Published in final edited form as:

J Fam Commun. 2020 ; 20(2): 160–174. doi:10.1080/15267431.2020.1723591.

‘Mama Don’t Preach’: Young Adults’ Perceptions of Maternal Messages about Underage Drinking

Lucy E. Napper¹, Laura C. Wolter¹, Diana S. Ebersole²

¹Department of Psychology, and Health, Medicine, and Society Program, Lehigh University

²Communication Studies, Kutztown University

Abstract

College students commonly report that their parents provide advice about how to drink safely; however, there is very little research exploring the content of parent-child harm-reduction conversations. The present study explores the types of advice mothers provide underage college students about drinking. A random sample of college students (ages 18 to 20) completed an online survey about their alcohol use and conversations they had with their mother about alcohol. Students’ perceptions of mother-child harm-reduction conversations include the themes of: *specific protective behavioral strategies, ambiguous behavioral advice, decision making advice, value-based advice, warning-based advice, and advice conveying approval*. Discussion of specific protective behavioral strategies was most common for female students and students who reported binge drinking. Mothers did not typically address how to implement harm-reduction strategies effectively. The findings have implications for the assessment of harm-reduction communication between parents and emerging adult children.

Keywords

communication with mothers about alcohol; students’ perceptions of alcohol advice from mothers; underage drinking messages

There is a growing body of work demonstrating that parents influence college students’ alcohol use in a variety of ways (e.g., parental monitoring, modeling, and approval; Abar, Fernandez, & Wood, 2011; Abar, Turrissi, & Mallett, 2014; Boyle & Boekeloo, 2006). Research examining parent-based interventions (PBIs) targeting college alcohol use suggests that encouraging parents to talk to their students about alcohol can lead to less risky patterns of drinking (Doumas, Turrissi, Ray, Esp, & Curtis-Schaeffer, 2013; LaBrie et al., 2016; Turrissi, Jaccard, Taki, Dunnam, & Grimes, 2001). Parental conversations about alcohol are pivotal to shaping alcohol-related beliefs, values, and behaviors among emerging adult children. Research in this area has examined the general content of alcohol conversations between parents and students. For example, studies have shown parents cover a range of topics, including rules about alcohol use, risks of alcohol use, and the benefits of drinking (Baxter, Bylund, Imes, & Routsong, 2009; Menegatos, Lederman, & Floyd, 2016). Less

research examines the conversations that college students recall having with parents about how to stay safe while drinking in college. The current study extends past research on the content of alcohol messages by exploring the content of mother-child conversations about how to drink safely from the perspective of underage college students (i.e., students under the age of 21 in the United States).

Harm-reduction (HR) messages are conversations where a parent encourages safe drinking practices in order to reduce the potential negative consequences of alcohol use (Napper, 2019). One form of HR communication encompasses the provision of advice about specific strategies students can use to drink safely. For example, such parental advice might focus on avoiding shots of liquor or not driving while intoxicated. Several college alcohol prevention efforts utilize this type of HR approach (Dimeff, Baer, Kivlahan, & Marlatt, 1999; Hennessy, Tanner-Smith, Mavridis, & Grant, 2019) and are effective at reducing risky alcohol use among college students (Fromme & Orrick, 2004; Marlatt & Witkiewitz, 2002). Given the success of HR approaches as used by colleges, it is plausible that parental HR communication may also be effective for reducing risky alcohol use among college students.

Only a limited number of studies have specifically examined parental HR messages and the findings have been somewhat mixed (Abar, Morgan, Small, & Maggs, 2012; LaBrie, Boyle, & Napper, 2015; Napper, 2019). For instance, a longitudinal study finds that maternal HR communication is prospectively associated with reduced alcohol use and fewer negative alcohol consequences for heavy drinkers (Napper, 2019). In contrast, among moderate and light drinkers HR communication is not associated with later alcohol outcomes after controlling for abstinence-based communication. Further, regardless of baseline alcohol use, HR communication is not associated with students using more HR strategies at follow-up. These findings suggest that parental HR messages may have some benefits for high-risk students but may not be beneficial for the majority of students.

In contrast to Napper (2019), two cross-sectional studies suggest that HR communication is associated with more risky patterns of alcohol use (Abar et al., 2012; LaBrie et al., 2015). Among a sample of light college-aged drinkers, those who most commonly receive HR communication from their parents report using fewer HR strategies and drink more alcohol than those who primarily receive abstinence-based messages (LaBrie et al., 2015). Similarly, students whose parents communicate HR messages report higher rates of drinking and experience a greater number of alcohol-related consequences than students whose parents communicate disapproval of alcohol use (Abar et al., 2012). Taken together, these studies suggest that parent HR communication may not be associated with reduced alcohol risk among college students.

Given the broader support for a HR approach to address college alcohol use, it is not clear why parent HR advice appears to be associated with limited benefits. However, there are several potential explanations. One suggestion is that parent HR communication may be interpreted by students as parental approval of drinking (Abar et al., 2012; Napper, 2019). For the cross-sectional studies, these findings may reflect that parents are more likely to give HR advice once their child has begun to drink heavily. It is also possible that parents provide HR advice but students do not implement it. For example, the advice may not be practical or

relevant, or the students may not be receptive to receiving this type of advice from their parents.

An alternative explanation for the limited benefits of HR communication is that parents may not be providing the same types of HR advice employed in the effective college intervention efforts. College interventions (such as the BASICS program; Dimeff, et al., 1999) often involve teaching college students a range of protective behavioral strategies (PBS). PBS are behaviors that individuals can employ before, during, or after drinking to reduce the negative consequences of alcohol use (Martens et al., 2004). For example, part of the BASICS program encourages students to consider which strategies to implement in order to minimize drinking consequences (e.g., limiting the number of drinks consumed or stopping drinking at a certain time). Previous cross-sectional and longitudinal research has suggested that the use of PBS is associated with less alcohol consumption and fewer negative consequences (Braitman, Henson, & Carey, 2015; Frank, Thake, & Davis, 2012; Napper, Kenney, Lewis, & LaBrie, 2014).

While some research suggests that parents can be taught how to talk to their students about PBS (Donovan, Wood, Frayjo, Black, & Surette, 2012), it is less clear how much parents discuss PBS outside the context of PBIs. Some past research assessing parental HR communication uses broad measures that assess whether parents offer advice on how to stay safe while drinking (LaBrie et al., 2015; Napper, 2019). Other research uses measures that only examine a couple of specific PBS (Abar et al., 2012). Further, past studies have not specifically explored the HR content separately when using a more comprehensive list of PBS as part of general measures of alcohol communication (Menegatos et al., 2016). In order to better understand the nature and influence of perceived mother-child HR communication, more research is needed about college students' perceptions of the content of parents' advice about drinking safely.

Prior qualitative research has offered some insights into the content of parents' communication about substance use in general (Baxter et al., 2009; Miller-Day, 2008; Miller-Day & Dodd, 2004). These studies suggest that conversations often include warnings about using substances and students being encouraged to make their own decisions about use. A minority of participants in one study (31%) report that substance-use conversations with parents contain advice about strategies for making healthy choices around substance use (Miller-Day & Dodd, 2004). In the study, both parents and students describe talking about not drinking and driving, how to deal with peer pressure, and being "smart and safe" (p. 79). The limited discussion of HR strategies may be because participants described conversations about substances (including illicit drugs) rather than just reflecting on conversations about alcohol specifically. Furthermore, participants described their most significant conversations and these conversations may have occurred during early adolescence when parents could have been more focused on preventing substance use rather than providing advice on safe use.

While past quantitative research demonstrates that parents commonly offer college students advice on how to drink safely, these studies are limited by only assessing HR communication in terms of specific PBS or using broad measures that may not adequately

distinguish different forms of HR communication. Previous qualitative research has not specifically explored HR communication. Furthermore, this research has looked at alcohol conversations in the context of broader conversations about substance use. Further research is needed to specifically examine college students' perceptions of the types of advice they remember their parents giving them about safe alcohol use as underage emerging adults. The present study extends past research by examining students' perceptions of mothers' advice about drinking safely in college. More specifically, we explore the following research questions:

RQ₁: To what extent do students report discussing specific protective behavioral strategies (PBS) with their mothers?

RQ₂: What other forms of drinking advice do students receive from their mothers?

We chose to focus on conversations between mothers and college students because mothers are more likely than fathers to talk to their students about alcohol (LaBrie, Napper, & Hummer, 2014; Miller-Day & Dodd, 2004) and adolescents are more comfortable discussing alcohol use with their mother in comparison to their father (Miller-Day, 2002).

Parents are generally more concerned about male college students' alcohol use and communicate more frequently with males about this topic (Vaughan, Limas, McKean-Blackwell, Klann, & Robbins, 2017). Previous research also suggests that the influence of HR messages may vary based on how much a student drinks (Napper, 2019), yet it is unclear if the perceived content of HR messages also differs in important ways given a student's level of high-risk drinking (i.e., being a binge drinker or not). Finally, while previous research suggests that parents may doubt their ability to influence their child's alcohol use (Miller-Day & Dodd, 2004), there is a lack of research examining how useful students perceive maternal advice about drinking safely. As such the final research questions grounding our study include:

RQ₃: Do female students recall different types of harm reduction (HR) messages from mothers than do male students?

RQ₄: Does the content of harm reduction (HR) communication differ for higher-risk students (i.e., students who report binge drinking) compared to lower-risk students?

RQ₅: How do students perceive HR messages in terms of usefulness and maternal motives providing advice?

Understanding the types of HR advice college students recall receiving from their mothers could have implications for measuring parental communication and inform PBIs aimed at encouraging parents to engage in alcohol-specific communication. Further, understanding the content of parental advice from the perspective of the student could help shed light on past findings suggesting that this form of communication is sometimes associated with more risky patterns of student drinking.

Method

Participants

A random sample of 950 U.S. college students under the legal drinking age (e.g., 18 to 20 years) was obtained from the Office of Institutional Research at a private university. Students were emailed a link to an informed consent form. After providing consent, students were directed to an online survey and asked to indicate the female parent or guardian with whom they had the closest relationship. Participants completed all measures with reference to this individual (98.2% of the final sample selected their mother). For simplicity, the terms *mother* and *maternal* are used to refer to the female selected. A total of eight participants were excluded from the analyses because they were unable to identify a female parent/guardian or because they selected a guardian approximately the same age as the sample (e.g., a sister aged 20 to 23 years). Of the remaining 327 participants, 282 students (86.2%) reported that their mother had given them HR advice and answered at least one open-ended question about the content of their conversations.

The majority of the final sample were female (61.3%; mean age 19.2 years) and identified as White (79.6%), followed by Asian (12.1%), multiracial (4.6%), other race (2.5%), and Black or African American (1.1%). In terms of ethnicity, 7.8% of participants identified as Latino(a). Most students had drunk alcohol (95.7%) and on average initiated drinking at 16.5 years old. In total, 60.3% of students reported binge drinking in the past 2 weeks (4/5 or more drinks in a row for females/males). The majority of the sample said that their mother thought that they drank alcohol (78.0%) and 69.5% reported having drunk alcohol in their mother's presence. The majority of the sample said their mother had attended college (87.6%).

Procedures

After reporting on demographics, participants answered a few questions about the way that they communicated about alcohol with their mother. More specifically, students were asked whether in the past 12 months their mother had: 1) given them advice on how to drink safely, and 2) discussed ways to stay safe while drinking. When students indicated that they had discussed either of these topics, they were presented with a follow-up, open-ended question that read, "You mentioned that your mother has given you advice on how to drink safely. What specific advice did she give you? Please include as much detail as possible." After describing their conversations, students were asked a series of questions about the advice they received. This included whether their mother's advice was helpful and why they thought their mother had provided the advice (e.g., because she knew the student drank, because she wanted the student to drink more safely, or because she wanted to try to stop the student from drinking). Regardless of whether students had received HR advice in the last 12 months, all participants were asked to describe the most useful advice their mother had ever given them about drinking in college and to describe the content of the last conversation they had with their mother about alcohol. Past research demonstrates that parents are more likely to engage in ongoing conversations about substance use rather than one-shot conversations (Miller-Day & Dodd, 2004). Therefore, we examined the advice students received across multiple occasions to capture a broader range of messages.

Data analysis

We used an interpretive analytic induction approach for the three open-ended survey questions (Bulmer, 1979). Specifically, we conducted a thematic analysis (Charmaz, 1983; Strauss & Corbin, 1990) to identify common and descriptive themes in the advice college students recalled receiving about alcohol use from their mothers. The Protective Behavioral Strategies Scale–20 (PBSS; Treloar, Martens, & McCarthy, 2015) was used to code mothers' discussion of specific HR strategies. Three subthemes reflected subscales of the PBSS, including messages about serious harm reduction, messages about manner of drinking, and messages about stopping/limiting drinking. To address data that did not fall under PBS-guided themes, we used analytic induction (Bulmer, 1979) to identify new, emergent themes. Emergent themes were identified through an iterative and reflective process that involved discussions among the authors.

Participants' responses were reviewed and initial categories were created. We then independently read all the participant responses and refined the initial categories collaboratively by adding codes, merging codes, and deleting some codes. We agreed upon six global themes before creating and refining a codebook with descriptions of themes that were used to systematically apply codes to the text. All data were coded independently. Inter-coder agreement was high for the coding of all themes, with kappa statistics ranging from 0.61 to 0.95 ($M = 0.77$, $SD = 0.12$). The coders met to discuss and resolve coding discrepancies. We calculated the percentage of the total sample who reported each theme and subtheme, unless otherwise stated.

Results

Our results include one deductive specific protective behavioral strategies theme and five emergent themes. Students recalled messages from their mothers about the follow five emergent themes: 1) ambiguous behavioral advice, 2) decision making advice, 3) value-based advice, 4) warning-based advice, and 5) advice conveying approval. The next section discusses these themes and provides answer related to the research questions driving this investigation.

Established Theme: Specific Protective Behavioral Strategies

Our first research question asked to what extent students recalled discussing specific protective behavioral strategies with their mother. Most students reported that their mother had discussed specific protective behavioral strategies (68.8%). The most common strategies identified in students' responses were those related to maternal messages about serious harm reduction (55.3%), followed by messages about strategies related to stopping or limiting drinking (24.5%), and messages about strategies related to manner of drinking (14.9%). Overall, 24.5% of students reported discussing specific protective strategies that were related to two or more of the PBSS subscales.

Students reported that their mothers discussed a number of serious harm reduction strategies with them, including not drinking and driving, knowing where a drink has been at all times,

drinking with people who will take care of you, and eating food before or during drinking. For instance, one student said,

Most of her advice is about not leaving drinks unattended or accepting drinks from strangers. She also always stresses not getting in the car with someone who has been drinking, and [says] to call her or use her credit card to get an Uber if I'm ever in an unsafe situation.

Discussing PBS related to drinking with friends was also common. For instance, students reported being told to, "Always drink with friends you trust," and "to make sure that I'm always with my friends and don't go home with any strangers."

Students identified that their mothers discussed a range of stopping or limiting drinking strategies with them, including alternating alcoholic and nonalcoholic drinks, drinking water while drinking alcohol, and keeping track of drinks. For example, one student said that his mother, "encourages me to space out my drinks, don't drink too many in a short time period, alternate alcohol with water, make sure to have food in my system." Strategies related to manner of drinking included avoiding drinking games, avoiding shots, and avoiding mixing different types of alcohol. For instance, one student was told to, "stay away from hard alcohol, don't take shots, and don't pregame too much before going out."

In addition to specific strategies that mapped on to the categories outlined in the PBSS, 7.8% of students were told by their mothers to "know your limits." The term "know your limits" has been used in the literature to describe knowing the number of drinks considered safe to avoid long-term harm (Bowring et al., 2012) and knowing how the number of drinks consumed on a single occasion relates to blood alcohol levels (Johnson & Clapp, 2011). In the current study, students recalled their mothers using the term more generally in the context of helping them to think about how to set appropriate drinking limits. For example, one student reported that his mother told him to, "know and do not exceed your limits. Count the number of drinks you've consumed." Other students recalled their mothers giving more ambiguous advice, instructing them to be aware of their limit without explicitly encouraging them to stop once they reached their limit. For instance, one student recalled his mother saying to, "Be aware of how you are feeling throughout the night and know when you are at your limit."

Emergent Theme One: Ambiguous Behavioral Advice

Our second research question explored what forms of HR communication students recalled receiving that were not related to specific protective strategies. In response to this question our analysis finds that just over half of students reported that they had received an ambiguous HR message (57.1%) from their mothers. One common form of ambiguous message students identified was advice from their mothers to not be "stupid" and instead to be "safe," "smart," "careful," and "responsible" (40.1%). For example, one student said her mother "talked to me about the importance of drinking safely. [...] To drink safely and be smart." Direct statements to not be stupid were common with one student stating his mother said "'don't be stupid,' really. She's rather blunt about it." Another student reported that his mother said, "Never drink and drive. She lost a friend when they were in their 30's that's the big one [sic]. Otherwise she just sums everything else up into don't be an idiot." As in this

example, students frequently reported that the maternal messages they recalled included a combination of both specific and ambiguous HR advice. For instance, approximately two-thirds of students (68.3%) reported receiving an ambiguous message as well as specific PBS advice.

A second common ambiguous HR message was to drink in moderation, without any specific details as to what moderate drinking looks like (27.3%). Students recalled their mothers commonly using phrases such as “don’t drink too much,” and “drink in moderation.” Overall, many students recalled their mothers providing vague advice to drink safely. The student responses about what their mothers said in this subtheme did not include information about what responsible, smart, or moderate drinking might look like.

Emergent Theme Two: Decision Making Advice

Students indicated that their mothers often addressed how they should make decisions around alcohol use (25.9%). This included addressing peer pressure to drink (9.9%). Some students received specific advice on how to address peer pressure. For instance, one student reported being told, “If you’re at a party and don’t want to drink just hold a cup so no one will pressure you.” Another student was advised to “order a non-alcoholic drink that looks like an alcoholic drink.” Other students talked about their mothers more generally telling them not to succumb to peer pressure. For instance, one student said that they were told “to look out for yourself and don’t let anyone pressure you into doing anything you don’t want to do.” Another said that his mother had told him “not to care what other people want you to do.”

In addition to addressing peer pressure, some mothers acknowledged the lack of control they had over their students’ behavior and encouraged their children to think for themselves about how to drink and make good decisions. Some students reported their mothers giving specific advice about ways to make good decisions, including not drinking so much that the student lost control or blacked out (8.5%). While discussing how to make decisions, some students were told that their mother trusted them to make their own decisions (5.7%). Some students talked about how knowing their mothers trusted them impacted their own drinking. For instance, one female student stated that, “She has told me that it is okay to either drink or not drink, as long as I am safe and do not go overboard, which she knows I won’t because she trusts me and I want to respect that trust.” A male student similarly noted that, “She trusts my judgement and I think that knowing she trusts me has made me more responsible.” Taken together, these examples illustrate how students were encouraged to think about their choices when it comes to drinking and avoid people and situations that could negatively impact decision making.

Emergent Theme Three: Value-based Advice

Mothers were described as providing a range of advice that centered on encouraging students to live out their core values (14.2%). This included explicitly telling students to “stay true to yourself and your morals” with respect to drinking. Some mothers emphasized getting “involved in things on campus that do not involve alcohol” and prioritizing academics over alcohol use. For example, one son recalled being encouraged by his mother

to “always remember what I’m in school for, what my priorities are (good grades, networking, learning, and taking care of my health).” Students discussed that their mothers encouraged them to select friends with similar values related to drinking. For instance, one student stated that “most of our alcohol-related conversation is about the prevalence of people who seem to be using alcohol in excess, and trying to find people who share similar priorities and values to my own to befriend.” Another son remembered being told to “avoid people who focus on drinking as the main fun activity on campus.”

Students recalled their mothers encouraging them to live out their values by looking out for friends. For instance, one male student remembers being told by his mother to “be around the right people so we can always take care of each other if someone has made a poor decision. We always have each other’s back.” Similarly, one female student described her mother saying:

Whenever I went out with friends, she always told me to look out for them as if I’m their mother and that if the mother of the group wavers, the entire group goes to shambles, so for the sake of my friends, I should control my drinking.

In this way, value-based advice addressed both how students should make decisions about their drinking, select friends, and look out for friends in drinking-related contexts.

Emergent Theme Four: Warning-Based Advice

Some students indicated that their mothers discussed HR messages incorporating warnings about drinking dangers (8.5%). The risks discussed ranged from fairly minor physical concerns (e.g., “Be careful, because alcohol causes weight gain”) to more serious consequences (e.g., “horror stories from the news of alcohol poisoning, drunk accidents”). Some students recalled their mothers raising concerns about how drinking could affect their grades and academic standing and offered advice such as, “Don’t get caught,” and “Don’t get arrested.” These warnings were sometimes paired with more specific advice about how to avoid these consequences by, for instance, limiting drinking or avoiding drinking in specific contexts. For example, one student described a discussion about “my sister getting in trouble for drinking underage at her college,” and being told “not to get in trouble and avoid getting too drunk.” Another student stated that:

The majority of my mother’s worries are around me getting in trouble for drinking alcohol so most of the conversations revolved around being smart and responsible when drinking. One example would be not drinking in high risk scenarios such as at tailgates where police are around.

These examples highlight that students received information about the potential negative consequences of drinking and avoiding situations that could increase the risk of these consequences.

Emergent Theme Five: Advice Conveying Approval

The final theme that emerged in relation to research question two was advice that conveyed a range of approval messages (29.4%). In total, 9.9% of students described their mothers communicating approval of alcohol use. Students commonly described drinking advice

associated with being encouraged to have fun. For example, one mother stated that “it’s okay to drink and have fun.” Another mother was described as saying:

Everyone does it so don’t be paranoid about getting in trouble. If you say no to parties because you are worried about getting caught you will miss out on making friends and they will eventually stop asking you to hang out with them.

Another student stated that his mother had said “if you party hard you should study hard, and if you study hard then you can party hard.” One student described how her mother’s approval of drinking led to more open conversations about drinking in general, stating that her mother’s “approval that it’s OK to drink underage was nice because she’d rather have a conversation about alcohol rather than have me hide it from her.”

Messages to drink and have fun were typically combined with specific PBS advice (53.6% of those reporting this subtheme; “She told me to go out and have fun. [...] Drink water in between, have a drinking buddy, never put your cup down, cover your hand above your drink.”) or ambiguous HR messages (64.3% of those reporting this subtheme; “She wants me to be safe but have fun,” “Go out and have fun, but be careful and smart”). These examples demonstrate how students perceived mothers to be balancing acknowledging the positives of alcohol with advice aimed at reducing the potential downsides of drinking.

Some students recalled their mothers conveying acceptance of their drinking, but only within specific limits (15.2%). Students received advice about acceptable amounts and frequency of alcohol use (e.g., “To only drink once a week and drink 3 drinks a night”), acceptable drinking contexts (e.g., “Only drink at meal time or casually;” “Only drink with close friends and not at parties.”), and acceptable motives for drinking (e.g., “never drink to get drunk;” “Do it as a social thing not [...] just to get drunk”). One student stated that his mother:

...told me not to drink when sad or depressed. She knew that if she drank when sad or depressed it would become a crutch and that would be bad. She also said that the point of drinking should never be to get drunk because that leads to dumb decisions.

These examples illustrate that mothers were seen as providing a variety of clear advice about the contexts in which drinking alcohol was considered acceptable.

Finally, some students perceived their mothers clearly disapproved of their alcohol consumption while they also gave advice on how to drink safely (6.4%). An example of this type of mixed message was given by one student who noted that:

My mother encouraged me not to drink. However, knowing that it was likely that I [would] encounter situations where I would find myself drinking, she ensured me to be safe about my drinking habits. She would always tell me never to drive after drinking or get in a car with someone who had been drinking.

Another student said, “My mother told me to know my limits, but encouraged me not to drink. She told me that drinking under 21 could get you in a great deal of trouble.” Statements such as these illustrate that students perceive considerable variability in how their

mothers framed HR advice. Some students perceived their mothers' messaging as explicit encouragement to drink underage, while other students received HR advice in the context of being told not to consume alcohol.

Biological Sex Differences

Our third research question focused on whether females recalled receiving different HR advice to male students. To explore this question, a series of χ^2 tests were conducted to examine differences in the global themes based off of students' biological sex (see Table 1). The only significant difference in themes based off of a student's biological sex was in reports of specific PBS, with females being more likely to report having received specific advice from their mother (75.7%) than males (57.8%). Follow-up tests revealed that this biological sex difference was driven by differences in discussion of serious harm-reduction strategies. Females were more likely to describe their mothers as having discussed serious harm-reduction strategies with them (65.3%) than males (39.4%), $\chi^2(1, N = 282) = 18.10, p < .001$. There were no biological sex differences in manner of drinking strategies ($p = .67$) or stopping/limiting drinking strategies ($p = .45$).

Differences by Drinking Status

Our next research question explored whether higher-risk drinkers recalled receiving different forms of HR advice than lower-risk students. To address this question, a series of χ^2 tests were conducted to examine differences in the six global themes between students who did and did not report binge drinking (see Table 1). Students who engaged in binge drinking were more likely to report receiving advice related to specific PBS (79.4%) than students who did not binge drink (52.7%). This pattern was true for all three types of PBS. There were no other significant differences in maternal advice by binge drinking group.

Perceptions of Maternal Messages

Our final research question focused on students' perceptions of the usefulness of their mothers' advice and perceptions of their mothers' motives for providing advice. Overall, 87% of participants who had received HR messages in the past 12 months agreed that the advice they received was helpful. There were no differences in perceived usefulness of recalled parental advice based on drinking status, $t(140.4) = 0.47, p = .64$, or the student's biological sex, $t(236) = .85, p = .40$. When reflecting on their mother's motivation for providing HR advice, most students reported believing that their mother had provided the advice because she knew that they drank alcohol (71.4%) and wanted them to drink more safely (73.1%). A minority of the students believed that the advice was intended to try and stop them from drinking (7.6%).

Discussion

Past research suggests that HR messages are among the most common forms of communication that parents use to address alcohol use among college students (Abar et al., 2012). While there are a small number of quantitative studies that have assessed whether parents talk about a limited range of specific PBS (e.g., Donovan et al., 2012; Menegatos et al., 2016), the current study adds to the literature by using a mixed method approach to more

broadly understand the content of advice on how to drink safely and the perceived usefulness of that advice from the perspective of college students. The current study extends past qualitative work on family communication about substance use by specifically exploring advice that college students recall getting from their mothers about alcohol use during emerging adulthood, a developmental period when parents may struggle to balance fostering independence while also helping their child to make good decisions around alcohol use. In the current study we found that students' descriptions of HR conversations revealed a diverse range of themes. We also found support that students recalled their parents discussing specific PBS with them. Advice commonly included ambiguous encouragement to be responsible while drinking, to make good decisions that reflected students' personal values, and to be mindful of peer pressure. While some mothers' advice was related to drinking in ways that would reduce the risk of specific alcohol-related negative consequences, others encouraged their students to drink in ways that would allow them to have fun. The current study extends research on biological sex differences in frequency of alcohol communication by providing evidence for differences in the content of mothers' HR messages received by college students.

Past research has suggested that parent HR communication may have limited benefits for addressing college alcohol use (Abar et al., 2012; LaBrie et al., 2015; Napper, 2019). The current study provides several possible insights into these findings. For example, one possible explanation for these findings is that students perceive their parents offer poor advice to them about how to drink safely. The current findings highlight that most students receive advice from their mothers to use the types of HR strategies that are often included in effective college alcohol prevention programs. Students perceived that their mothers most commonly offer advice about serious harm reduction strategies. Longitudinal research suggests that serious harm reduction strategies are related to fewer negative alcohol-related consequences, but their relationship with alcohol use is less clear (Martens, Martin, Littlefield, Murphy, & Cimini, 2011; Napper et al., 2014). Given that students often received messages about this type of strategy, we might expect this form of communication to have limited impact on student drinking, but to potentially reduce negative consequences.

While the current findings suggest that most students reporting HR messages are receiving information about specific PBS from their mothers, it is not clear if these conversations are providing students with the skills needed to use these strategies effectively. Indeed, students' descriptions of their conversations focused on being told to use a strategy (e.g., "don't drink and drive"). Less clear from the data and our questioning is if students also receive messages about how to apply these strategies (e.g., discussing how to handle situations where a designated driver has been drinking). Furthermore, it was not clear from the data if mothers' advice was addressing strategies students were already using or aimed at encouraging students to implement a new strategy. While conversations about strategies students already implement may be beneficial for reinforcing a message about what is normative to do when drinking, this type of advice may not be helpful for students who still experience alcohol problems despite using these strategies. While the students reported that most of their mothers discussed the types of PBS that are incorporated into evidence-based college prevention efforts, it is not clear whether mothers' approach to discussing these strategies would be effective for promoting risk reduction. Future interview-based qualitative studies

using follow-up questioning with mothers specifically addressing how they encourage strategy use and the novelty of strategies discussed could help shed more light on this topic.

Past studies that have failed to find a link between HR communication and students' PBS use have relied on measures that assess if students have received advice on how to drink safely (LaBrie et al., 2015; Napper, 2019). Based on the current study, it is possible these findings reflect how HR communication has been assessed. While students reporting HR advice do describe discussing specific PBS, they also commonly reported a range of other messages including being given ambiguous advice such as encouragement to "be safe," "don't be stupid," and to "drink in moderation." Similar content has emerged in previous research examining parent-child conversations about substance use more generally (Miller-Day & Dodd, 2004). It is not clear how students interpret these more ambiguous messages about drinking. For instance, it is possible that parents' concepts of moderate drinking and being responsible are very different from college students' interpretations of these terms. It is not clear whether the ambiguity of this type of advice makes it less effective for addressing alcohol risks or increasing PBS use than the discussion of specific PBS or advice on specific limits for alcohol use (e.g., do not exceed two drinks a night). Indeed, it is possible that the mere fact that mothers are talking about alcohol at all, are expressing some form of expectation, and are communicating that they care about their child's alcohol choices may be beneficial for promoting healthy drinking. Indeed, qualitative research suggests that when parents do not explicitly talk about substance use, younger adolescents may interpret this as parental apathy (Ebersole, Miller-Day, & Raup-Krieger, 2014). The current study's findings highlight the need for further research to determine the effects of different forms of HR messaging on student alcohol use and to explore how students interpret vague maternal messaging about drinking in moderation and responsibly.

Similar to past research (Miller-Day & Dodd, 2004), students reported being told to use their own judgement when making alcohol decisions and that their mothers trusted their ability to make healthy choices. Parents may feel that this type of advice is developmentally appropriate as they attempt to balance helping their emerging adult navigate the college experience while also fostering independence (Nelson, Padilla-Walker, Christensen, Evans, & Carrol, 2011). Further, this type of advice may be reasonable if students have already demonstrated that they make responsible choices around alcohol use (Miller-Day & Dodd, 2004). While students' description of this form of advice suggested that they felt it was beneficial and reinforced their desire to drink responsibly, the effectiveness of this parental approach is less clear. Given that parents generally underestimate their own child's use of alcohol (Bylund, Imes, & Baxter, 2005) there may be students who would benefit from more concrete discussions of challenges they encounter when making decisions about alcohol use.

While parents may not always be accurate at estimating their own child's alcohol use, the current study provides some evidence that mothers may be sensitive to their child's level of drinking when providing HR advice. For instance, students who reported binge drinking were more likely to receive advice about all forms of specific PBS compared to those who did not engage in this behavior. It is possible that mothers have greater motivation to discuss specific HR strategies when they have concerns about their child engaging in high-risk alcohol use. Alternatively, if students engage in binge drinking they may be more likely to

talk with their mother in a way that leads to the discussion of specific PBS. Dyadic research examining how parents and students interact during conversations about alcohol use would be beneficial for understanding the broader context in which PBS are discussed.

Past research has suggested that parents of college students are more concerned about sons' alcohol use and talk more to sons about drinking in comparison to daughters (Vaughan et al., 2017). The current findings provide preliminary evidence that, in addition to differences in the frequency of conversations, the content of parental alcohol advice may also differ for sons and daughters. Daughters were particularly likely to receive advice addressing serious harm reduction (e.g., staying with friends, not leaving a drink unattended). This difference may reflect that females are more vulnerable to sexual assault when drinking than males (Abbey, 2002). Mothers' discussion of serious harm reduction strategies with daughters could be motivated by a desire to address sexual assault concerns rather than negative drinking outcomes specifically. Further research is needed to determine mothers' motives for providing different types of alcohol advice for sons and daughters. Past research suggests that drinking is seen as more socially acceptable for males than females as it may provide a way to express masculinity (Kerr-Corrêa, Igami, Hiroce, & Tucci, 2007). Therefore research exploring the extent to which gender stereotypes influence parental alcohol advice to emerging adult children may also be beneficial.

Implications

The current findings have implications for how researchers may wish to assess students' perceptions of parental HR communication. Past studies have relied either on broad measures assessing if students have received advice on how to drink safely or have asked students to indicate if they had discussed a small subset of PBS. Measures that only examine a small set of PBS may be missing the wider range of other types of advice parents offer students. In contrast, measures that capture this breadth may not allow researchers to distinguish between different forms of advice (e.g., specific PBS versus ambiguous advice). It may be beneficial to create measures of HR communication that distinguish different forms of advice such as those highlighted in the current study. Further, it may be valuable to differentiate whether students perceive that their parents offer advice on what to do (e.g., setting limits) in contrast to advice on how to use strategies effectively (e.g., addressing strategies for overcoming barriers to staying with predetermined limits). The current results highlight that advice on how to drink safely can be framed in a variety of ways, ranging from maternal approval of drinking to mothers' strong disapproval of alcohol use. Measurement tools that allow researchers to understand the broader context in which HR advice is provided could help further elucidate the effects of HR communication on student drinking outcomes.

The current findings also have potential implications for college PBI research. First, the vast majority of college students in the current study indicated that their mothers' alcohol advice was helpful. This was true regardless of students' biological sex or drinking status. Given that parents have been shown to have low self-efficacy with respect to discussing substance use (Miller-Day, 2008; Miller-Day & Dodd, 2004), this information may be helpful for parents to encourage them to talk to their child about these topics, regardless of exactly how

they talk to them. Further, some PBI have included efforts to train parents to teach their children PBS (Donovan et al., 2012). The current findings offer valuable insights into areas where parents may benefit from support. For example, students were least likely to receive advice on PBS related to the manner of drinking. In both cross-sectional and longitudinal work, this type of PBS has been found to be most consistently associated with lower risk drinking behavior and fewer negative consequences (Frank et al., 2012; Napper et al., 2014; Pearson, Kite, Henson, 2012). Therefore, PBI efforts may benefit from providing parents with information about this specific category of strategies. In addition, students reported that their mothers predominately encouraged strategy use. It is less clear from the data, because of our lack of ability to ask follow-up questions, if parents addressed how to use strategies effectively. Existing PBI techniques that encourage parents to discuss how to handle hypothetical drinking situations (e.g., LaBrie et al., 2016) could be applied to parent conversations about PBS. For example, parents could be encouraged to help students identify the types PBS that might be beneficial to use and explore how students could overcome barriers to use in hypothetical drinking scenarios.

Limitations

The current study has a number of limitations. For instance, we did not assess mothers' perceptions of the alcohol conversations and these may differ from students' perceptions. Further, we did not examine advice received from fathers. Fathers may have different parenting approaches during emerging adulthood than mothers (Nelson et al., 2011), and it is not clear if the content of their alcohol advice would differ from mothers. The current study focused on underage college students and future research should address whether HR communication changes after college students turn 21. For instance, it is possible that parents of older students discuss different strategies relevant to drinking contexts that are more accessible to those over 21 (e.g., bars). Finally, the majority of students in the current study reported that their mother had attended college. It is possible that the types advice mothers provide may differ based on their own experiences of attending college. Indeed, research among younger adolescents suggests that higher levels of maternal education are associated with less parental discussion of rules and warnings related to substance use (Ennett, Bauman, Foshee, Pemberton, & Hicks, 2001). Research with more diverse samples would allow researchers to explore whether first-generation college students receive different alcohol messages from their non-first-generation peers. Perhaps there is a generation gap of qualitatively different emerging adulthood experiences and challenges with and without the college experience during this time.

While the current study offers some insights on why past studies may have failed to find protective benefits of parent HR communication, a limitation is that we did not assess students' plans to implement their mothers' advice. It may be that most parents do offer advice that students perceive as useful in general, yet they still do not intend to implement these strategies because, for instance, there are situational barriers to implementation. Future studies could shed light on students' motivation and ability to implement parent drinking advice. Furthermore, while the current study focused on students' perceptions of the content of mothers' advice, future studies addressing the manner and context in which these messages are provided would further our understanding of HR communication.

Conclusion

The current findings contribute to the broader literature on student perceptions of parental alcohol communication by highlighting the spectrum of HR advice underage students report receiving from their mothers. The themes identified highlight that drinking advice varied along several dimensions including the level of specificity of the advice, how positively alcohol use was viewed, and whether advice centered on students' decision-making or actual drinking behaviors. Advice commonly addressed the use of specific PBS or specific limits within which drinking was acceptable. At the other extreme, students also reported more ambiguous advice to drink responsibly or in moderation. Some advice focused on drinking in ways that maximize the positive aspects of drinking (i.e., have fun). In contrast, other students received advice that highlighted specific negative consequences to avoid or was framed in the context of disapproval of alcohol use. While some advice addressed specific behaviors that could be used while drinking to reduce risks, other advice focused more broadly on how students should think about alcohol use (e.g., decision making, prioritizing activities).

Advice commonly addressed how students should interact with peers both in terms of the moral component of looking out for peers and not being pressured to conform to undesirable drinking behavior. Previous literature has thoroughly addressed responses to peer pressure, but the current study begins an important new line of inquiry into protecting peers, especially given the rate of alcohol-related injuries and deaths, and sexual assaults, on college campuses. Additional research about HR messages and strategies between peers is warranted. Overall, the current study adds a more nuanced understanding to the literature on parent-child communication about underage alcohol use in college. This research suggests that previous work has oversimplified parental messages into those of abstinence or those of acceptance and approval. Parents are also focused on shaping children's thinking as well as their actual behavior with drinking. This approach may set students up for a healthy long-term *relationship* with drinking, rather than just addressing the short-term harms of drinking in the college environment.

Acknowledgments

Research reported in this publication was supported by the National Institute On Alcohol Abuse And Alcoholism of the National Institutes of Health under Award Number R34AA026032. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

References

- Abar C, Fernandez AC, & Wood MD (2011). Parent-teen communication and pre-college alcohol involvement: A latent class analysis. *Addictive Behaviors*, 36, 1357–1360. doi:10.1016/j.addbeh.2011.07.044 [PubMed: 21864983]
- Abar C, Morgan NR, Small ML, & Maggs JL (2012). Investigating associations between perceived parental alcohol-related messages and college student drinking. *Journal of Studies on Alcohol and Drugs*, 73, 71–79. doi:10.15288/jsad.2012.73.71 [PubMed: 22152664]
- Abar C, Turrise R, & Mallett KA (2014). Differential trajectories of alcohol-related behaviors across the first year of college by parenting profiles. *Psychology of Addictive Behaviors*, 28, 53–61. doi:10.1037/a0032731 [PubMed: 23915366]
- Abbey A. (2002). Alcohol-related sexual assault: A common problem among college students. *Journal of Studies on Alcohol Supplement*, 14, 118–128. doi:10.15288/jsas.2002.s14.118

- Baxter LA, Bylund CL, Imes R, & Routsong T. (2009). Parent-child perceptions of parental behavioral control through rule-setting for risky health choices during adolescence. *Journal of Family Communication*, 9, 251–271. doi:10.1080/15267430903255920
- Bowring AL, Gold J, Dietze J, Gouillou M, Van Gemert C, & Hellard ME (2012). Know your limits: Awareness of the 2009 Australian alcohol guidelines among young people. *Drug and Alcohol Review*, 31, 213–233. doi:10.1111/j.1465-3362.2011.00409.x [PubMed: 22176516]
- Boyle JR, & Boekeloo BO (2006). Perceived parental approval of drinking and its impact on problem drinking behaviors among first-year college students. *Journal of American College Health*, 54, 238–244. doi:10.3200/JACH.54.4.238-244 [PubMed: 16450849]
- Braitman AL, Henson JM, & Carey KB (2015). Clarifying observed relationships between protective behavioral strategies and alcohol outcomes: The importance of response options. *Psychology of Addictive Behaviors*, 29, 455–466. doi:10.1037/adb0000024 [PubMed: 25180560]
- Bulmer M. (1979). Concepts in the analysis of qualitative data. *Sociological Review*, 27, 651–677. doi:10.1111/j.1467-954X.1979.tb00354.x
- Bylund CL, Imes RS, & Baxter LA (2005). Accuracy of parents' perceptions of their college student children's health and health risk behaviors. *Journal of American College Health*, 54, 31–37. doi:10.3200/jach.54.1.31-37 [PubMed: 16050326]
- Charmaz K. (1983). The grounded theory method: An explication and interpretation In Emerson R. (Ed.) *Contemporary Field Research: A Collection of Readings* (pp. 109–126). Boston, MA: Little, Brown and Company.
- Dimeff L, Baer J, Kivlahan D, & Marlatt G. (1999). *Brief Alcohol Screening and Intervention for College Students (BASICS): A harm reduction approach*. New York, NY: Guilford Press.
- Donovan E, Wood M, Frayjo K, Black RA, & Surette DA (2012). A randomized, controlled trial to test the efficacy of an online, parent-based intervention for reducing the risks associated with college-student alcohol use. *Addictive Behaviors*, 37, 25–35. doi:10.1016/j.addbeh.2011.09.007 [PubMed: 21963316]
- Doumas D, Turrisi R, Ray A, Esp S, & Curtis-Schaeffer A. (2013). A randomized trial evaluating a parent based intervention to reduce college drinking. *Journal of Substance Abuse Treatment*, 45, 31–37. doi:10.1016/j.jsat.2012.12.008 [PubMed: 23369415]
- Ebersole DS, Miller-Day M, & Raup-Krieger J. (2014). Do actions speak louder than words?: Adolescent interpretations of parental substance use. *Journal of Family Communication*, 14, 328–351. doi:10.1080/15267431.2014.945699 [PubMed: 25285048]
- Ennett ST, Bauman KE, Foshee VA, Pemberton M, & Hicks KA (2001). Parent-child communication about adolescent tobacco and alcohol use: What do parents say and does it affect youth behavior? *Journal of Marriage and Family*, 63, 48–62. doi:10.1111/j.1741-3737.2001.00048.x
- Frank C, Thake J, & Davis CG (2012). Assessing the protective value of protective behavioral strategies. *Journal of Studies on Alcohol and Drugs*, 73, 839–843. doi:10.15288/jsad.2012.73.839 [PubMed: 22846249]
- Fromme K, & Orrick D. (2004). The lifestyle management class: A harm reduction approach to college drinking. *Addiction Research and Theory*, 12, 335–351. doi:10.1080/1606635042000236484
- Hennessy EA, Tanner-Smith EE, Mavridis D, & Grant SP (2019). Comparative effectiveness of brief alcohol interventions for college students: Results from a network meta-analysis. *Prevention Science*, 20, 715–740. doi:10.1007/s11121-018-0960-z [PubMed: 30604290]
- Johnson MB, & Clapp JD (2011). Impact of providing drinkers with 'know your limit' information on drinking and driving: A field experiment. *Journal of Studies on Alcohol and Drugs*, 72, 79–85. doi:10.15288/jsad.2011.72.79 [PubMed: 21138714]
- Kerr-Corrêa F, Igami TZ, Hiroce V, & Tucci AM (2007). Patterns of alcohol use between genders: A cross-cultural evaluation. *Journal of Affective Disorders*, 102, 265–275. doi:10.1016/j.jad.2006.09.031 [PubMed: 17084906]
- LaBrie JW, Boyle SC, & Napper LE (2015). Alcohol abstinence or harm-reduction? Parental messages for college-bound light drinkers. *Addictive Behaviors*, 46, 10–13. doi:10.1016/j.addbeh.2015.02.019 [PubMed: 25753930]

- LaBrie JW, Earle AM, Boyle SC, Hummer JF, Montes K, Turrise R, & Napper LE (2016). A parent-based intervention reduces heavy episodic drinking among first-year college students. *Psychology of Addictive Behaviors*, 30, 523–535. doi:10.1037/adb0000187 [PubMed: 27824231]
- LaBrie JW, Napper LE, & Hummer JF (2014). Normative feedback for parents of college students: Piloting a parent based intervention to correct misperceptions of students' alcohol use and other parents' approval of drinking. *Addictive Behaviors*, 39, 107–113. doi:10.1016/j.addbeh.2013.08.036 [PubMed: 24099892]
- Marlatt GA, & Witkiewitz K. (2002). Harm reduction approaches to alcohol use: Health promotion, prevention, and treat. *Addictive Behaviors*, 27, 867–886. doi:10.1016/S0306-4603(02)00294-0 [PubMed: 12369473]
- Martens MP, Martin JL, Littlefield AK, Murphy JG, & Cimini MD (2011). Changes in protective behavioral strategies and alcohol use among college students. *Drug and Alcohol Dependence*, 118, 504–507. doi:10.1016/j.drugalcdep.2011.04.020 [PubMed: 21612879]
- Martens MP, Taylor KK, Damann KM, Page JC, Mowry ES, & Cimini MD (2004). Protective behavioral strategies when drinking alcohol and their relationship to negative alcohol-related consequences in college students. *Psychology of Addictive Behaviors*, 18, 390–393. doi:10.1037/0893-164X.18.4.390 [PubMed: 15631613]
- Menegatos L, Lederman LC, & Floyd K. (2016). When parents talk about college drinking: An examination of content, frequency, and associations with students' dangerous drinking. *Health Communication*, 31, 287–298. doi:10.1080/10410236.2014.948709 [PubMed: 26305320]
- Miller-Day M. (2002). Parent-adolescent communication about alcohol, tobacco, and other drug use. *Journal of Adolescent Research*, 17, 604–616. doi:10.1177/074355802237466
- Miller-Day M. (2008). Talking to youth about drugs: What do late adolescents say about parental strategies? *Family Relations*, 57, 1–12. doi:10.1111/j.1741-3729.2007.00478.x
- Miller-Day M, & Dodd AH (2004). Toward a descriptive model of parent-offspring communication about alcohol and other drugs. *Journal of Social and Personal Relationships*, 21, 69–91. doi:10.1177/0265407504039846
- Napper LE (2019). Harm-reduction and zero-tolerance maternal messages about college alcohol use. *Addictive Behaviors*, 89, 136–142. doi:10.1016/j.addbeh.2018.09.024 [PubMed: 30296649]
- Napper LE, Kenney SR, Lewis LJ, & LaBrie JW (2014). A cross-lagged panel model examining protective behavioral strategies: Are types of strategies differentially related to alcohol use and consequences? *Addictive Behaviors*, 39, 480–486. doi:10.1016/j.addbeh.2013.10.020 [PubMed: 24229842]
- Nelson LJ, Padilla-Walker LM, Christensen KJ, Evans CA, & Carrol JS (2011). Parenting in emerging adulthood: An examination of parenting clusters and correlates. *Journal of Youth and Adolescence*, 40, 730–743. doi:10.1007/s10964-010-9584-8 [PubMed: 20809102]
- Pearson MR, Kite BA, & Henson JM (2012). The assessment of protective behavioral strategies: Comparing prediction and factor structures across measures. *Psychology of Addictive Behaviors*, 26, 573–584. doi:10.1037/a0028187 [PubMed: 22612255]
- Strauss A, & Corbin J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.
- Treloar H, Martens MP, & McCarthy DM (2015). The protective behavioral strategies scale-20: Improved content validity of the serious harm reduction sub subscale. *Psychological Assessment*, 27, 340–346. doi:10.1037/pas0000071 [PubMed: 25558969]
- Turrise R, Jaccard J, Taki R, Dunnam H, & Grimes J. (2001). Examination of the short-term efficacy of a parent intervention to reduce college student drinking tendencies. *Psychology of Addictive Behaviors*, 15, 366–372. doi:10.1037/0893-164X.15.4.366 [PubMed: 11767270]
- Vaughan EL, Limas EF, McKean-Blackwell N, Klann EM, & Robbins MJ (2017). Parental concerns about students' transition into college: Substance use and sexual assault. *Journal of Interpersonal Violence*. Advanced online publication. doi:10.1177/0886260517731787

Table 1.

Frequency of themes by participant sex and binge drinking status

Global Theme	Females (%)	Males (%)	$\chi^2(1, N = 282)$	Non-binge drinker (%)	Binge drinker (%)	$\chi^2(1, N = 282)$
Specific protective behavioral strategies	75.7	57.8	10.01 ^{**}	52.7	79.4	22.48 ^{***}
Ambiguous behavioral advice	56.6	57.8	0.04	51.8	60.6	2.14
Decision making advice	22.0	32.1	3.59 [†]	24.1	27.1	0.31
Value-based advice	15.6	11.9	0.74	15.2	13.5	0.15
Warning-based advice	8.1	9.2	0.10	6.3	10.0	1.22
Advice conveying approval	28.3	31.2	0.27	35.7	25.3	3.53

^{***}
 $p < .001$

^{**}
 $p < .01$.

[†]
 $p = .058$