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Developing Text Messages to Reduce Community College Student Alcohol Use

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Abstract

Objectives: The aim of this study is to evaluate how community college students with hazardous drinking perceived the usefulness of alcohol protective behavioral strategy text messages (TM-PBS).

Methods: Community college students with past hazardous single occasion or weekly drinking (N = 48; 60% female) were randomized to receive 2 TM-PBS on 3 typical drinking days per week for 2 weeks selected by: (1) research investigators (ie, based on clinical and theoretical application); (2) participants (ie, messages highly rated at baseline by the participants); or (3) a random process. Prior to 2 typical drinking days per week, immediately after receiving TMs, we asked: "How useful do you think this strategy will be for you when you drink? Text a number from 1 (not useful) to 5 (very useful)."

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Results: Response rates for the 12 messages ranged from 72.9% to 87.5%, with no differences in response rates across selection categories (ie, investigator, participant, random). Investigator-selected messages were rated as less useful than messages that were self-selected by participants or messages that were selected at random.

Conclusions: TMPBS chosen a priori by students were perceived as more useful than TM-PBS chosen by investigators, supporting this form of tailoring in alcohol interventions to optimize usefulness.

Keywords

text messages; brief intervention; community college students; alcohol; protective behavioral strategies

The limited research on alcohol use among community college students reveals that 66% report past month alcohol use.[1] Rates of heavy episodic drinking range from 25% to 47%, with high rates among young adults enrolled in community colleges.[1–3] Though the findings regarding the prevalence of alcohol use among community college students are mixed, some studies indicate that whereas they may drink less than their 4-year college counterparts (on certain indices), they experience an equivalent amount of negative consequences. This is notable, as the majority of alcohol-related deaths, disability, and damage can be traced to moderate drinkers who only occasionally engage in episodes of risky drinking, and therefore, are subjectively more impaired.[4] Furthermore, research suggests that typical non- or light-drinkers are at increased risk of personal harm on specific occasions when they do drink.[5,6] Thus, community college students are not necessarily at lower risk by drinking less than 4-year college students.

Most community college students do not live on campus and spend most of their college life *away* from the community college setting engaged in social roles that may limit their ability to come to campus for non-academic activities (eg, in-person interventions). There is also research to suggest that community college students are engaged in many more activities that can be negatively impacted by alcohol use. Social roles, such as employment, parenting, living arrangement, and romantic relationships, have been associated with young adult alcohol use.[7–10] Moreover, research shows that a greater percentage of heavy episodic drinkers (HEDs) experience problems with relationships (32%), school (24%), employment (20%), and legal issues (13%) than non-HEDs and abstainers,[2] highlighting that multiple roles (eg, work, school, and relationships) can be negatively impacted by alcohol use. Collectively, these findings suggest that interventions that target the consequences of alcohol and, specifically, alcohol's impact on multiple role domains, may have higher salience to the lives of community college students than traditional college student interventions.

Interventions based on motivational interviewing[11] aim to create a "hook," or personally-relevant reason to change, by employing principles and strategies for building individuals' motivation to change their drinking behavior. Miller and Roll-nick[11] use the acronym FRAMES to highlight the active ingredients in effective brief interventions. *Advice to change*, the A in FRAMES, represents simple advice on changing high-risk drinking and suggestions for moderation. Protective behavioral strategies (PBS) can be useful as part of

the *advice to change* component in brief interventions. PBS are defined as cognitive-behavioral strategies that an individual can learn to limit alcohol use and reduce negative consequences.[12–14] Strategies include alternating alcoholic and nonalcoholic drinks, avoiding drinking games, and using a designated driver. PBS are commonly included in brief alcohol interventions for 4-year college students and have been shown to mediate intervention effects.[15–18] Despite the need among community colleges for efficacious interventions to reduce alcohol use and related consequences, PBS-only interventions have not been used with community college students.

Text-messaging is a promising modality for health promotion in general[19] and reducing alcohol use specifically.[20] Use of text messages (TMs) may be especially useful in prompting use of PBS proximal to drinking occasions, when salience and uptake are likely to be higher. There are only a few studies that have tested TM-interventions for college students[21–23] and only one that focused on community college students.[24] Bock et al[24] randomly assigned 60 heavy drinking community college students to a TM condition where they received 6 TMs per week for 6-weeks: alcohol-information TMs or a control condition of general motivation TMs not related to alcohol use. The alcohol-information TMs included facts about alcohol, strategies to limit alcohol use (ie, PBS), and motivational messages. At week 6 (immediately post-intervention) and week 12, students in the intervention condition were more likely to report fewer heavy drinking episodes and consequences than those in the control condition. Within-group comparisons from baseline to week 12 were also examined. Results showed students in the intervention condition continued to use PBS, whereas those in the control condition reduced the number of PBS used. This work suggests a TMPBS intervention may be efficacious in reducing alcohol use among community college students. Still, optimal design for TM-PBS interventions remains unknown.

There are numerous design decisions for TM interventions that can affect engagement and effectiveness, from the individual message (language, tone, semantics, personalization) to the pattern of messaging (frequency, duration, adaptability) and interactivity of program components. For example, a meta-analysis revealed that TM interventions using tailored and personalized messages, in addition to those with customized and variable frequency of contact over time, were associated with greater intervention efficacy.[19] Others have found that TMs with automated dialogue, content that engages and is tailored to the individual, and self-monitoring with activity planning were aspects associated with behavior change.[25] Focusing on content, TMs aimed at either reinforcing or changing a behavior should ideally be informative, interesting, and relevant as messages seen as irrelevant or annoying would be less likely to produce behavioral changes (eg, Elaboration Likelihood Model (ELM)).[26]

The current research study aims to focus on the structure and content of a TM intervention to reduce community college students' alcohol use. The aim of this study was to evaluate the feasibility (ie, high response rate to TMs) and acceptability (ie, participants' rating of TMs; participants' overall impressions on usefulness of PBS) of a TM intervention. Examining the feasibility and acceptability of a TM intervention during its development is an essential step in the research process, with the potential to maximize the likelihood of TM use by the target audience. Specifically, we wanted to examine how acceptability differed based on if messages were selected by: (1) research investigators (2) participants, or (3) a random

procedure. We hypothesized that messages selected by participants would be rated higher than those not selected by participants (ie, researcher selected or random).

METHODS

Participants

Participants for the present study included 48 community college students from several public community colleges in in the greater Seattle, Washington area. Across the campuses, mean age of those enrolled in the study was 22.52 years (SD = 2.94) and median age was 22.00; 66.7% reported being full-time students, 33.3% reported being part-time students, and ethnic identity reported by the sample was 57% white, 10% Asian, 6% black, 10% multiracial, and 2% American Indian/Alaskan Native, and 15% "other." Over half (60%) of the sample self-identified as being female, which is consistent with community colleges in the United States as there is higher enrollment for community colleges among females than males.[27] Table 1 shows baseline descriptive information by condition.

Persons were recruited to participate in a study for the development and initial feasibility and acceptability of sending PBS via TMs to community college students. Recruitment for this study consisted of tabling at on-campus events, hanging posters and handing out fliers around campuses, placing ads in the college newspapers, and sending out an email to the student body with information about the study. We also supplemented recruitment by placing online ads on Craigslist. Most students (N = 40) were recruited from the 3 community colleges, with the remainder (N = 8) representing 5 other local community colleges. All recruitment materials stated the URL or had a link to our study website where students could get more information and complete a brief eligibility questionnaire. To be eligible, individuals needed to report being 18–29 years old, enrolled full- or part-time at a local community college, drink 4+/5+ for women/men over the course of 2 hours, or exceed weekly National Institute on Alcohol Abuse and Alcoholism drinking recommendations (8+/15+ for women/men) over the past week and own/use a cell phone with TM capabilities.

Procedure

Persons who completed the screening survey and met eligibility criteria were telephoned and invited to continue their participation. During the telephone call, the study purpose and protocols were explained and any questions were answered. Recruitment continued until we reached our target of 60 students indicating interest in the study. Following the phone call, an email with a link to the online baseline survey was sent. This 20-minute survey assessed alcohol use and PBS. Of those invited, 80% (N = 48) completed the baseline survey and were eligible for the TM phase of the study. In the baseline survey, participants reported on their typical drinking days using the Daily Drinking Questionnaire and time blocks in which they would like to receive TMs, which included times before they typically started drinking alcohol as times when they were likely to be engaged in alcohol use. Time blocks included 3–5pm, 5–7pm, 7–9pm, 9–11pm, 11pm-1am. TMs were sent the first hour of each time block.

At baseline, prior to randomization, participants rated how useful they perceived each PBS to be. These ratings were collected to determine which PBS would be included for individuals assigned to the self-selected TM condition (described below). Following the baseline survey, participants received a total of 12 TMs over the next 2 weeks (2 messages a day, 3 days a week) on the days they indicated in the baseline survey as their typical drinking days. If less than 3 drinking days were indicated, participants received the TMs on the day(s) they endorsed drinking and additional days based on pre-specified criteria. Criteria included potential high-risk weekend days (ie, Thursday, Friday, or Saturday) that participants did not indicate as a typical drinking day. Of the 2 messages sent on the TM delivery days, one PBS message targeted times typically prior to drinking (either 3pm or 5pm), while the other focused on PBS during or after drinking (7pm, 9pm, or 11pm). Messages included PBS presented in various ways including testimonials, tips, tailored or personalized messages, and "mocktail" recipes. For purposes of this study, to assess engagement and acceptability, participants were asked to respond to each TM with a rating of how useful they found the PBS, with a number from 1 (not at all useful) to 5 (very useful). Participants received an initial TM asking for their rating and a reminder TM if they did not respond within 60 minutes. One person declined further participation after receiving the first TM with 98% (N = 47) receiving all 12 messages.

Following the 2 weeks of TMs, participants completed a follow-up telephone interview regarding their experiences with the study and the TMs. The majority of students (N = 46, 96%) completed the telephone interview. Participants were compensated $40 for their participation.

Randomization

Participants were randomized to one of 3 conditions after completion of the baseline survey; messages were selected by: (1) research investigators (ie, based on clinical and theoretical application; N = 16; 62.5% female), (2) participants (ie, messages highly rated at baseline; N = 16; 68.8% female), or (3) a random process (N = 16; 50.0% female). For messages selected by investigators, authors on this manuscript rank-ordered each potential PBS based on clinical and theoretical utility, wording preference, and practical application within a community college setting. Investigators were asked to select their top 6 before-drinking PBS messages and 6 during/after-drinking PBS messages. The first and last author then reviewed all the ratings and made final determinations for the 12 investigator-selected messages.

Measures

Demographics.—Randomization was coded as Investigator, Participant, and Random. Basic demographics were assessed and sex was coded as 1 (Female) or 0 (Male).

Alcohol use.—We used the Daily Drinking Questionnaire (DDQ)[28] to measure the number of drinks consumed on each day of a typical week within the past month. A summed score was created to indicate typical number of drinks per week.

Protective behavioral strategies.—Protective behavioral strategies were assessed with 32 items from a combination of measures that assess PBS for alcohol use.[13,29,37] Participants were asked to "Consider a typical drinking event for you. Indicate the tips you would find useful for helping you have a fun and safe time during future drinking events by rating the below tips on a scale from 1 - not at all useful to 5 - very useful." In addition, participants were asked to create personalized PBS for their "future self." They were asked: "Thinking about your own life, what messages would you like sent to yourself when you are using alcohol or "party ing" to stay safe while drinking? In 160 characters or less, please provide 3 personalized text messages that you would like sent from your past self." Responses were recoded into a mean score representing average usefulness of the PBS items.

Personal goals.—Participants were asked to "Please list your 5 most important goals you are thinking about and planning to work toward during your time in college." Responses were used to tailor PBS TMs (Table 1).

Ratings of 12 individual PBS TMs.—During the 2-week TM period, participants were asked to rate how useful each PBS message was from 1 = *not useful* to 5 = *very useful*, regardless of condition they were assigned to. For each participant, the average of the 12 items was created and used for analysis.

RESULTS

Feasibility and Acceptability

Initial analyses revealed there were no differences in baseline typical number of drinks per week among the 3 groups, $F(2, 47) = 0.84$, $p = .44$: investigator-selected messages, M = 9.62, SD = 9.75, messages that were self-selected by participants, M = 9.50, SD = 7.16, or messages that were randomly selected, M = 6.75, SD = 7.38. At baseline, participants overall perceived that PBS would be useful, M = 3.76, SD = 0.59. Males (M = 3.81, SD = 0.63) and females (M = 3.73, SD = 0.57) rated the PBS equally, $F(2, 47) = 0.11$, $p = .74$. There were no significant differences at baseline among the 3 groups' mean ratings of PBS usefulness, $F(2, 47) = 0.49$, $p = .61$: investigator-selected messages, M = 3.68, SD = 0.61, messages that were self-selected by participants, M = 3.71, SD = 0.48, or messages that were randomly selected, M = 3.89, SD = 0.68. From baseline data, PBS descriptive information and percentile rankings of PBS messages with scores of 4 or 5 in terms of usefulness are presented in Table 2.

Response rates to the TM "usefulness" rating queries ranged from 72.9% to 87.5%. Most participants responded to the TMs on the first prompt rather than the second prompt, with a range of 60.4% to 77.1% rating each PBS message within 2 hours. One student did not answer any prompt and one student responded to only one TM. Males (M = 10.32, SD = 2.00) and females (M = 9.64, SD = 2.80) did not differ in TM response rates, $F(2, 47) = 0.55$, $p = .48$. There were no significant differences among the 3 groups for the number of TM responses, $F(2, 47) = 1.33$, $p = .27$: investigator-selected messages, M = 9.13, SD = 3.30, messages that were self-selected by participants, M = 10.00, SD = 2.25, or messages that were randomly selected, M = 10.67, SD = 1.49.

At baseline, students felt the PBS TMs were useful, M = 3.69, SD = 0.69. Males (M = 3.70, SD = 0.69) and females (M = 3.70, SD = 0.70) rated the PBS equally, F(2, 47) = 0.13, p = .91. However, when examining the real-time ratings of TMPBS, there were significant differences among the 3 groups' ratings of usefulness, F(2, 47) = 3.50, p = .039, such that investigator-selected messages, M = 3.33, SD = 0.87, were rated as less useful than messages that were self-selected by participants, M = 3.88, SD = 0.45, or randomly selected messages, M = 3.87, SD = 0.56.

Qualitative findings at follow-up indicated most participants liked how messages were personalized, short, provided helpful information, were received when drinking, and were framed in a positive manner (Table 3). Conversely, they disliked that some strategies were perceived as not helpful, and they wanted to receive messages only when drinking. Participants suggested future messages should be shorter and even more personalized. Many students wanted more content about getting home safely (eg, link to a ride-sharing app; who will be the designated driver) and a greater emphasis within messages on money spent on alcohol. Overall, participants agreed the number of messages sent were "just right" (76%), as well as the number of times per day (76%). Nearly all participants (96%) indicated they were very willing to participate in a study like this again, and the majority reported they were somewhat willing or very willing (93%) to receive these TMs again if they were not enrolled in a study.

DISCUSSION

In a diverse sample of community college students with hazardous drinking, we found high and immediate response rates to the TM rating prompts, suggesting that PBS messages delivered during typical drinking periods are read by target audiences at the times they are making drinking decisions. Community college student drinkers rated most PBS TM favorably, found the messages easy to understand, and over three-fourths felt the frequency and number of messages were "just right," suggesting that these "nudges" or prompts to action could have utility in reducing drinking or alcohol-related negative consequences.

Investigator-selected messages were rated as less useful (though still useful) than messages that were self-selected by participants or messages that were selected at random. This may indicate that PBS selected by the research investigators (ie, strategies consistently shown to be associated with alcohol-related consequences, such as eating prior to drinking to slow alcohol absorption and using a designated driver or other means of returning home safely), may not be perceived as useful as other PBS. This finding is important, and consistent with best practices related to brief interventions in the college setting – that interventions should meet participants where they are in terms of readiness to change, should be person-focused (ie, emphasize what is important to them rather than what the facilitator sees as important).[16] Another interpretation of this finding is that strategies students selected were ones they already had familiarity with and/or were already engaged in to some degree.

A major strength of this study is that we assessed the perceived utility of each selected message proximal to the context where drinking decisions were being made, thus likely resulting in less biased and more accurate ratings compared to retrospective ratings that have

been measured in prior studies. Another notable innovation is that we incorporated self-generated messages into the potential selection of PBS, which could be useful in optimizing personal salience. Future studies could explore which "voice" students hear TMs in when they have selected them on their own versus when it is received from someone else, such as a researcher or campus prevention coordinator.

There are limitations to this study. First, the sample was relatively small, with 48 participants (60% female) who completed the baseline survey and 46 who completed the interviews; thus, subsequent studies could explore the impact of TM-based strategies with a larger sample to improve generalizability as well as to provide greater examination of the potential differences between male sand females. Second, the variability in drinking patterns led to different experiences for some participants (eg, some received TMs on more days in which they were not drinking than when they were); consequently, future research could explore the impact of days on which messages are received based on perceived relevance to the situation (ie, drinking vs non-drinking days). It is not clear the degree to which students need to see messages containing PBS as "useful" or that they need to "like" them for the content to have an impact on behavior. Finally, we focused on feasibility and acceptability for TMs for reducing hazardous alcohol use among community college students. These findings might differ for community college students who do not drink as often or as much as persons in our sample.

For over a decade, numerous challenges related to alcohol prevention on community college campuses have been documented,[38] including limited resources, constrained budgets, and infrequent opportunities for exposure to prevention messages on campuses that are primarily commuter-based. Not only did this study target this understudied and typically underserved group of students, but it did so with a strategy that overcomes many of these barriers and challenges. As the modalities in which students receive information about health (and even communicate with peers) are increasingly centered on technology, efforts to understand how best to affect health and health behaviors are needed. Our study demonstrated that PBS delivered via TM to community college students was both feasible and acceptable. Future studies can continue to explore the impact of such TM-driven interventions as stand-alone prevention efforts and/or as part of boosters in more detailed personalized feedback interventions across all levels of alcohol use, from abstainers to current drinkers.

Acknowledgements

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Table 1

Protective Behavioral Strategies Used in TMs per Condition and Baseline Descriptive Information

Characteristic	Investigator-selected Messages (N = 16)	Participant Self-selected Messages (N = 16)	Randomized Messages (N = 16)
Age (M, SD)	21.81 (2.51)	22.75 (3.19)	23.00 (3.12)
Female (%)	62.5%	68.8%	50.0%
White	56.3%	62.5%	50.0%
Asian	6.3%	12.5%	12.5%
Black	12.5%	.0%	6.3%
Multiracial	6.3%	6.3%	18.8%
American Indian/Alaskan Native	.0%	6.3%	.0%
Other	18.8%	12.5%	12.5%
Hispanic/Latino	18.8%	6.3%	12.5%
PBS usefulness (M, SD)	3.68 (0.61)	3.71 (0.48)	3.89 (0.68)

Note.

PBS usefulness ranged from 1 = not useful to 5 = very useful.

Table 2

Protective Behavioral Strategies Used in TMs per Condition and Baseline Descriptive Information

Strategy	Min	Max	Mean	SD	Percent with score of "useful" or "very useful"	Participant N that received the PBS in the participant-selected condition	Participant N that received the PBS in the random-selected condition
Message from past self.[32]	**3**	**5**	**4.60**	**0.57**	**95.8**	**9**	**7**
Part of feeling lousy the day after drinking can be dehydration. Drink water while drinking alcohol both to pace yourself and get a head start on rehydrating.	3	5	4.40	0.68	87.5	5	3
Make sure you drink with people who will take care of you if you drink too much and are willing to get help if needed.	1	5	4.29	1.01	85.4	3	5
Going out and leaving with friends you know and trust helps everyone look out for one another.	1	5	4.17	0.95	81.3	4	5
Front-loading drinks puts you at a higher risk for drinking more than you wanted. Spacing out your drinks helps you pace yourself.	1	5	3.83	0.99	75	4	7
Other CC students have said: "I started drinking water between my alcohol drinks. This really helps me to avoid a hangover."	**1**	**5**	**4.06**	**1.04**	**72.9**	**6**	**4**
Other CC students have said: "When my friends and I are out drinking, we make sure to watch out for the physical safety of each other."	1	5	4.08	1.08	72.9	5	5
Spread your drinks out across the time you're out.	1	5	3.94	1.01	72.9	5	4
Before going out, think about a game plan of how you are going to safely get home.	**2**	**5**	**4.21**	**0.93**	**71.1**	**7**	**7**
Students tell us that pounding drinks or doing shots results in having their night get away from them. Drinking slowly helps to maintain control longer.	**1**	**5**	**4.06**	**0.97**	**70.8**	**7**	**2**
Eating prior to or while drinking will slow absorption of alcohol into the bloodstream, keeping your peak blood alcohol level lower.	**1**	**5**	**4.02**	**1.02**	**68.8**	**10**	**7**
Using a designated driver is one way to reduce your risk. Consider other transportation options, including walking home with friends.	1	5	3.91	1.21	68.8	6	2
Keep it safe by only riding with people who have not been drinking. Also keep it safe by not accepting rides from one star Uber drivers.	1	5	4.00	1.22	68.8	7	3
Testimonial: "When my friends and I are at a party, bar, or club, we are careful to look out for each other's drinks and don't leave our drinks unattended."	1	5	3.88	1.24	64.6	3	4
You've indicated you want to {RESPONSE:BSHORTGOAL1} and drinking would negatively impact this goal. Consider what strategies you would use before going out to help stay on track to meet your goal.	1	5	3.50	1.17	64.6	4	2
Before drinking, set a limit on the number of drinks you want to have.	1	5	3.56	1.23	64.6	8	5
It's easy to overspend if there's no real limit. Bring cash (not credit or ATM cards) to limit your expenses when going out to drink. Plus, it keeps mystery packages from arriving later in the week.	1	5	3.88	1.17	64.6	10	7
Have a plan for alcohol-free alternatives for you and your friends.	1	5	3.58	1.28	62.5	8	5
Tonight may be one you want to remember - choose drinks other than hard alcohol.	1	5	3.54	1.14	62.5	3	2

Strategy	Min	Max	Mean	SD	Percent with score of "useful" or "very useful"	Participant N that received the PBS in the participant-selected condition	Participant N that received the PBS in the random-selected condition
If you're thinking of cutting down, replace a drink or 2 (or more) with an alcohol-free alternative.	1	5	3.56	1.33	60.4	7	13
How many drinks does it take to feel a buzz? If the number is higher than it used to be, you can reduce your tolerance by drinking less often or taking a 2 week break.	1	5	3.48	1.25	60.4	4	3
People who don't know you may not be looking out for your best interests. Opt out from drinks from strangers.	1	5	3.73	1.30	60.4	3	4
Testimonial: "Sometimes if I don't feel like drinking, I try to get connected with enjoyable activities that do not include alcohol consumption."	1	5	3.77	1.13	60.4	15	10
Keep your buzz going longer by choosing a drink with a lower alcohol content instead of stronger alcoholic beverages.	1	5	3.60	1.08	60.4	1	2
When you want to go out but don't want to drink, volunteer to be the designated driver.	1	5	3.58	1.47	56.3	4	1
You want to go to the party but don't want to drink much tonight. Carry around a cup (or whatever everyone else is carrying around) with something other than alcohol in it if it makes you feel more comfortable socially.	1	5	3.47	1.36	50	4	3
Testimonial: "I purposefully limit the amount of money spent on alcohol. It helps me to limit my drinking by going out with only $20."	1	5	3.35	1.49	50	7	6
Other CC students have said: "I am careful to only drink things I have made myself or opened myself."	1	5	3.48	1.41	50	2	5
Think about what having a safe night would look like. Consider some things you could do to make that happen.	1	5	3.48	1.07	50	5	9
Pay attention to the number of standard drinks you have.	1	5	3.60	1.14	50	3	6
Before drinking, pick a time to stop drinking and stick to it. Your call if you want to loudly exclaim, 'I'm done!' then drop the mic and walk away.	1	5	3.10	1.38	47.9	3	8
You've indicated you want to {RESPONSE:BSHORTGOAL1} and reducing your drinking would positively impact this goal. Consider what strategies you would use before going out to help stay on track to meet your goal.	2	5	3.82	0.99	45.8	7	7
Using alcohol and marijuana at the same time can create a dangerous drug interaction. If you're trying to stay in control of your night and have started drinking, think about just sticking with alcohol.	1	5	3.21	1.41	45.8	0	5
Before you go out, talk to a friend about how to keep each other safe.	1	5	3.40	1.09	45.8	3	6
You've indicated you want to {RESPONSE:BSHORTGOAL1} and reducing your drinking would positively impact this goal. Consider what strategies you would use while out to reduce significant risks and help stay on track to meet your goal.	1	5	3.53	1.02	37.5	0	0
You've indicated you want to {RESPONSE:BSHORTGOAL1} and drinking would negatively impact this goal. Consider what strategies you would use while out to reduce significant risks and help stay on track to meet your goal.	1	5	3.62	1.01	29.2	0	0
If you find more than one phone aimed at you over the course of the night, might be time to slow down. That stuff's getting shared.	1	5	3.58	1.45	29.2	4	7

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Note.

At baseline, PBS text messages were rated from a scale of 1 (not at all useful) to 5 (very useful). Bolded strategies indicate that they were included in the investigator-selected PBS condition. PBS for the condition wherein messages were selected at random and the self-selected condition were from the full list of PBS. CC = community college. BSHORTGOAL1 = participant open-ended response to the prompt: "Please list your 5 most important goals you are thinking about and planning to work toward during your time in college"

Table 3

Sample Comments from Interviews Regarding TMs Liked by Participants

Comments
"I feel like they were a nice reminder to not drink too much. I feel like someone cared about me and was texting me not to drink too much and stay safe."
"I liked the ones tailored towards me."
"How easy they were and how they were helpful suggestions. I would be like "that's a great point" and they made me stop and think."
"They were a quick way to get reminders of things. Very convenient."
"It was really short and simple."
"I feel like someone cared about me."
"I liked generally the reminder. It was nice to see it in a text and made me think about what I was going to be doing later and remind me to drink responsibly."
"liked that it made you think about common nights that people would be drinking, make you think about your choices more than you typically would if no one was reminding, think about keeping in control and what you are doing."
"They were short. I really liked that."
"Short and easy, 2 sentences are too long"