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DOI

[10.1080/10810730.2018.1554730](https://doi.org/10.1080/10810730.2018.1554730)

Publication date

2018

Document Version

Final published version

Published in

Journal of Health Communication

License

Article 25fa Dutch Copyright Act

[Link to publication](#)

Citation for published version (APA):

Boers, E., Hendriks, H., van den Putte, B., & Beentjes, H. (2018). Vocational community college students' conversations about binge drinking. *Journal of Health Communication*, 23(12), 1072-1076. <https://doi.org/10.1080/10810730.2018.1554730>

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Vocational Community College Students' Conversations about Binge Drinking

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The large amount of vocational community college students that continue showing binge-drinking behavior might be an indication that interventions targeting this behavior have not been hugely successful. It might be that these interventions targeted beliefs that are less or not related with vocational community college binge-drinking behavior. The aim of this study was to identify vocational community college students' salient beliefs about binge drinking. In the context of the integrative model of behavioral prediction, we applied deductive qualitative content analysis of conversations about binge drinking. The analysis of vocational community college students' conversations about binge drinking revealed a significant amount of salient beliefs, such as cognitive and affective outcome beliefs and efficacy beliefs. These beliefs may be important indicators of vocational community college students' binge drinking. Moreover, to our knowledge, this study was the first to reveal a new set of beliefs, namely social judgment beliefs (i.e., vocational community college students' judgments about their peers' binge-drinking behavior). We believe that our study yielded salient beliefs that may serve as input for future interventions targeting binge drinking among vocational community college students.

Binge drinking is a serious health issue in today's society. Among adolescents, and vocational community college students in particular, binge drinking is prevalent. Recent statistics show that 31% of vocational community college students consume on average 5–10 alcoholic units, 19% consumes 11–20 alcoholic units, and 14% consumes more than 20 alcoholic units per weekend (Trimbos Instituut, 2015). Given the negative consequences of binge drinking for one's health, these statistics are distressing. That is, it has been well documented that binge drinking is associated with negative short- and long-term consequences such as unintentional injuries and brain damage (e.g., Patrick et al., 2013) as well as with negative mental outcomes such as depression and anxiety (e.g., Newbury-Birch et al., 2009). These alarming statistics and facts suggest that current interventions, targeting binge drinking among vocational community college students, are insufficiently effective. A reason for this insufficient effectiveness might be that past and contemporary interventions target beliefs (people's knowledge, thoughts, and feelings about a behavior; Ajzen, 1991) that are less or not salient concerning vocational community college students' binge drinking.

Previous work suggested that interpersonal communication is a fruitful source of people's salient beliefs toward behavior. For instance, Strack and Deutsch (2004) argued that interpersonal communication is a medium through which people express and ventilate salient beliefs underlying various behaviors.

Furthermore, observational studies on interpersonal communication suggested that conversations predominantly consist of exchanges of social information (Emler, 1992, 1994). That is, Emler reported that approximately 70% of conversation time was taken up with the exchange of information about social events and the behavior of the speakers. In light of these findings, it seems reasonable to assume that interpersonal communication serves at least two functions. First, it allows speakers to convey to others a lot of information, thoughts, and feelings (beliefs) about themselves and their behaviors. Second, assuming that interpersonal communication is an interactive process, it facilitates the acquisition of beliefs of other individuals. Given these two functions of interpersonal communication, one may argue that, for example, conversations about binge drinking contain a lot of information, thoughts, and feelings about binge drinking. We believe that the content of these conversations provide valuable and up-to-date information about what vocational community college students know, think, and feel about binge drinking. Consequently, this conversational content might serve as input for interventions that aim to target binge drinking among vocational community college students.

Despite interpersonal communication about binge drinking being a potential source of salient beliefs about binge drinking, as far as we know, no previous study has assessed the content of conversations about binge drinking on the presence of vocational community college students' salient beliefs. In order to address this gap in previous literature, we designed a study in which vocational community college students talked about binge drinking with a classmate in an online environment

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(i.e., a *Facebook*-a-like-chatroom). Subsequently, by means of qualitative content analysis we assessed their conversation content. We reported on this content by describing their most salient beliefs about binge drinking. We used an online environment because online interpersonal communication has become a centerpiece in the social life of adolescents. For example, in North America, 68% of adolescents use the internet for communicating with peers (Valkenburg & Peter, 2011).

Theoretical Framework

To identify vocational community college students' salient beliefs about binge drinking, we used the integrative model (IM) of behavioral prediction (e.g., Fishbein, 2009) as a theoretical starting point for our study. The IM posits, among other things, that behavior is guided by three kinds of beliefs: outcome, normative, and efficacy beliefs. Outcome beliefs refer to beliefs about the probability that performing the behavior will have positive or negative outcomes (e.g., binge drinking leads to more fun; binge drinking results in a hangover). Furthermore, the IM distinguishes two types of normative beliefs: injunctive normative beliefs and descriptive normative beliefs. Injunctive normative beliefs provide information about what is accepted or unaccepted within a social group, whereas descriptive normative beliefs are based on people's observations of how others portray alcohol-related behaviors (e.g., Cialdini, Reno, & Kallgren, 1990). Lastly, efficacy beliefs relate to people's perceptions of the extent to which particular factors will enable or impede performing the behavior. An example of an efficacy belief is that people believe that they are not capable of refraining from drinking while being at a party. According to the IM, these beliefs underlie, respectively, one's attitude (outcome beliefs), perceived norm (norm beliefs), and self-efficacy (efficacy beliefs) concerning the behavior. In turn, these behavioral determinants are considered predictors of people's intention to (not) perform a behavior, which is considered to be the most relevant predictor of behavior.

Methods

Participants

After receiving ethical approval, participants ($N = 298$) who were vocational students were recruited from nine different vocational community colleges across the Netherlands and enrolled voluntarily by giving their informed consent prior to the study. Underage participants received a letter in which their parents were asked to provide their informed consent. Participants were classmates who shared a classroom several days a week and were therefore familiar with each other. Our sample of participants contained 185 females and 113 males ($M^{\text{age}} = 17.63$ years ($SD = 1.84$)). The number of grades a school provided, depended on the number of first- and second-year grades there were available. The number of grades varied between 1 and 7. Most grades consisted between 15 and 20 students. Because of dropout (participants who did not talk about binge drinking

or provided too little relevant information), we lost a total number of 131 participants. Nevertheless, we value our sample of 298 vocational community college students.

Procedure

By means of a random name generator, pairs of participants were randomly distributed across chatrooms that resembled the chatroom function of *Facebook*. In order to commence and maintain the chatroom conversations, participants were provided with a list of topics to talk about. The list contained the following binge drinking-related topics: advantages/disadvantages of drinking, their perceptions concerning the ease/difficulty of (not) drinking, what they like/dislike about drinking, and their opinions about peers who never drink and peers who are drunk often. There was no moderator during the chat sessions, so participants were entirely free to follow their own course of conversation. Because the study took place during classroom hours there was limited time, therefore the conversations lasted approximately 5–10 minutes.

Deductive Qualitative Content Analysis

We used deductive qualitative content analysis to identify vocational community students' beliefs about binge drinking. The major premise of deductive qualitative content analysis is that the data are analyzed and categorized using an existing theory (e.g., Elo & Kyngäs, 2008). As noted above, we used the IM as theoretical framework for the current study. A deductive qualitative content analysis has three main phases: the preparation phase, the organizing phase, and the reporting phase (Elo & Kyngäs, 2008). Below, we will describe the first two phases. The reporting phase is the results section.

Preparation Phase

In the preparation phase, the units of analysis were selected. In this case, we selected and analyzed every part of the conversation that was related to binge drinking (a statement that referred to binge drinking). Before the main analysis, to achieve accordance on what are and what are not statements about binge drinking, the first author and an assistant independently assessed 10% of the total sample of chatroom conversations and selected every statement related to binge drinking. Agreement about the selection of alcohol-related statements was perfect ($r = 1.00$). The first author assessed the remaining 90% of the conversations.

Organizing Phase

In the organizing phase, the first author gathered every statement related to binge drinking from each chatroom and collected them in a document that was given to two independent coders. Both coders coded all statements. Based on a codebook, the coders interpreted and coded each statement in three main categories of beliefs: outcome beliefs, normative beliefs, and efficacy beliefs. As to outcome beliefs, we distinguished

between cognitive outcome beliefs and affective outcome beliefs. That is, our data contained outcome beliefs that were more related to vocational community college students' cognitions (knowledge) and outcome beliefs that were more related to their affect (emotions) with regard to drinking alcohol. Furthermore, an initial scan of our data did not reveal any normative beliefs. Instead, we revealed another category of beliefs, namely social judgment beliefs. We referred to social judgement as beliefs about vocational community college students' judgments of their peers' binge-drinking behavior (e.g., "I have respect for peers who are never drunk"). The coders agreed upon and included these social judgment beliefs in the coding process. Our coders considered the coding process saturated when agreed on to which belief category each statement belonged. A Cohen's Kappa value of .89 revealed that both coders sufficiently agreed on the beliefs and to which category they belonged (Landis & Koch, 1977).

Results

Below we report on vocational community college students' beliefs about binge drinking which were retrieved from their conversations. The beliefs reported are actual quotes, directly derived from these conversations.

Outcome Beliefs

We revealed two types of outcome beliefs: outcome beliefs related to cognitive outcome expectancies of alcohol use (i.e., cognitive outcome beliefs) and outcome beliefs related to affective outcome expectancies of alcohol use (i.e., affective outcome beliefs).

Cognitive Outcome Beliefs

The conversations showed that vocational community college students mostly hold outcome beliefs related to negative short-term and long-term consequences that come with binge drinking. Vocational community college students stated that binge drinking has several negative short-term consequences, mostly related to beliefs about behavioral impairment, such as aggression (e.g., "*Drinking makes you more aggressive than usual*"), losing control over their behavior (e.g., "*Too much alcohol makes you lose control*"), and taking it a step to far (e.g., "*Being drunk makes you cross certain lines*").

Other beliefs about short-term negative consequences relate more to cognitive impairment. That is, vocational community college students stated that too much drinking results in feelings of sickness (e.g., "*Too much alcohol makes you vomit*"; "*A big disadvantage of drinking too much is the hangover*"). Aside from these negative short-term consequences, we also found beliefs related to negative consequences on the long term. For instance, vocational community college students stated that drinking alcohol leads to long-term cognitive impairment (e.g., "*Too much drinking causes brain damage*"; "*You can drink yourself in a coma*"). Vocational community college students also stated that drinking might culminate in undesirable sexual behaviors (e.g., "*A big risk of too much drinking is unsafe sex*"; "*A risk of drinking too much is the possibility of*

sex against my will"). Finally, other salient cognitive outcome beliefs were economically related ("*I do not like the cost of drinking*"; "*It is really expensive*").

Affective Outcome Beliefs

In contrast to vocational community college students' cognitive outcome beliefs, their affective outcome beliefs were rather positive toward binge drinking. A significant amount of these positive outcomes are related to the belief that binge drinking is an enjoyable experience (e.g., "*Drinking is fun*"; "*An advantage of drinking is that it is pleasurable*"). It was also mentioned that they like the taste of alcohol ("*An advantage of drinking is that it is tasty*"). Furthermore, they stated that they engage in binge drinking because it makes them feel better about themselves (e.g., "*Alcohol makes me feel better about myself*"; "*An advantage of alcohol is that it makes you more attractive*"; "*It makes you feel more confident*") and (e.g., "*Without alcohol I find myself boring*"; "*Alcohol makes you feel more relaxed*"). In addition, we were able to identify affective outcome beliefs that were related to the outcome expectancies of binge drinking as social lubricant. Vocational community college students stated that drinking together is pleasant (e.g., "*Drinking is fun when being with multiple people*"; "*An advantage of drinking is that you can have fun with other people*") and a pleasurable experience (e.g., "*It is pleasurable to drink with others*"; "*Meeting up with friends for a few wines is really pleasurable*").

Social Judgment Beliefs

Our conversations yielded no statements related to the injunctive and descriptive norm. That is, the conversations did not contain statements related to one's perceptions about directly (dis)approving binge drinking and neither did the conversations contain statements concerning one's perceptions about binge drinking being common or uncommon behavior within the social environment. However, the conversations contained statements about vocational community college students' judgments about their peers' binge-drinking behavior. We referred to these statements as social judgement beliefs because we argue that these beliefs represent vocational community college students' direct judgments about others (not) performing binge-drinking behavior.

A first set of beliefs was related to negative judgments (e.g., "*Drunk people are annoying*"; "*People who are drunk are often antisocial*"). Other beliefs were non-judgmental or neutral judgmental concerning their peers' drinking (e.g., "*People who never drink or who are drunk often should decide for themselves*"; "*Drinking is people's own responsibility*"; "*As long as they do not bother me, I am fine with it*"). Furthermore, vocational community college students stated they respect fellow peers who do not drink (e.g., "*I respect people who never drink*"), whereas others stated they experience feelings of discontent when their peers do not drink along with the social group (e.g., "*I do not like it when people do not drink along with the rest of the group*"; "*Imagine you are at a party with friends and one of them is not drinking at all, that is a bit boring, right?*"). In addition, it was also stated that underage people should not drink (e.g., "*People should not drink when*

they are underage”), that peers who are drunk too often are considered to be foolish and immature (“*People who are drunk often are not so smart and should grow up*”), and that peers who have a need for alcohol are boring (e.g., “*I think it is a bit stupid when people claim they need alcohol. To me those people are simply boring*”).

Efficacy Beliefs

As to efficacy beliefs, vocational community college students stated they believe it not difficult to refrain from binge drinking (e.g., “*I can do without drinking*”) and that it is possible to enjoy themselves without drinking (e.g., “*It is also possible to have fun without drinking alcohol*”; “*I can enjoy myself with a soda too*”). However, some vocational community college students stated they find it difficult not to drink because they are easy to persuade (“*To be honest, I find it difficult not to drink. It depends on where I am, but generally I am easy to persuade*”). Furthermore, it was noticed that vocational community college students (do not) know when to stop drinking (“*I do not think it is hard not to drink because I know when to stop*”; “*I find it hard not to drink because I do not know when to stop*”). The latter quote might be related to vocational community college students’ beliefs that it is difficult to refrain from drinking when being in drinking company (“*When everybody is drinking, I think it is hard not to drink, I start to feel like drinking myself*”; “*It is hard not to drink, when everybody drinks*”; “*Not drinking alcohol is especially hard when being in good company*”).

Discussion

To our knowledge, within the realm of interpersonal communication about health behaviors, the present study is the first to examine vocational community college students’ beliefs about binge drinking. Our study reveals various salient beliefs, held by vocational community college students about binge drinking. We believe that these salient beliefs provide valuable input for future interventions targeting binge drinking among vocational community college. Furthermore, with caution, we reveal a set of beliefs, not yet identified in previous work about binge-drinking beliefs. In this study, we refer to this set of beliefs as social judgment beliefs.

The Revealing of Social Judgement Beliefs

The conversations did not contain any normative beliefs. That is, we did not identify any conversational statements that were directly related to one’s perceptions of disapproval or approval of binge drinking (injunctive normative beliefs) or statements about one’s perceptions on binge drinking being common or uncommon behavior (descriptive) normative beliefs. Instead, we identify social judgment beliefs. Social judgment beliefs refer to vocational community college students’ positive, negative, or neutral judgments about their (non-)drinking peers. The most obvious explanation for the absence of norm beliefs and the presence of social judgment beliefs is that our instructions are more related to social judgement beliefs than to norm

beliefs. That is, among other topics, we asked participants to talk about peers who are drunk often and peers who do not drink at all. It might be that the latter instruction elicited vocational community college students’ judgements about their peers’ drinking behavior, instead of their normative perceptions on binge-drinking behavior within their social environment. For example, participants explicitly judge peers who are drunk often as being annoying and antisocial. We do not rule out that a different instruction might have led to the discussion of norm beliefs (e.g., by asking participants about the frequency of binge-drinking behavior in their social environment). Nevertheless, our social judgement beliefs may be good indicators of how people perceive their fellow peers when they engage or do not engage in binge drinking. We believe that these social judgement beliefs stem from vocational community college students’ binge-drinking experiences with, for instance, peers who behave annoying when being drunk and might therefore serve as valuable input for future interventions targeting vocational community college students’ binge drinking. Thus, by revealing social judgement beliefs as a potentially unique set of beliefs underlying vocational community college students’ binge drinking, we disclose a set of beliefs that, to our knowledge, has not been found before in research on binge drinking among adolescents and young adults, and vocational community college students in particular.

Targeting Vocational Community College Students’ Salient Binge-Drinking Beliefs

Fishbein and Yzer (2003) recommend three strategies to target beliefs. The first strategy is priming, that is reinforcing associations between beliefs and binge drinking that vocational community college students already hold in their memory. Priming might be a fruitful strategy when the majority of vocational community college students already associate binge drinking with certain beliefs (e.g., the beliefs which were also identified in previous studies), but when these beliefs are not activated when vocational community college students are exposed to binge drinking. Reinforcing the association between beliefs and binge drinking will increase the likelihood of the beliefs activated when vocational community college students are confronted with binge drinking. For example, one might prime the anticipated regret regarding cognitive impairment or undesired and potentially unhealthy sexual activities. The second strategy is to create new associations between binge drinking and beliefs that most adolescents do not yet hold (for example, the newly identified beliefs in our study; Ajzen, 2001; Fishbein & Yzer, 2003). This strategy is more challenging than priming, because, unlike priming, an association between binge drinking and new beliefs has to be created. Most promising might be to select negative beliefs that are already held by some, but not all, vocational community college students. The third and final strategy is to convince vocational community college students that the positive beliefs they have about binge drinking are false or at least less positive than they perceive. This strategy can be realized by developing an intervention in which the positive beliefs about binge drinking are being counter argued. However, changing existing associations is difficult and failure

to do so may cause a boomerang effect by priming the existence of the association and bringing it top-of-mind.

Limitations

Our study contains several interesting findings for both researchers and developers of health messages. However, there are some limitations to discuss. First, our study took place in the context of an in-class task. Because of this, we do not know to what extent naturally occurring online conversations differ in, for example, subject matter, duration, personal engagement, and whether they yield other beliefs. Our findings should therefore be interpreted as restricted to the context of a classroom assignment.

Second, our study involves online interpersonal communication. Although online interpersonal communication has advantages over offline interpersonal communication, such as increased feelings of anonymity (e.g., Valkenburg & Peter, 2011) and decreased levels of proneness to normative influence of the conversation partner (e.g., Adrianson & Hjelmquist, 1991), which might make people more inclined to share their true knowledge, thoughts, and feelings, there is one major drawback. That is, instead of face-to-face interaction, which enables researchers to observe both non-verbal and verbal communication, we limit ourselves to the analysis of text, which makes it impossible to observe interpersonal communication characteristics such as sarcasm, humor, and emotions.

Third, we examined a specific group of people at a certain point of time, with distinct geographical and cultural features, which makes it difficult to generalize our results across other vocational community college students within other geographical regions, with other cultural backgrounds and at different time points. As recommended by Fishbein (2009), we urge future researchers to not only rely on the results of previous belief studies and ours. When examining vocational community college students' beliefs about binge drinking, it is important to reach out to the desired target group and examine their unique beliefs about binge drinking.

Implications

Notwithstanding these reservations, our study has several interesting and important implications for researchers within the field of health communication. First, we suggest future researchers to further investigate the background of our newly identified social judgment beliefs. For example, by examining whether they are truly unique beliefs, predictive of binge-drinking behavior among vocational community college students, or whether they are related to an existing determinant of binge-drinking behavior such as attitude or social norm. We also suggest that future researchers further explore social judgment beliefs in the context of an intervention, for instance, by testing whether these social judgment beliefs can be primed (in case they support healthy behavior) and/or changed (in case they support unhealthy behavior). If social judgment beliefs are indeed salient beliefs, they may serve as new input for future binge-drinking interventions.

Second, we show that interpersonal communication is a fruitful source for identifying vocational community college students' salient beliefs about binge drinking. Thus, interpersonal communication has the potential to become a relevant research method for researchers interested in identifying people's salient beliefs about health-risk behavior such as binge drinking.

Concluding, by revealing vocational community college students' salient beliefs about binge drinking, the occurrence of social judgement beliefs and by showing that interpersonal communication about binge drinking is a useful strategy for identifying vocational community college students' salient beliefs about binge drinking, our study provides valuable and new insights for researchers within the domain of health communication and for developers of binge-drinking interventions.

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