric: I think that would be much better: for example 2 lagers and 1 shot tonight or something like that, or two lagers and a glass of wine. I think it would be much more useful to the average person.

Other participants said that the system should be age–related, allowing younger adults to drink more than older people. The stated rationale was that participants thought that because of their younger age, their bodies were able to handle more alcohol and recover faster than older people.

> Chris: If they were less units for older people then maybe we'd understand 'cause it has more impact on their health and they can get worse hangovers.

Interviewees suggested that non-health-related factors such as showing people how embarrassing they were when drunk or focusing more on the cosmetic side of drinking (e.g., bad skin, gaining weight) would resonate more with young people. They said it would be more motivating as this population is sensitive to being perceived in a negative way and is concerned about appearance.

> Helena: maybe emphasise that it will make you look old and things like that, 'cause I think people care a lot more about looking bad than they do about liver disease.

Participants suggested that alcohol availability should be more regulated, either by banning advertising – as is the case for tobacco products, banning cheap- or free-drink offers, or restricting times when people can buy alcohol. The existing numbers of deals on alcohol and the 24 hours access to alcohol were seen as factors encouraging people to drink more.

> John: It's gotten worst because people can just buy alcohol whenever they want and you have all those happy hours and stuff or like drinks promotions .it's very much an English thing.

Financial constraints

Financial resources seemed to have an impact on how much people were prepared to spend on alcohol. Some participants said that, in order to save money, they would drink less alcohol or stick to less expensive soft drinks. A few said that when they have more money or take their bank card with them on a night out then they would be more likely to buy more drinks (e.g., "That night I took my card,

which is always very stupid, and I was buying drinks").

Interviewees had mixed feelings about introducing minimum unit pricing for alcohol – a policy whereby alcohol could not be sold more cheaply than a minimum price, and which could result in price rises for some products - and expressed some ambivalence towards the possible outcomes for them. Some thought it was a bad idea and that it would not help reduce people's alcohol intake. They thought that most people would keep drinking, but it would just cost them more money, and that this would hit hardest the least well-off:

> Dina: it's just causing people to have a more monetary loss. It's not actually stopping people drinking at all. People are still going to want to drink and they are still going to want to get drunk ... I think I've heard somewhere that the UK has a bigger drinking problem than a lot of other European countries and when you go to a lot of European countries the alcohol is really cheap over there

Although most interviewees thought that introducing minimum unit pricing would be a good idea, they expressed ambivalence. On one hand, they thought it could help cut people's drinking. On the other hand, they disliked it because it would be more expensive for them to buy alcohol and they were not necessarily willing to decrease how much they drink themselves:

> Grace: That sounds good ... not really, 'cause then I'll have to spend lot of money. I don't know ... I think it's a different kind of culture goes along with different drinks ... and I think it's unfair to kind of penalise everyone by raising the prices of everything rather than the people that drink less responsibly.

Most interviewees also thought that minimum unit pricing would cause a big detriment to people's health as, in their opinion, it would encourage them to buy cheaper alcohol of worse quality or increase the use of other drugs to replace alcohol, which could have a worse impact on drinkers' health:

> Chris: Maybe people would be more likely to take drugs if they couldn't afford alcohol and drugs weren't a much different price.

DISCUSSION

The results presented above show that participants did not feel familiar with the government's unit-based guidelines. Although they were aware of their existence and knew where to find more information about them (e.g., online, on campus, etc.), most were unable to accurately remember and quote them. This lack of knowledge of the guidelines is in line with previous research (de Visser, 2015; Gill and O'May, 2007a, 2007b). So too was the observation that students did not always use this system or feel particularly motivated to use it to monitor and regulate their alcohol consumption (de Visser, 2015, de Visser and Birch, 2012). They thought the system was not very clear and was difficult to understand.

Participants expressed very low motivation to adhere to the unit-based guidelines. They felt that it was even more difficult in certain situations where their alcohol intake would be determined by enhancement motives such as drinking to have fun and to get drunk (Kuntsche and Cooper, 2010). Alcohol would then be consumed for its psychoactive properties but also because it was directly linked to what participants perceived as positive outcomes. These included the social aspects of drinking with peers, lower inhibitions and greater self-confidence. Alcohol was also used for coping motives such as forgetting about one's problems (Kuntsche and Cooper, 2010; Seaman and Ikegwuonu, 2010). It is when drinking to get drunk that it was particularly difficult to adhere to the guidelines.

No participants were worried about how much they drank, or the possible negative consequences for their health. As observed in previous research, participants did not consider their drinking to be problematic (de Visser et al., 2013; Harrison et al., 2011). Therefore, even when acknowledging that their drinking might be heavier than that of the general population, participants considered their alcohol consumption well within the norm in a student population where regularly drinking in excess was seen as a transitory lifestyle phase. Interviewees expressed more concern about the negative social consequences such as embarrassing or antisocial behaviour.

Analysis showed that interviewees wanted to be considered as "expert" in relation to their own drinking. They felt that they were the ones who should decide how often and how much they should drink. They all expressed the idea of having a "personal limit" or a personal "alcohol tolerance" based on their previous experience as drinkers, and not defined in terms of units. They would know from experience what to do to avoid going over that limit. It was important to them to still have fun and not completely lose control of their behaviours. This dimension of control can be compared to the concept of "calculated hedonism" where drinking is a form of planned letting go where young people are choosing when, where and who to drink with but also when they can drink or not drink to excess (Brain, 2000; Szmigin et al., 2008).

When asked about ideas for future public health measures, many thought that the emphasis should be put even more on the possible negative effect of excessive alcohol consumption on one's health, but to use means other than units-based guidelines to do so. However, research suggests that approaches that only focus on health-related consequences of excessive drinking are not very appealing or successful among young people (de Visser et al., 2013; Harrison et al., 2011). Contextual variables (e.g., having commitments the next day) and financial constrains seemed to have more influence on how little or how much people would drink. Opinion was divided about the introduction of a minimum

unit price policy. Although participants recognised the need for action to curb excessive alcohol consumption, such a measure was seen as unfair. As in other research, it was felt that it would disproportionately affect disadvantaged groups and punish sensible drinkers (Lonsdale et al., 2012).

Although this study has provided some important insights into young people's knowledge, motivation, and skills related to unit-based alcohol consumption guidelines, it does have some limitations. One limitation of the study was the relatively small sample composed of university students only. Furthermore, the sample was self-selected from participants who took part in the first phase of the study. These are common limitations encountered when using qualitative methodologies but they may mean that the results are not necessarily representative of a broader population. It would be good in future research to examine similar issues among other non-students people and among older adults. However, the aim of this study was to complement existing quantitative data showing low knowledge, motivation and skills among young people.

The data presented here indicate that current unit-based guidelines for the general population may not be perceived as appropriate by younger drinkers. The IMB model suggests that individuals need to be well informed, motivated to act, and must possess the relevant behavioural skills to experience positive health outcomes (Fisher and Fisher, 1992). However, this study shows that although young adults have access to information about unit-based guidelines for sensible drinking, they find the system difficult to understand, they may not be motivated to adhere to guidelines based on a health-focused message and they often do not possess adequate skills to apply them to their own drinking. This lack of skills related mainly to interviewees not feeling confident estimating how many units were in their drink of choice. Recent research has shown that a drink-pouring exercise combined with personalized feedback may improve people's knowledge of and adherence to low risk drinking guidelines (de Visser, 2015). However, the results of this study and others' research suggest that there is a need for multifaceted public health interventions that focus not only on units, but also on other factors found to influence young people's alcohol use.

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