

Mobile-based Balanced Lifestyle for Undergraduate Excellence (MoBLUE)

NCT04105725

Last Updated/Approved: 07/30/2019

1. Basic Information (See Initial Review Request Guidelines Section 1)

1.a: Lead Investigator

BannerU#(e.g., U12345)	Academic Unit: PSYC
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	Completion Report # 18435996
	Completion Date: 4/27/16

1.b: Contact Person (if different from lead investigator)

Contact Banner U#	Contact Email:
Contact Last Name:	Contact First Name:

1.c: Faculty Advisor (this section required for students only)

BannerU#(e.g., U12345)	Academic Unit:
Last name:	First Name:
Email address:	
	CITI Training Info:
	Completion Report #
	Completion Date:

1.d: Study Information

Study Title: * Mobile-based Balanced Lifestyle for Undergraduate Excellence (MoBLUE)		
Anticipated Number of Subjects: * 100		
Co-Investigators:		
Submission Type: * Exempt Study <input type="checkbox"/> Secondary Analysis of Existing Data Only <input type="checkbox"/> All Other Studies <input checked="" type="checkbox"/>		
Externally Funded? * <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

1.e: Affirmations

By checking the box below, Investigator affirms the following:

- 1) The research will not be initiated until written approval is secured from the IRB.
- 2) I will conduct this study as described in the approved study. If any changes are anticipated, I will contact the IRB staff prior to implementing the changes and request the appropriate form or procedure. I will not implement the changes until I receive approval from the IRB or its staff.
- 3) I will contact the IRB staff immediately if any of the following events occur: unanticipated problems involving risks to subjects, study deviations, and findings during the study that would affect the risks or benefits of participation.
- 4) If you are a student, you also affirm your understanding that approval of your Faculty Advisor is required before this document is submitted to IRB.

Investigator affirms: *

Yes

No

Date Affirmed: 06/24/2016

By checking the box below, Faculty Advisor affirms the following (required for graduate and undergraduate student research):

- 1) I have reviewed and approved the research plan of the student(s).
- 2) I assume responsibility for ensuring that the student(s) conducting research are aware of their responsibilities as researchers
- 3) The IRB will be immediately informed in the event of unanticipated problems involving risks to subjects, study deviations, or findings during the study that would affect the risks or benefits of participation.
- 4) I will submit the reviewed study to irb@memphis.edu on behalf of my student

Faculty Advisor affirms:

Yes

No

Date Affirmed:

*Required fields

2. Purpose of the Study (See Initial Review Guidelines Section 2)

Literature Review:

Heavy drinking peaks during late adolescence and early adulthood and is especially common among 18 – 24 year-old young adults who attend college (Hingson et al., 2005). College students often drink large quantities of alcohol over relatively brief time periods, which can result in dangerously high blood alcohol concentrations (Fournier et al., 2004). These patterns of heavy drinking place college students at high risk for alcohol-related health and social problems. Hingson et al. (2005) estimated that alcohol use contributed to over 1,700 deaths among U.S. college students in 2001. Large numbers of students also experienced other past-year alcohol-related health and social problems, including having unprotected sex, driving under the influence of alcohol, being injured due to drinking, being assaulted or hit by a student who was drinking, and being the victim of sexual assault or date rape (Hingson et al., 2005). Heavy drinking can also impede critical developmental tasks such as educational attainment and career development (Bachman et al., 1997), which may in turn increase risk for substance abuse and other problematic outcomes during adulthood (Bennette et al., 1999). Heavy drinkers tend to enter college with lower academic aptitude, are less engaged in academic activities during college, and finish with lower grades than other students (Ham & Hope, 2003).

Growing recognition of these social and health problems has made the prevention and treatment of college student alcohol abuse a significant research and public health priority (Ham & Hope, 2003). Colleges are an especially promising context for prevention and early intervention because approximately one-third of young adults do not begin to drink heavily until they arrive at college (Gledhill-Hoyt et al., 2000). Most students begin drinking during their 1st year, which makes the initial transition to college an important time to conduct prevention programs.

The most promising interventions for college student drinkers include personalized feedback about drinking patterns, blood alcohol content (BAC), and alcohol-related risks along with advice to moderate drinking (Dimeff et al., 1999; Larimer et al., 2004/2005). Typically the personal drinking feedback and advice are delivered in the context of a motivational interview (MI), a supportive and nonjudgmental therapeutic approach that focuses on increasing motivation to change drinking (Miller & Rollnick, 2002). The goals of these interventions are pragmatic and focused on reducing drinking and related consequences. For example, students are advised to limit their overall alcohol quantity and to space their drinks out over several hours. These brief motivational interventions (BMIs) result in drinking reductions that exceed various control conditions (Murphy et al., 2001, 2004).

In one of the largest BMI trials with college students, Marlatt et al. (1998) identified 300 incoming college students who were at risk for alcohol problems based on their reported levels of drinking in high school and randomly assigned them to either an assessment-only control condition or a single-session BMI (Marlatt et al., 1998). Students who received a BMI showed significant reductions in drinking quantity and alcohol-related problems relative to untreated controls throughout the 4-year follow-up. The amount of change was small, but meaningful in light of the harm reduction goals. Average quantity consumed per occasion decreased from 4.7 to 3.6 standard drinks among treated participants, a mean shift from risky “binge” drinking to more moderate and less harmful consumption levels. These findings were replicated by Borsari and Carey (2000), and other studies have found an advantage for BMIs relative to active control conditions. Murphy et al. (2001) found that, among the heavier drinkers in a sample of undergraduates, an individual BMI intervention showed a significant advantage for reducing total drinks per week and frequency of heavy drinking over a traditional educational intervention.

48 Several empirically supported alcohol treatments for adults (e.g., contingency management, community
49 reinforcement, and coping skills training) attempt to develop viable alternatives to substance use such
50 as recreational pursuits, exercise, or increased engagement in career related activities (Petry et al.,
51 2000). Recently, research in college student populations has demonstrated support for a behavioral
52 economic supplement to BMIs that addresses a previous limitation that these interventions do not
53 attempt to also increase positive activities that might substitute for alcohol and drug use (see Murphy et
54 al., 2012a). A pilot study at the University of Memphis found that the combination of an alcohol-focused
55 BMI and Substance-Free Activity Session (SFAS) resulted in significantly greater reductions in alcohol
56 problems and binge drinking compared to an alcohol BMI + relaxation session control intervention
57 (Murphy et al., 2012a,b). Given the promising results of the in-person SFAS, the proposed project will
58 develop and evaluate a mobile-based (text-message) BMI + SFAS that attempts to increase students'
59 participation in academic, community, and recreational activities while taking full advantage of the
60 technological advances many young adults already own and use (Anderson, 2015).

61

62 *Possible Contribution:*

63 The goals of the SFAS - increasing student engagement in academic, campus, and career-related
64 activities- are consistent with the priorities of most colleges. Therefore, if the mobile intervention is
65 found to be efficacious, it would likely be appealing to colleges and has the potential for cost-effective
66 and widespread dissemination.

67

68 *Study Goals:*

69 The proposed project will develop and empirically evaluate a mobile-based alcohol brief intervention
70 and substance-free activity session. To do this, study personnel will develop and systematically evaluate
71 an intervention that includes efficacious elements of brief alcohol interventions along with personalized
72 feedback. Intervention elements will be delivered remotely via personalized web-based feedback and
73 text-messages. We will evaluate the efficacy of the mobile-based brief alcohol intervention compared
74 to mobile-based alcohol and nutrition education in the context of a randomized pilot trial.

75

76 **3. Methods and Procedures** (See Initial Review Guidelines Section 3)

77 This research will be divided into two stages: Stage 1, the screening stage, and Stage 2, the randomized
78 pilot trial stage. During the screening stage, participants will be recruited and screened for eligibility to
79 participate in Stage 2. During the randomized controlled trial stage (stage 2), we will test the feasibility
80 and efficacy of a mobile-based BMI + SFAS in the context of a two-group experimental design. All
81 students (N = 100) will complete a baseline assessment and will then be randomly assigned to either
82 receive a mobile-based BMI + SFAS, or mobile-based alcohol and nutrition education. Each group will
83 receive 4 weeks of booster contact (1 booster session per week) on material from their respective study
84 condition. Outcomes will be assessed after the fourth booster session and at a 3-month follow-up.

85 **Procedures:**

86 *Screening to Identify Eligible Participants:*

87 In order to identify enough eligible participants, we estimate that we will need to screen approximately
88 1000 college students (recruited through the University of Memphis psychology subject pool, emails
89 sent to undergraduate courses, classroom screeners, local and university publication advertisements,
90 and flyers around the University of Memphis campus and other local college campuses; see Appendix
91 for recruitment flyer/ad). Participants will complete a brief screening survey via classroom screeners,

92 the SONA system or through a secure weblink sent via email or posted in flyers to identify those
93 students who might be eligible to participate in the study. In order to be contacted about the clinical
94 trial, respondents will be asked to provide contact information. Ads and flyers will also include study
95 contact information for interested respondents/participants to contact study staff directly and screen
96 for eligibility. Given that heavy drinking levels are highest among teenagers and twenty year olds,
97 college students 18 to 25 years who report two or more binge drinking episodes in the past month (4/5
98 or more drinks for women/men on one occasion) will be eligible to participate in this trial (eligibility
99 criteria listed in Section 7). We expect 100 students to participate in the clinical trial.

100 If the participant meets eligibility criteria as described above, the researcher will speak with the
101 participant via phone call to confirm eligibility status, explain the project procedures and confidentiality
102 in more detail, and allow the participant the opportunity to ask any questions they may have about the
103 study. Text messaging and email may also be used as methods to communicate with participants who
104 meet the eligibility criteria and will be used as the primary method of communication if the student
105 prefers. Participants will be informed that the study is designed to learn more about college students'
106 lifestyle and health behaviors and that the study will involve random assignment to one of two
107 treatment conditions, along with 4 booster sessions by text-message, a post-intervention survey
108 immediately following the 4th booster session, and a survey follow-up three months after their last
109 booster session. If the participant expresses interest in the study, the study administrator will invite
110 them to participate in further phases of the study. If students do not meet the eligibility criteria at the
111 time of screening, but indicate drinking in the past 6-months, they may be contacted later and
112 rescreened via phone, text message or email and then enrolled if interested in the study. Eligible and
113 interested individuals will remotely read and e-sign the consent form, provide contact information, and
114 complete the initial baseline assessment via a secure web-link.

115 All self-report measures will be completed by the participant via a secure, web-based survey. Prior to
116 completing baseline measures, participants will be provided with a consent form and will be informed of
117 the study's purpose, risks, benefits, compensation, and all other pertinent study details. Participants will
118 be provided with a phone number and email address should they have questions and will also be
119 informed in the consent that they can discontinue the study at any time. If participants choose not to e-
120 sign the consent form or decide not to participate in the study at any time, they will be provided with
121 information about college student alcohol misuse on websites, hotlines, and local resources to learn
122 more about their drinking if they are interested. The remote web-based assessment will last
123 approximately 30 minutes. After completing the assessment, participants will be randomized to either
124 a) the mobile-based BMI+SFAS (mBMI+SFAS); or b) mobile-based alcohol and nutrition education
125 (mANE) (both described below). Immediately following the baseline assessment and random
126 assignment, participants will take part in a 60-minute session of either the mobile BMI or mobile Alcohol
127 Education. Later the same week, participants will take part in either one 60-minute session of the
128 mobile SFAS or mobile Nutrition Education. The interventionist conducting the mobile BMI or Alcohol
129 Education earlier in the week will also conduct the mobile SFAS or Nutrition Education, respectively, as
130 well as all booster contact. A brief 3-item survey will be administered immediately following the mobile
131 SFAS or Nutrition Education session that will solicit initial impressions and feedback on these respective
132 sessions.

133 Booster contact will take place once a week for four weeks for approximately 20 minutes. Booster
134 contact for the mBMI+SFAS group will also collect information on past week time allocation, level of
135 discounting of future monetary rewards (delay discounting), and the subjective reward value of alcohol,
136 which are associated with problematic alcohol use. Upon completion of the booster contact,

137 participants will complete a post-intervention assessment survey via secure web link. The post-
138 intervention survey will collect information on the participants' experiences with the mobile-based
139 interventions and will solicit feedback about the interventions. They will then be thanked for their
140 participation and reminded of their 3-month follow-up appointment.

141 For completing the baseline assessment participants will be awarded either 1 hour of credit for
142 participation, which the researcher will grant through the SONA System, or \$25. Participants may earn
143 \$10 for completing at least 3 booster contact surveys, and another \$10 for completing the post-
144 intervention assessment survey. This is to help ensure high survey completion rates.

145 All participants will be asked to download on to their smartphone or personal computer a secure
146 messaging web app called *Babelnet* (<https://www.babelnet.com/en/>). *Babelnet* is free to download and
147 use, and study personnel will assist participants in the download and use of the app. Participants will be
148 assigned a userID that will be similar to their study ID and a password that will be saved in a secure,
149 password protected file only accessible to study personnel. In the event a participant has forgotten or
150 lost their *Babelnet* login information, they may contact study personnel to retrieve it and log in securely.
151 Messages sent through *Babelnet* are heavily encrypted by the app. However, study personnel will record
152 (via screenshot or copy-and-paste) the text conversations to facilitate later communication and for
153 intervention supervisory, as well as fidelity, purposes. These recordings will be saved on a secure server
154 in a password protected shared drive that is accessible only to study personnel.

155 Three months post-baseline, participants will be asked to remotely complete a web-based follow-up
156 self-report assessment battery. The follow-up will assess the impact of the interventions on attitudes
157 and behaviors toward alcohol use, as well as patterns of alcohol-related problems and drinking levels,
158 and will last approximately 30 minutes. Upon completion, participants will be thanked for their
159 participation, debriefed, and awarded 1 credit hour through the SONA System, or paid \$20 for their
160 participation. Participants may earn a total of \$65 for their participation across all study assessments
161 (baseline, boosters, post-intervention survey, and 3-month follow-up).

162 After the 3-month assessment, participants will be given the option to complete any of the intervention
163 sessions that they did not complete as a part of the study or to complete a session for a second time.

164 **Interventions**

165 Mobile-based Brief Motivational Interview (mBMI). Following the baseline assessment, participants will
166 complete a mobile text-message-based BMI. This session will last approximately 60 minutes.
167 Personalized feedback will be provided with information on how the participant's drinking compares to
168 that of other students, along with information on risk factors such as engaging in heavy drinking and
169 their use of protective behavioral strategies. The goals of this session are to raise concern about
170 potential consequences of heavy drinking, correct faulty normative perceptions of drinking, and assist
171 students in strategizing means for avoiding future consequences of drinking. The clinician will also
172 discuss and provide advice on avoiding driving after drinking if the participant endorses alcohol-impaired
173 driving. Participants will be instructed to view the personalized feedback document and respond to a
174 number of closed-ended questions embedded in the feedback document as a fidelity check. After
175 confirming receipt and processing of the document, the clinician will send participants text messages
176 containing the following open-ended questions:

- 177 1. What are some things you like about drinking? And what are some things you don't like as
178 much?
- 179 2. What do you make of your percentile rank compared to other college students?
- 180 3. You also endorsed some consequences you've experienced because of drinking.
 - 181 a. Which of these would you most like to avoid in the future?
 - 182 i. *If the participant endorses alcohol-impaired driving, the clinician will address that here.*
 - 183 b. How might you do that?
 - 184 4. How do you see yourself making use of all this information?
 - 185 a. How would you like things to be different?
 - 186 b. What do you think has to change?
 - 187 5. Would you be willing to set a goal to reduce future drinking or to avoid specific consequences of
188 drinking?
 - 189 a. *NO:*
 - 190 i. What do you think will happen if you continue to drink the same way you have
191 been?
 - 192 ii. What would be some advantages of cutting down on your drinking?
 - 193 b. *YES:*
 - 194 i. What do you think might be your next step?
 - 195 6. Here are some strategies you already use to prevent some of the negative consequences of
196 drinking. What are some other strategies or ideas you might have on maximizing the positive
197 aspects of drinking while avoiding some of the consequences we talked about?
 - 198 a. *Reflect*
 - 199 b. *Provide any suggestions if they are open to it*
 - 200 7. I want to thank you for talking with me today, and just to summarize everything:
 - 201 a. *Motivation/goal*
 - 202 b. *Plan*
 - 203 c. *Self-efficacy*

205 Mobile-Based Substance-Free Activity Session (mobile SFAS). Following the mBMI, participants will
206 schedule a time within the same week to participate in a mobile-based SFAS. This session will last
207 approximately 20 minutes. Personalized feedback and other information, including self-reported past
208 week time allocation and the association between class attendance, GPA, and income, will be sent in a
209 secure link or as an attachment. The same clinician who conducted the mobile BMI will also conduct the
210 mobile SFAS,. Similar to the structure of the mBMI session, the clinician will have a text exchange with
211 the participant containing the following open-ended questions:

- 212 1. What are your goals for college? Tell more about why these goals are important to you? What
213 would be the benefits of accomplishing them?
- 214 2. What do you hope to do after you graduate? Tell me more about why this would be a good fit
215 for you? What do you need to be doing right now and over the next year or so to achieve this
216 outcome?
- 217 3. How does your alcohol use fit in with your ability to accomplish your goals?
- 218 4. People rarely think about how they spend their time, even though it is a valuable resource and
219 says a lot about your priorities and goals.
 - 220 a. Looking at how you allocate your time (*referencing feedback on time allocation*), how
221 does your time allocation map onto your goals we discussed?
 - 222 b. Are there certain activities that you would like to devote more time to? Why?

223 5. We asked you about some activities that don't involve drinking and that you said you enjoyed.
224 Which of these activities/hobbies do you enjoy most? [A *link/attachment will be sent securely*
225 *with a list of tailored activities based on their interests*]
226 a. Are there certain activities/hobbies you would like to do more often?
227 b. What are some barriers you have encountered?
228 6. What are some specific things you can do this semester or this year to make progress towards
229 your goals we discussed?
230 a. What would be the benefits of achieving these goals?
231 b. How will you know if your plan is working?
232 c. How will you know if you are getting off track?
233 d. What steps would you take to get back on track?
234 7. Take a moment to consider a positive experience you are looking forward to in the next couple
235 of months that is consistent with or related to your goals we discussed. Then, briefly (in 3 or 4
236 sentences) describe what it would be like to actually have this positive experience, noting in
237 particular how you will feel and what you will be thinking.
238 8. I want to thank you for talking with me again today, and just to summarize:
239 a. *Goals*
240 b. *Plan*
241 c. *Self-efficacy*

242 For the following four weeks after the mobile SFAS, the clinician will initiate four brief text exchanges
243 (once per week) with the participant about their goal progress and any changes in weekly time
244 allocation, as well as connecting them with activities for the upcoming week that are consistent with
245 their interests and goals. Each brief text exchange will also include a brief reminder of the positive future
246 experience that is goal-consistent described by the participant. Four weeks after the mSFAS, the
247 participant will complete a post-intervention assessment survey and will be reminded of their 3-month
248 follow-up appointment

249 Mobile Alcohol Education*. Following the baseline assessment, participants will complete a mobile text-
250 message-based alcohol education session. This session will last approximately 60 minutes (in terms of
251 direct contact). Participants will be provided with information on what is a standard drink of alcohol and
252 other alcohol-related term definitions, how alcohol is metabolized and how it effects the body, what
253 blood alcohol content (BAC) is, how to identify alcohol poisoning, alcohol tolerance, and the biphasic
254 effect. The interventionist will check-in with the participant throughout for any questions or comments.
255 The alcohol education materials were developed, in part, from brochures and fact sheets provided by
256 NIAAA: (<https://www.niaaa.nih.gov/publications/brochures-and-fact-sheets>).

257 Mobile Nutrition Education*. Following the mobile Alcohol Education session, participants will schedule
258 a time within the same week to participate in a mobile-based nutrition education session. This session
259 will last approximately 60 minutes. Participants will be provided with information on the different food
260 groups (e.g., fruits, grains, proteins) and the types of foods in each food group (e.g., apples, bread,
261 chicken), key recommendations on foods/nutrients to increase (e.g., whole fruits/vegetables, whole
262 grains, fish/seafood) and food/food components to decrease (e.g., sodium, trans/saturated fats, sugar),
263 and how to build a healthy eating pattern. Although problematic alcohol use has been shown to be
264 associated with poor nutrition and eating habits, providing nutrition information has not been shown to be
265 significantly affect change in drinking behaviors. Nutrition education materials were developed from the

266 United States Department of Agriculture Food and Nutrition Service ([http://www.fns.usda.gov/get-
267 involved/provide-nutrition-education](http://www.fns.usda.gov/get-involved/provide-nutrition-education)).

268 * The Mobile-ANE (mobile Alcohol and Nutrition Education) will be delivered in an instructional manner.

269 **Data Analyses.**

270 The primary study analyses will examine whether or not there is a statistically significant difference
271 between treatment groups in change in a number of self-reported indicators of alcohol use severity.
272 Repeated measures mixed modeling analyses will be conducted to compare the mobile-based BMI
273 group and the mobile Alcohol and Nutrition Education group on each of the primary outcome variables
274 at 3-month follow up. Mixed modeling examines data similarly to repeated measures ANOVA; however,
275 mixed modeling provides increased flexibility in handling missing data by utilizing all available data for
276 each participant and provides ease of adaptation for multiple research designs (Hox, 2010; West, Welch,
277 and Galecki, 2007). For each model tested, one of the primary outcome variables will serve as the
278 dependent variable with gender, age, and ethnicity likely included as covariates.

279 **Measures** (Please see attached documents detailing measures for inclusion.)

280 Demographics. These questions will ask about participant gender, age, ethnicity, fraternity or sorority
281 affiliation, year in school, place of residence, and income/finance. Each of these demographic variables
282 have been shown to be associated with driving after drinking and will be used as covariates in statistical
283 models.

284 Motivation to change. The Readiness Ladder (Biener & Abrams, 1991) will be used to assess motivation
285 to change drinking immediately post intervention (i.e., after both the In-person and Text-based
286 interventions) to evaluate how motivation changes as a function of condition. This single item measure
287 has been found to be sensitive to changes in motivation in other brief alcohol intervention studies
288 (Murphy et al., 2010).

289 Discrepancy Rating Form (Neal & Carey, 2004). The Discrepancy Rating form is a 5-item self-report
290 measure that assesses the extent to which the individual believes alcohol is helping or interfering with
291 various aspects of their life, including relationships with friends and family, school work, health, and
292 appearance.

293 Daily Drinking Questionnaire (DDQ; Collins, Parks, & Marlatt, 1985). Students will be asked to estimate
294 the total number of standard drinks they consumed on each day during a typical week in the past
295 month. The DDQ is frequently used to assess alcohol consumption patterns among college students and
296 is correlated with self-monitoring and retrospective drinking measures (Kivlahan, Marlatt, Fromme,
297 Coppel, & Williams, 1990). A separate item will be included to assess binge drinking. Students were
298 asked to report how many times they had drunk 4 or more (if female) or 5 or more (if male) standard
299 drinks in one occasion during the past month (Wechsler et al., 1995). This measure will be used as a
300 secondary intervention outcome variable.

301 Brief Young Adult Alcohol Consequences Questionnaire (B-YAACQ; Kahler, Strong, & Read, 2005). The
302 BYAACQ is a 24-item self-report measure that assesses whether or not participants have experienced
303 items on a list of potential alcohol-related problems. Participants indicate whether or not they have

304 experienced each alcohol-related problem by circling yes or no for each item. The items are then
305 summed for a total score. The BYAACQ has demonstrated high internal consistency with college
306 students (Kahler et al., 2005) as well as good reliability and validity (Kahler et al., 2008). This measure
307 will be used as a secondary intervention outcome variable.

308 Norms. Participants will be asked to estimate the percentage of drinkers that report past 3-month
309 alcohol-impaired driving. This data will be used to compare normative estimates to actual data on
310 percentage of drinkers report AI driving in the personalized feedback condition.

311 Drug Use Questionnaire. This measure is used to assess the frequency of past month illicit and
312 prescription drug use. This measure will be used as a secondary intervention outcome variable.

313 Income Questions. Participants will be asked questions pertaining to 1) parent's annual household
314 income; 2) personal monthly income; 3) disposable income; 4) amount spent during the past month; 5)
315 Amount spent on alcohol during the past month; and 6) amount spent on drugs during the past month.

316 Time Allocation. The time allocation measure asks a number of questions about typical activities and
317 asks the respondent to record how many hours they typically spend engaged in each activity. We will
318 collect information on time spent in 16 different activity categories common to college students and
319 pertinent to the goals of the intervention (e.g., drinking/using drugs, studying, extracurricular activities,
320 class, community activities, exercise/sports; Murphy et al., 2006). Consistent with procedures from our
321 previous trials, in order to minimize recall burden, activity data will only be collected for the week
322 preceding the assessment. To enhance recall for specific activities, participants will be asked to bring
323 their day planner or smart-phone to the assessment and are provided with weather reports and news
324 events from each day during the past month. We will evaluate whether or not the SFAS resulted in
325 decreased time using alcohol or drugs, and increased time spent in substance-free activity categories,
326 and whether change in time use mediated any main effects on drinking and alcohol problems. The M-
327 TLFB assessment will be used to provide personalized drinking feedback in the BMI, and feedback on
328 time allocation to substance use and to several categories of substance-free activities (e.g.,
329 studying/academics, campus/community activities, volunteering, exercise) in the SFAS. This measure is
330 used to help create the feedback, which provides a visual overview of a person's typical time allocation.

331 Depression, Anxiety and Stress Scale (DASS-21). The DASS-21 is a self-report instrument that consists of
332 three, 7-item subscales: stress, anxiety, and depression. Participants indicate on a 4-point scale how
333 much each item has applied to them over the past week. Sample items include, "I found it hard to wind
334 down," "I was aware of dryness in my mouth," and "I couldn't seem to experience any positive feeling at
335 all." This measure will be used as an exploratory moderator. Previous research evaluating the SFAS
336 demonstrated that depression is an important moderator of treatment outcome (Murphy et al., 2012);
337 therefore, for the sake of relevance and brevity, the current study will only include the depression
338 subscale.

339 Delayed Discounting (DD). We will measure DD using a modified version of the Monetary Choice
340 Questionnaire (MCQ; Kirby et al., 1999). The modified MCQ is an 8-item measure of delayed reward
341 discounting with choices between two hypothetical amounts of money. Delay discounting will be
342 calculated using the approach described by Kirby et al. Hypothetical money choices provide a reliable
343 and valid estimate of discounting rates. This measure will be used as an exploratory moderator.

344 Alcohol Purchase Task (APT; Murphy et al., 2006) measure of alcohol reinforcing efficacy. The APT is a
345 simulation measure that assesses self-reported alcohol consumption and financial expenditure across a
346 range of drink prices. Participants report the number of standard drinking they would consume in a
347 hypothetical drinking scenario across 17 price increments ranging from zero (free) to \$20 per drink.
348 Demand curves are estimated by fitting each participant's reported consumption across the range of
349 prices to Hursh and Silberburg's demand curve equation: $\ln Q = \ln Q_0 + k (e^{-\alpha Q_0 C} - 1)$, where Q is
350 demand, Q₀ is the level of demand that occurs when cost, C, approaches zero, k specifies the range of
351 Q, and α is a measure of demand curve elasticity. Several reinforcing efficacy (RE) measures are
352 generated from the demand curve: 1) intensity of demand (alcohol consumption at the lowest price), 2)
353 Omax (maximum financial expenditure on alcohol); and 3) elasticity of demand (sensitivity of alcohol
354 consumption to increases in cost). These RE indices are reliable, correlated with alcohol consumption
355 and problems, predictive of treatment response, and function as dynamic markers of intervention
356 response. This measure will be used as an exploratory moderator.

357 Consideration of Future Consequences Scale (CFCS; Strathman et al., 1994). The CFCS is a measure of
358 the extent to which an individual values immediate versus future rewards. The CFC consists of 12
359 statements weighing the present and the future; specifically, identifying whether or not the respondent
360 is more concerned with immediate outcomes as opposed to future outcomes. Participants will report
361 how much each statement represents them on a scale from 1 to 5 (1=extremely uncharacteristic to 5=
362 extremely characteristic). Several of the items are reverse coded to protect against random response.
363 The items are added up, with higher scores indicating greater consideration of future consequences.

364 Reward Probability Index (RPI). The RPI is a self-report measure of an individual's access to reward and
365 ability to experience reward. It is a 20-item measure that consists of two subscales: Reward Probability
366 and Environmental Suppressors. Scores on the RPI reflect overall reward experience with higher scores
367 indicating a higher degree of experienced reward and lower scores indicating relative reward
368 deprivation. Environmental suppressors are obstacles in experiencing or engaging in rewarding activities
369 or opportunities. The 20 statements in the RPI are rated on a scale from 1 (strongly disagree) to 4
370 (strongly agree). Because behavioral economic theory proposes that it is the reward experienced from
371 alternative, substance-free activities, and not necessarily the capacity for or ability to experience reward
372 itself that influences level of substance use, the current study will only use the environmental
373 suppressors subscale.

374 Protective Behavioral Strategies Scale (PBSS). The PBSS is a 19-item measure that assesses the frequency
375 of engagement in protective or cognitive behavioral strategies specific to reducing alcohol consumption
376 or to drinking in a manner that reduces negative consequences. Respondents mark the frequency in
377 which they engage in each protective strategy on a scale from 0 to 5 (0=Never; 5=Always). The PBSS will
378 be incorporated in the feedback for the mBMI condition.

379 Short Self-Regulation Questionnaire (SSRQ). Behavior regulation and impulsivity will be measured using
380 the SSRQ-31. This measure consists of 31 statements related to self-regulation, such as "I feel bad when
381 I don't meet my goals" and "I enjoy a routine and like things to stay the same". These are scored
382 between 1 and 5 (1= strongly disagree and 5= strongly agree) and are added up to create a total self-
383 regulation score. The SSRQ does not have any subscales; factor analysis showed that all items load
384 heavily onto one factor (Carey, Neal, & Collins, 2004).

385 Other academic and student engagement measures. Participants will report any school or community
386 activities that they have been involved with in the past or would like to participate in during college

387 (Kuh, 2001). They will also indicate from a list of 26 activities those which they would have liked to
388 engage in more in the past month. This information will be used to prepare a personalized list of campus
389 activities that are consistent with the student's interests and at follow-up to evaluate whether or not the
390 SFAS resulted in increased participation in extracurricular activities relative to the control conditions. We
391 will also obtain registrar reports of student GPAs.

392
393 Session Ratings. Participants will rate the intervention and booster sessions on various scales, including
394 usefulness, interest, relevance and effectiveness, and will provide free-response feedback on the
395 sessions. The session ratings survey is 15 items and is a mix of 10-point scale items and free-response
396 text items.

397
398

399 **4. Secondary Analysis of Existing Data** (See Initial Review Guidelines Section 4)

400
401 N/A
402

403 **5. Investigator(s) Qualifications** (See Initial Review Guidelines Section 5)

404 Dr. Murphy has published extensively on college student substance use and associated risk factors (e.g.,
405 Murphy, Dennhardt, Skidmore, Martens, & McDevitt-Murphy, 2010; Skidmore & Murphy, 2011;
406 Murphy, et al., 2012; Murphy, Barnett, & Correia, 2012; Murphy, et al., 2013). Further, he currently
407 holds an R01 NIAAA-funded grant (R01AA020829) examining the efficacy of a brief motivational
408 interview intervention targeting college student substance use. Recruitment for that study is largely
409 through the University of Memphis Sona System. Dr. Murphy also served as a co-investigator on a study
410 approved through the IRB (081511-818) which examined similar constructs to the proposal submitted
411 here.

412 Kathryn Soltis, M.S., has also published on college student substance misuse and related
413 variables (Soltis, McDevitt-Murphy, & Murphy, 2017; Acuff, Soltis, Dennhardt, Borsari, & Murphy, 2017;
414 Voss, Soltis, Dennhardt, Martens, & Murphy, 2018; Soltis et al., 2018; Acuff, Soltis, Dennhardt, Berlin, &
415 Murphy, 2018; Teeters, Soltis, & Murphy, *in press*). Ms. Soltis worked on Dr. Murphy's R01 described
416 above as both a research assistant and clinical interventionist and, therefore, has substantial experience
417 with young adult and college student heavy drinkers. Further, Ms. Soltis was recently awarded an F31
418 NIAAA training grant to help her conduct the currently proposed study, which will be used to complete
419 her dissertation for the clinical psychology doctoral program at the University of Memphis.

420 Andrew Voss and Cecilia Olin have also had experience in working with college student young adults
421 related to substance misuse, and have published on this topic in peer-reviewed journals (Voss, Soltis,
422 Dennhardt, Martens, & Murphy, 2018; Acuff, Voss, Dennhardt, Borsari, Martens, & Murphy, *in press*;
423 Montes, Olin, Teachman, Baldwin, & Lindgren, 2018; Ramirez, Olin, & Lindgren, 2017). Mr. Voss and Ms.
424 Olin have been trained by Dr. Murphy and Ms. Soltis as clinical interventionists and have demonstrated
425 foundational competency in motivational interviewing and effectively delivering the text-message
426 interventions outlined above.

427
428

429 **6. Human Subjects** (See Initial Review Guidelines Section 6)

430 **a. Characteristics.** Participants will be U of M students, ages 18-25. Participants will be of varied age,
431 ethnicity, and gender.

432

433 **b. Vulnerable Populations.** Participants will be U of M students, ages 18-25.

434

435 **c. Pre-existing relationship to subject pool.** To our knowledge there is no pre-existing relationship
436 between the researcher and the subject pool.

437

438 **d. Subject Selection.** Participants will be U of M students, ages 18-25. To obtain a broadly representative
439 sample, participants will be of varied age, ethnicity, and gender.

440

441 **e. Anticipated Number of Subjects.** We anticipate recruiting 1000 participants for stage 1, and 100
442 participants for stage 2. Based on prior SONA System screening data on alcohol use among University of
443 Memphis undergraduate students, we anticipate that recruitment in this range is feasible.

444

445 **7. Recruitment** (See Initial Review Guidelines Section 7)

446 Participants will be first, second, and third year undergraduate students recruited from the University of
447 Memphis and other local colleges/universities via the psychology department SONA system, classroom
448 screeners, campus wide emails, and flyers. Students will be invited to complete a brief screener
449 (N=1000) that includes demographic questions and questions on past-month heavy drinking. They will
450 receive course credit in exchange for completing the screening survey.

451

Eligibility Criteria

452

- **Inclusion Criteria**

453

- Age 18-25
- Ability to speak, read, and write in English
- 2 or more heavy drinking episodes (5+/4+ drinks in one sitting for
males/females) in the past month
- Full time students
- Employed < 30 hours per week
- Reports access to a cell phone/smartphone and willingness to read study
materials and exchange texts post-intervention with study personnel
- Reports a valid email address

457

- **Exclusion Criteria**

458

- Currently in treatment for substance use or abuse

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8. Subject Payment (See Initial Review Guidelines Section 8)

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For completing the baseline assessment and brief 3-item survey immediately following the mobile SFAS or mobile Nutrition Education assessment, participants will be awarded either 1 hour of credit through the SONA System, or paid \$25 for their participation.

For completing the 3-month follow-up, participants will be awarded 1 credit hour through the SONA System, or paid \$20 for their participation.

478
479 Participants may earn \$10, or 0.5 SONA credit, for completing at least 3 booster contact surveys.
480
481 Participants may earn \$10, or 0.5 SONA credit, for completing the post-intervention assessment survey.
482
483 Participants have the opportunity to earn up to \$65 total, or 3 SONA credits, for their participation.
484

485 **9. Potential Risks** (See Initial Review Guidelines Section 9)

486 The risks in this study include subject discomfort (e.g., psychological discomfort due to discussing
487 personal and/or sensitive information related to participant substance use or substance-related
488 problems) and risk of breach of confidentiality. The likelihood of experiencing subjective discomfort
489 from completing the present assessment batteries is low. The questions used in this study are standard
490 research instruments that have been used without observed discomfort in numerous studies with
491 similar populations. Some participants may find the personalized feedback or alcohol education about
492 the risks associated with drinking uncomfortable. The risk of breach of confidentiality is also judged to
493 be low based on the safeguarding procedures in place, including removing identifiers from data, storing
494 identifiers and data in separate locked file cabinets, password-protecting all data files, and limiting
495 access to project data to project personnel. Only the study administrator and study research assistants
496 will have access to any identifying information. Any identifying information will be destroyed after
497 completion of last follow-up or if the participant does not complete the last follow up, within six-months
498 of study enrollment. We will encourage participants to password protect their cell phones or personal
499 computers to ensure confidentiality of the text information and links sent. *Babelnet*, the encrypted
500 messaging app described above, will provide an extra layer of security as it requires a separate password
501 and heavily encrypts all sent messages. Participants' userIDs for *Babelnet* will not include any identifiers
502 and will be similar to their study ID number. This is due to preset userID requirements on *Babelnet*.
503

504 Planned procedures for protecting against risk. For the possibility of subjective discomfort from
505 answering questions, any distress will be minimized by assurances that participants can refuse to
506 answer any particular question that they do not feel comfortable addressing and may withdraw at any
507 time without penalty. Participants will also be advised to talk to a research assistant following the
508 assessment batteries should any psychological distress persist, and referrals will be provided
509 accordingly. The risk of breach of confidentiality will be handled by numerically coding all data, by
510 separating all identifying information from study data, and by ensuring that all data is collected via
511 secure web server. No participant names or identifying information will be used in presenting data in
512 lectures, presentations, or publications. All feedback and text messages will be framed in a manner
513 that is as objective and nonjudgmental as possible, consistent with MI theory and the empirical
514 literature on effective brief intervention approaches.
515

516 Plans for ensuring necessary professional intervention in the event of an adverse event. All
517 participants will receive information about free hotlines, websites, and campus and Memphis area
518 options for receiving alcohol-related information and treatment. Participants who express concern
519 about their substance use will be provided with referrals to appropriate university and community
520 resources for addressing these issues. If any participant reports suicidal ideation, the study
521 administrator (who will all be graduate-level students) will immediately notify Dr. Murphy, who is a
522 licensed clinical psychologist. The study administrator will immediately attempt to reach the
523 participant via phone and Dr. Murphy will subsequently conduct a thorough suicide risk assessment. If
524 necessary, Dr. Murphy will arrange for the participant to be transported to an emergency room or the

525 Psychological Services Center for further crisis intervention services. All participants will be informed
526 that they can contact Dr. Murphy if they would like more information on obtaining substance abuse
527 services. Dr. Murphy has over 15 years of clinical and research experience with college student
528 substance abusers and is well prepared to address any clinical concerns that may arise in the context of
529 this research.

530

531 **10. Potential Benefits** (See Initial Review Guidelines Section 10)

532 No direct benefits of participation can be guaranteed to participants. Participants may derive
533 satisfaction from contributing to the success of the research and its scientific contributions.
534 Participants in the randomized trial may benefit from increased knowledge about methods for reducing
535 alcohol or drug use. There is relatively strong empirical support for the efficacy of brief motivational
536 interventions like the ones we are testing (Larimer et al., 2004/2005).

537 Importance of knowledge to be gained. College student alcohol abuse is a substantial public health
538 problem that demands attention from researchers. The proposed project will provide a comprehensive
539 test of a promising method for improving the efficacy of brief alcohol interventions. This study will also
540 be the largest prospective analysis on the role of behavioral economic variables in the progression of
541 young adult drinking. The finding will assist clinicians in predicting poor treatment response and
542 increasing patterns of drinking over time as well as increase the effectiveness of substance abuse
543 interventions in general and basic knowledge of how risky drinking patterns develop and remit in
544 young adulthood.

545

546 **11. Assessment** (See Initial Review Guidelines Section 11)

547 Given the minimal risks to participants, the procedures we have in place to protect against those risks,
548 their effectiveness for doing so in past research, and the anticipated benefits of the study, we judge the
549 risk-benefit ratio to be acceptable for this research. The results of this study will provide important
550 information on the risk factors and needed intervention/prevention efforts among young adults
551 engaging in risky drinking behavior.

552

553 **12. Privacy** (See Initial Review Guidelines Section 12)

554 For study recruitment, participants identified through online screening will be contacted if they meet
555 eligibility criteria. Identifying information of enrolled participants will be kept confidential, no identifying
556 information will be shared with unauthorized personnel. Identifying information of screened
557 participants who do not enroll in the study will be shredded and not retained. In response to study
558 flyers, interested participants from the community will contact the study team and be screened over the
559 phone. If participant meets eligibility criteria and are willing to participate, they will enroll in the study.
560 Identifying information of enrolled participants will be kept confidential, no identifying information will
561 be shared with unauthorized individuals. Identifying information of screened participants who do not
562 enroll in the study will be shredded and not retained. Participants' data will be assigned a study
563 identification number, which will be used to identify all study records. Participants' names will not be
564 associated with any subsequent publication or representation of the data. Risk of disclosure of sensitive
565 information will be minimized by removing personal identifying information from the files, and by using
566 the data only to develop statistical tables for group data in which no individual can be identified. All

567 records will be kept in a locked cabinet or on a password-protected computer in a secure and locked
568 room/office.

569
570 All personnel working on the research study will have CITI training and are graduate-level clinical
571 psychology students or faculty members. The study will take place in the HABIT laboratory in the
572 Psychology Building at the University of Memphis. Participants will be asked to complete assessment
573 batteries on three separate occasions and will be informed that they may decline any questions or tasks
574 they wish not to answer or complete.

575

13. Confidentiality (See Initial Review Guidelines Section 13)

576 Participants' data will be assigned a number, which will be used to identify all study records.
577 Participants' names will not be associated with any subsequent publication or representation of the
578 data. Risk of disclosure of sensitive information will be minimized by removing personal identifying
579 information from the files, and by using the data only to develop statistical tables for group data in
580 which no individual can be identified. The web-based surveys used in the present study are password
581 protected and do not ask for or record any identifying information. All data collected from these
582 surveys are identified by ID numbers rather than names.

583
584 All data will be received stripped of personal identifiers. Measures will be identified with a study ID
585 number not based on a personal identifier. A cross-index of names and ID numbers will be stored in a
586 separate locked location from all data and destroyed at the completion of the study. Additional
587 precautions include: (1) data will be entered in coded form, (2) data will be stored in computer files
588 protected from unauthorized access by passwords, (3) information that might potentially allow an
589 individual participant to be identified will not be allowed in any publications or reports sent to
590 individuals outside the study, and (4) all employees who are to handle data will be trained in
591 confidentiality policies and procedures. Raw data that is stripped of any identifiers will be retained and
592 made available to NIH per their data sharing policies.

593 As mentioned above, all text exchanges will take place through the encrypted messaging app, *Babelnet*.
594 *Babelnet* IDs will not include identifying information and will be linked to data by study ID numbers.
595 Messages sent through *Babelnet* are heavily encrypted by the app. Study personnel will record (via
596 screenshot or copy-and-paste) the text conversations to facilitate later communication and for
597 supervisory and intervention fidelity purposes. These recordings will be saved on a secure server in a
598 password protected shared drive that is accessible only to study personnel.

599 We will also apply for a National Institutes of Health Certificate of Confidentiality, which protects the
600 investigators on this study from being forced to tell people that are not connected with this study about
601 participants' participation in the study, even under a subpoena.

602 The limits to confidentiality are outlined in the informed consent agreement and will be described by
603 the research assistant during the consent process. Specifically, the consent forms state:

604 *By law, there are a few limits to confidentiality. These limits were developed in*
605 *part to insure the safety of research participants. The researchers are required*
606 *by law to take some action if there is suspicion that you may harm yourself or*
607 *somebody else or there is suspicion that a child may be in danger. If any of these*
608 *situations should occur, we would attempt to contact you prior to taking any*
609 *action*

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709

710 **14. Collaboration, Engagement & Sponsor Relationships**

711 (See Initial Review Guidelines Section 14)

712 N/A

713

714 **15. Sponsor Proposal** (See Initial Review Guidelines Section 15)

715 N/A

716

717

718

16. Informed Consent (See Initial Review Guidelines Section 16)

CONSENT FORM: Screening

Note: Only students over the age of 18 should complete this screening form.

1. **Purpose of the Project**

You are being asked to take part in a University of Memphis research project. This project will entail completing questions related to health and lifestyle behaviors including alcohol use. The overall goal of the project is to evaluate the effectiveness of text-message based healthy lifestyle intervention.

2. **Explanation of Procedures**

We are asking you to complete questions related to health and lifestyle behaviors including alcohol use and driving behavior. We will retain the contact information you provide and may contact you at a later time. This is part of a research study being conducted at the University of Memphis HABIT lab. Some participants will be contacted and invited to participate in an additional paid phase of this research which would entail completing two surveys, receiving information about alcohol and about college/life goals, and having a discussion with a research assistant via instant messaging/text messaging. We are asking you about some activities (e.g., alcohol use) that are sensitive and in some cases illegal. However, we have obtained a federal Certificate of Confidentiality that ensures that any information you report will be kept confidential and not released to anyone.

3. **Risks or Discomforts**

The risk to you in this study would be due to loss of confidentiality due to the sensitive information you provide to us. However, we will make every effort to ensure your privacy and protect the information that you give us.

4. Benefits

There are no clear benefits to participating in this study. You may find it helpful to report on your health-related behaviors.

5. Confidentiality

If you decide to take part in this research study, as part of the research, you will be asked to give us information about various health behaviors. We have obtained a Certificate of Confidentiality (CoC) from the National Institutes of Health (NIH). The CoC has been issued to protect the investigators on this study from being forced to tell people that are not connected with this study about your participation in this study, even under a subpoena. The protection offered by the CoC does not stop us from voluntarily reporting information about suspected or known sexual, physical, or other abuse of a child or older person, threats of violence to self or others, or threats to destroy property. If any member of the research team is given such information, he or she will make a report to the appropriate authorities.

Even when a CoC is in place, you and your family members must still continue to actively protect your own privacy. If you voluntarily give your written consent for an insurer, employer, or lawyer to receive information about your participation in the research, then we may not use the CoC to withhold this information. The research record will include documents that contain private information about your health and other behaviors.

All data will be obtained specifically only for research purposes. All data will be kept confidential and not directly linked to any individual participant. Contact and identifying information will be collected for booster and follow-up purposes, but will be kept separate from the actual data. This information will be destroyed after completion of last follow-up or if the participant does not complete the last follow up, within six-months of study enrollment. All self-report data will be collected on-line with every effort made to have participants complete all measures on secure web servers.

6. Decision to participate and right to quit at any time

Participation is voluntary and you may quit at any time. A decision to quit the study will not affect your education at your current university in any way. You also may skip or not answer any question(s) you do not want to answer.

Questions about the study should be directed to the Principal Investigator, Dr. Murphy, at (901) 678-2630. For questions regarding your rights as a research participant contact the IRB Administrator at 678-2705. It is important for you to understand that the University of Memphis

does not have funds set aside to pay for the cost of any care or treatment that might be necessary because you get hurt or sick while taking part in this study. Also, the University of Memphis will not pay for any wages you may lose if you are harmed by this study.

CONSENT TO PARTICIPATE

I HAVE READ THE CONSENT FORM AND FULLY UNDERSTAND IT. ALL MY QUESTIONS HAVE BEEN ANSWERED. I AGREE TO TAKE PART IN THE STUDY, AND I WILL RECEIVE A COPY OF THIS COMPLETED FORM.

Please check this box to indicate that you have read and understand all information presented in this consent form.

Name (Print) of Participant

E-Signature of Participant

Date

Screening Measures

1. Gender:
 - a. Male
 - b. Female
2. What is your birthday? _____
3. Although the categories listed below may not represent your full identity or use the language you prefer, for the purpose of the survey, please indicate which group below most accurately describes your **racial identification**? (Check all that apply)
 - a. Native American/American Indian/Alaska Native/Indigenous
 - b. Asian
 - c. Black
 - d. Latin/Hispanic (Non-white)
 - e. Middle Eastern/North African (Non-white)
 - f. Pacific Islander/Native Hawaiian
 - g. Multiracial (please specify): _____
 - h. Not listed (please specify): _____
4. In the past month, on how many days did you smoke 1 or more cigarettes?
 - a. 0 days
 - b. 1-3 days per week
 - c. Every day or almost everyday
5. In the past month, on how many days did you consume alcohol?

- a. 0 days
- b. 1 day
- c. 2-3 days
- d. 4 or more days

6. Have you ever been entered into, or are you currently in, treatment for alcohol misuse or abuse?

- a. Yes
- b. No

7. Are you a fluent English speaker/reader/writer?

- a. Yes
- b. No

CONSENT FORM: Phase 2

Balanced Lifestyles for Undergraduate Excellence – Mobile (BLUDEM)

1. Purpose of the Project

You are being asked to take part in a University of Memphis research project. The project is designed to evaluate the effects of two different sets of text-message based information messages intended to help you maintain a healthy lifestyle.

2. Explanation of Procedures

You will be asked to complete several questionnaires related to your alcohol use and things that happen when you drink and your attitudes regarding drinking and other activities. We are asking you about some activities that are sensitive and in some cases illegal. However, we have obtained a federal Certificate of Confidentiality that ensures that any information you report will be kept confidential and not released to anyone (limits of confidentiality are discussed below).

Completing the questionnaires should take approximately 30 minutes. Then, you will be randomly assigned to one of two conditions: a mobile-based brief intervention or mobile-based alcohol and nutrition education. Using the mobile app *Babelnet*, participants will remotely complete the mobile-based brief intervention or alcohol education with a trained clinician immediately following the initial assessment.

Participants will complete a second session within the same week after the initial session, followed by a brief feedback survey of the initial 2 sessions. Participants will then complete booster text message sessions (~20 minutes each) that will take place once a week for 4 weeks after the second session. Following the boosters, participants will complete a brief post-intervention survey. Three months after the post-intervention survey, participants will complete a web-based follow-up self-report assessment battery. The assessment session will last approximately 30 minutes.

For completing the first two sessions, participants will be awarded either 1 hour of credit for participation, which the researcher will grant through the SONA System, or \$25. Participants will be awarded \$10, or 0.5 SONA credit, for completing at least 3 boosters and \$10, or 0.5 SONA credit, for completing the post-intervention assessment survey. Finally, upon completion of the 3-month follow-up assessment, participants will be thanked for their participation, debriefed, and awarded 1 credit hour through the SONA System, or paid \$20 for their participation. This adds up to a total of \$65, or 3 SONA credits, possible. After your 3-month follow-up assessment, you will

be given the option to complete any of the intervention sessions that you did not complete as a part of the study or to complete a session for a second time.

In order for this project to have scientific value, we need to know whether our intervention was helpful. Therefore, we will make every effort to contact participants for these follow-up interviews. As part of your participation in this project, we will ask your permission to contact another person who knows you well enough to know how to contact you over the next 4-6 months. We will not inform any individual about the nature of the research study or speak with them about any of the confidential material you have given us as a part of the study.

Transcriptions will be made of the mobile-based text-message sessions for supervisory purposes, so that we can check to make sure the project procedures are being implemented as planned. In addition, we plan to study parts of the interventions that are related to changes in alcohol use. This information will help us further improve future interventions for college students. These transcriptions will be identified only by an identification number and will be stored separately from all other information. Any personal information provided during the session (e.g., names of friends, classes attended) will be purged from transcripts made of the sessions. In addition, any information on the transcriptions is protected by the Certificate of Confidentiality obtained for this study (see section 6). These transcripts will be destroyed following their use in this study.

3. Risks or Discomforts

The risk to you in this study would be due to loss of confidentiality due to the nature of the sensitive information you provide to us through email and text messages. Though we will not be able to encrypt text messages, all messages will be sent from a secure mobile phone. The phones and email addresses we use will be password protected and kept in a secure locked room accessible only to research staff. We will make every effort to ensure your privacy and protect the information that you give us. Additionally, you may experience some emotional discomfort in receiving information about your experiences with drinking.

4. Benefits

We cannot guarantee that you will receive any benefits from this study. A possible benefit is that you may learn more about your alcohol use and your activity patterns.

5. Alternative Sources of Alcohol Information.

If you choose not to participate in this study, we can provide you with information on other resources on alcohol and drug use.

6. Confidentiality

If you decide to take part in this research study, as part of the research, you will be asked to give us information about various health behaviors. We have obtained a Certificate of Confidentiality (CoC) from the National Institutes of Health (NIH). The CoC has been issued to protect the investigators on this study from being forced to tell people that are not connected with this study about your participation in this study, even under a subpoena. The protection offered by the CoC does not stop us from voluntarily reporting information about suspected or known sexual,

physical, or other abuse of a child or older person, threats of violence to self or others, or threats to destroy property. If any member of the research team is given such information, he or she will make a report to the appropriate authorities.

Even when a CoC is in place, you and your family members must still continue to actively protect your own privacy. If you voluntarily give your written consent for an insurer, employer, or lawyer to receive information about your participation in the research, then we may not use the CoC to withhold this information. The research record will include documents that contain private information about your health and other behaviors.

All data will be obtained specifically only for research purposes. All data will be kept confidential and not directly linked to any individual participant. Contact and identifying information will be collected for booster and follow-up purposes, but will be kept separate from the actual data. This information will be destroyed after completion of last follow-up or if the participant does not complete the last follow up, within six-months of study enrollment. All self-report data will be collected online with every effort made to have participants complete all measures on a secure web-based server. Raw data that is stripped of any identifiers will be retained and made available to the NIH per their data sharing policies.

Further, participants will be asked to download on to their smartphone or personal computer a secure messaging web app called *Babelnet* (<https://www.babelnet.com/en/>). *Babelnet* is free to download and use, and study personnel will assist participants in the download and use of the app. Participants will be assigned a userID and password. Because *Babelnet* does not store this information on their servers, study personnel will maintain this userID and password log in a password protected file on a password protected computer in a locked office only accessible to study personnel. Messages sent through *Babelnet* are heavily encrypted by the app to ensure maximum security and confidentiality. Study personnel will record (via screenshot or copy-and-paste) text-message intervention conversations for supervisory purposes. These records will be destroyed following their use in the study.

By law, there are a few limits to confidentiality. These limits were developed in part to insure the safety of research participants. The researchers are required by law to take some action if there is suspicion that you may harm somebody else or there is suspicion that a child may be in danger. If any of these situations should occur, we would attempt to contact you prior to taking any action.

7. Decision to participate and right to quit at any time

Participation is voluntary and you may quit at any time. A decision to quit the study will not affect your relationship with the University of Memphis. You also may skip or not answer any question(s) you do not want to answer.

In certain circumstances (such as being a suicide risk), the study administrator will have the right to terminate your participation in the study. If termination was deemed appropriate, the study administrator would make every effort to contact you directly and provide you with information on mental health resources in the community.

Questions about the study should be directed to the Principal Investigator, Dr. Murphy, at (901) 678-2630. For questions regarding your rights as a research participant contact the IRB Administrator at 678-2705. "It is important for you to understand that the University of Memphis does not have funds set aside to pay for the cost of any care or treatment that might be necessary because you get hurt or sick while taking part in this study. Also, the University of Memphis will not pay for any wages you may lose if you are harmed by this study.

CONSENT TO PARTICIPATE

I HAVE READ THE CONSENT FORM AND FULLY UNDERSTAND IT. ALL MY QUESTIONS HAVE BEEN ANSWERED. I AGREE TO TAKE PART IN THE STUDY, AND I WILL RECEIVE A COPY OF THIS COMPLETED FORM.

Please check this box to indicate that you have read and understand all information presented in this consent form.

e-Signature of Participant (*Participant Initials*)

Date (*Timestamp in Qualtrics*)

Appendix

Telephone Script

Hello, this is (name) from the University of Memphis Psychology Department. I am calling to invite you to participate in an additional component of the research project that you participated in on the SONA system in the last week or so. Do you have a minute so that I can tell you a bit about this paid research study?

*If Yes: Great! First let me ask you a few questions just to make sure you're eligible **CHECK ELIGIBILITY***

1. Are you a full time student?
(Need to be full time student)

2. Are you employed? If so, how many hours a week do you work?
(Needs to be < 30 hours)

3. This next question is asking about standard drinks of alcohol. *All information collected about you will remain confidential (including what you say over the phone with me right now will not be shared with anyone outside of this research study; We would actually get in trouble if any of your information is shared with anyone outside of this research study).* A standard drink is considered 12 oz of beer, 5 oz of wine, or 1.5 ounces of hard liquor) In the past month, on how many days did you drink 4/5 (women/men, respectively) standard drinks in one night or occasion?
 - a. 0 days
 - b. 1 day
 - c. **2-3 days**
 - d. 4 or more days**Needs to be 2 or more binges in past month**

4. Do you have access to a smartphone, laptop, or desktop computer?
 - a. No
 - b. **Yes****Needs to be Yes**

Great, looks like you are eligible to participate! The next phase of this study will entail completing questionnaires and two sessions over the next week that will be either in person or over text message. Completing the questionnaires will take about 30 minutes.

Each of the two sessions that follow will take approximately 1 hour over text message. The first session will include either an interview related to your lifestyle, your consumption of alcohol, and your perception of others' alcohol consumption, or a discussion on alcohol and frequently asked questions about alcohol. The second session will be either a discussion about your college and career goals, or a discussion on nutrition and frequently asked questions about nutrition.

Following the second session, we'll ask you to answer just a few questions about your experience with the first two sessions, and we would pay you \$25. If you're enrolled in a psychology class we can give you up to an hour of extra credit. We'll then briefly contact you via text-message once a week for 4 weeks as a follow-up to your initial sessions, and you'll have an opportunity to earn \$10, or 0.5 SONA credit, there if you complete at least 3 of these follow-up sessions (boosters). We would then ask you to complete a 15-20-minute survey at the end of those 4 weeks, which you would receive \$10, or 0.5 SONA credit, for completing. Finally, we'll ask you to complete one last survey 4-months from now, which would take about 30 minutes, and we'd pay you \$20, or assign 1 credit hour in the SONA system. So total, you can earn up to \$65 or 3 SONA credits.

All information collected about you will remain confidential. You are not obligated to participate, and you may choose to withdraw participation at any time. If you decide to participate in this part the research project, we will schedule a convenient time for you to complete the survey and text-message sessions remotely within the next week.

Are you interested in participating?

Would you like to participate for extra credit or for the money?

Would it be okay for us to call or text you the day before your appointment just to remind you and answer any last minute questions you might have? Also, feel free to call or text us if you need to reschedule, or are running late!

Baseline and Follow-up Measures

Demographics

1. Gender: 1) Male 2) Female

2. Age: ____ years

3. What term(s) below best describes your race/ethnicity?

{Choose all that apply}

() White or Caucasian

() Hispanic or Latino

() Asian

() Black or African American

() American Indian or Alaska Native

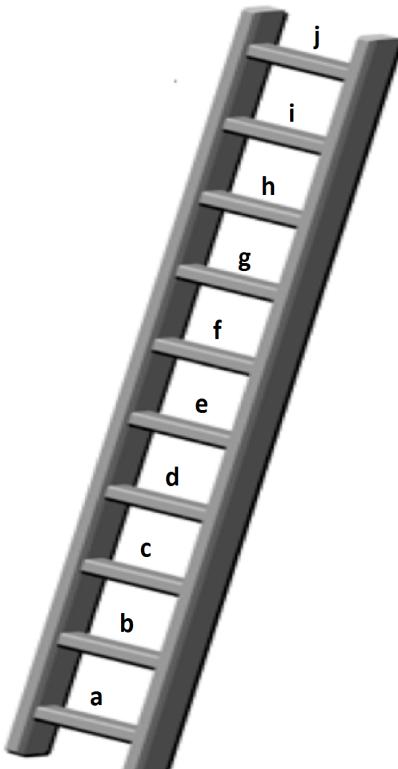
() Other: _____

4. Year in school as of the Fall 2012 semester:

1) Freshman	3) Junior
2) Sophomore	4) Senior
	5) Graduate Student

5. Student status for current semester?

Full time student ____ part time student ____ will not be enrolled in school ____



Think of the above ladder as representing where people stand in the United States. At the top of the ladder are the people who are the best off - those who have the most money, the most education, and the most

respected jobs. At the bottom are people who are the worst off - who have the least money, least education and the least respected jobs or no job. The higher up you are on this ladder, the closer you are to people at the very top; the lower you are, the closer you are to people at the very bottom. Where would you place yourself on this ladder? Please, select the letter for the corresponding rung in which you think you stand at this time in your life, relative to other people in the United States.

- A (11)
- B (12)
- C (13)
- D (14)
- E (15)
- F (16)
- G (17)
- H (18)
- I (19)
- J (20)

Health Behaviors

6. In the past month, on how many days did you smoke 1 or more cigarettes?
 - a. 0 days
 - b. 1-3 days per week
 - c. every day or almost every day
7. In the past month, on how many days did you consume fast food? (i.e. McDonalds, Taco Bell)
 - a. 0 days
 - b. 1-3 days per week
 - c. every day or almost everyday
8. (Question for Males Only) In the past month, on how many days did you have 5 or more drinks in a row (Note: a drink is defined as 12 oz. of beer, 4 oz. of wine, or 1.5 oz. of hard liquor)?
 - a. 0 days
 - b. 1 day
 - c. 2-3 days
 - d. 4 or more days
9. (Question for Females Only) In the past month, on how many days did you have 4 or more drinks in a row? (Note: a drink is defined as 12 oz. of beer, 4 oz. of wine, or 1.5 oz. of hard liquor)?
 - a. 0 days
 - b. 1 day
 - c. 2-3 days
 - d. 4 or more days
10. How many hours do you work (paid employment) in a typical week during the academic semester?

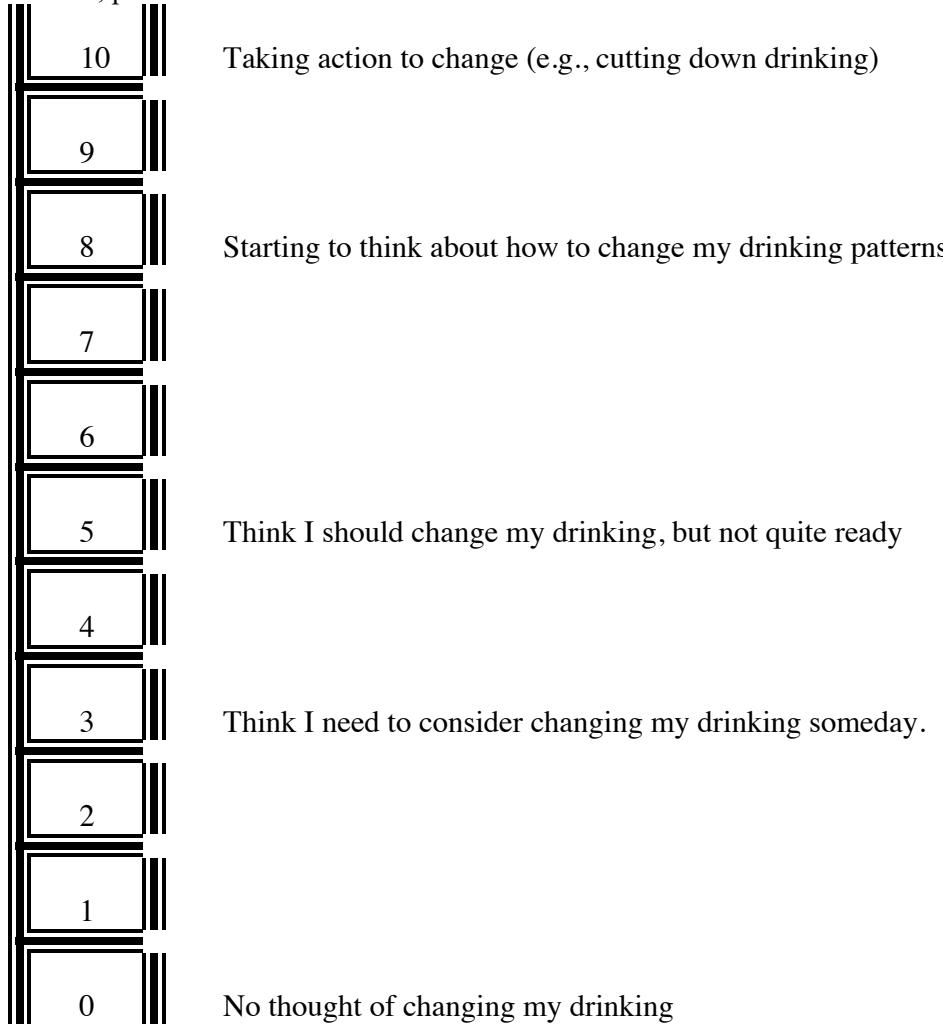
11. In the past month, on how many days did you use illicit drugs? (include prescription drugs if used without a prescription)

- a. 0 days
- b. 1 day
- b. 2-3 days
- c. 4-7 days
- d. 8 or more days

Motivation to Change

Each rung of this ladder represents where a person might be in thinking about changing their alcohol consumption.

CIRCLE THE NUMBER ON THE LADDER that best represents where you are now. If you don't drink alcohol at all, please enter "0" on the scale below.



Discrepancy Rating Form

	Substantially Less	Moderately Less	Slightly Less	The Same	Slightly More	Moderately More	Substantially More
1 How frequently do you drink compared to the average college student?	1	2	3	4	5	6	7
2 How much do you drink on a typical occasion compared to the average college student?	1	2	3	4	5	6	7
3 How much do you drink on the occasions you drink the most compared to the average college student?	1	2	3	4	5	6	7
4 How often do you drink 5 or more drinks (for men) or 4 or more drinks (for women) compared to the average college student?	1	2	3	4	5	6	7
5 How often do you experience problems due to your drinking, compared to the average college student?	1	2	3	4	5	6	7
	Substantially Helping	Moderately Helping	Slightly Helping	No Effect	Slightly Interfering	Moderately Interfering	Substantially Interfering
6 How is your alcohol use affecting your relationships with friends?	1	2	3	4	5	6	7

7 How is your alcohol use affecting your relationships with family members?	1	2	3	4	5	6	7
8 How is your alcohol use affecting your school-work?	1	2	3	4	5	6	7
9 How is your alcohol use affecting your health?	1	2	3	4	5	6	7
10 How is your alcohol use affecting your appearance?	1	2	3	4	5	6	7

Daily Drinking Questionnaire (DDQ)

In a typical week during the past month.

Number of drinks usually consumed on:

Sunday	_____
Monday	_____
Tuesday	_____
Wednesday	_____
Thursday	_____
Friday	_____
Saturday	_____

Number of hours over which drinks usually consumed:

Sunday	_____
Monday	_____
Tuesday	_____
Wednesday	_____
Thursday	_____
Friday	_____
Saturday	_____

Past Month Binge Episodes

What is your current weight? _____

What is your height (feet and inches)? _____

(males only) IN THE PAST MONTH how many times have you had 5 or more standard drinks (in one occasion)?

(males only) How many times IN THE PAST MONTH have you had 5 or more standard drinks in 2 hours or less?

(males only) IN THE PAST MONTH how many times have you had 10 or more standard drinks (in one occasion)?

(females only) IN THE PAST MONTH how many times have you had 4 or more standard drinks (in one occasion)?

(females only) How many times IN THE PAST MONTH have you had 4 or more standard drinks in 2 hours or less?

(females only) IN THE PAST MONTH how many times have you had 8 or more standard drinks (in one occasion)?

Brief Young Adult Alcohol Consequences Questionnaire (B-YAACQ)

Below is a list of things that sometimes happen to people either during, or after they have been drinking alcohol. Next to each item below, please mark an “X” in either the YES or NO column to indicate whether that item describes something that has happened to you IN THE PAST MONTH.

In the past month...

		NO	YES
1.	While drinking, I have said or done embarrassing things.		
2.	I have had a hangover (headache, sick stomach) the morning after I had been drinking.		
3.	I have felt very sick to my stomach or thrown up after drinking.		

4.	I often have ended up drinking on nights when I had planned not to drink.		
5.	I have taken foolish risks when I have been drinking.		
6.	I have passed out from drinking.		
7.	I have found that I needed larger amounts of alcohol to feel any effect, or that I could no longer get high or drunk on the amount that used to get me high or drunk.		
8.	When drinking, I have done impulsive things that I regretted later.		
9.	I've not been able to remember large stretches of time while drinking heavily.		
10.	I have driven a car when I knew I had too much to drink to drive safely.		
11.	I have not gone to work or missed classes at school because of drinking, a hangover, or illness caused by drinking.		
12.	My drinking has gotten me into sexual situations I later regretted.		
13.	I have often found it difficult to limit how much I drink.		
14.	I have become very rude, obnoxious or insulting after drinking.		
15.	I have woken up in an unexpected place after heavy drinking.		
16.	I have felt badly about myself because of my drinking.		
17.	I have had less energy or felt tired because of my drinking.		
18.	The quality of my work or schoolwork has suffered because of my drinking.		
19.	I have spent too much time drinking.		

20.	I have neglected my obligations to family, work, or school because of drinking.		
21.	My drinking has created problems between myself and my boyfriend/girlfriend/spouse, parents , or other near relatives.		
22.	I have been overweight because of drinking.		
23.	My physical appearance has been harmed by my drinking.		
24.	I have felt like I needed a drink after I'd gotten up (that is, before breakfast).		

Alcohol-Impaired Driving Behavior

How many times in the past 3 months have you driven within 2 hours of having:

1 drink:

2 drinks:

3 drinks:

4 drinks:

5 drinks:

6 drinks:

7 drinks:

8 drinks:

9 drinks:

10 or more drinks:

How many times have you driving within 2 hours of using a combination of alcohol and any other substance?

How dangerous do you believe it is to drive within 2 hours of drinking 1 drink?

1. Not at all dangerous
2. Somewhat dangerous
3. Dangerous
4. Very dangerous

How dangerous do you believe it is to drive within 2 hours of drinking 3 drinks?

1. Not at all dangerous
2. Somewhat dangerous
3. Dangerous
4. Very dangerous

How dangerous do you believe it is to drive within 2 hours of drinking 5 or more drinks?

1. Not at all dangerous
2. Somewhat dangerous
3. Dangerous
4. Very dangerous

The following questions ask about your most recent alcohol-impaired driving episode:

- a. What time did you take the first sip of your drink?
- b. How many total standard drinks did you consume prior to driving?
- c. What were you drinking?
- d. What time did you take the last sip of your last drink?
- e. How much time passed from the last sip of your last drink until beginning to drive?

Estimate the number of drinks you can consume and still drive safely within two hours of drinking: _____

Norms

1. How often do you think the typical (male/female) college student drinks?
 - a. Once a month or less
 - b. 2-3 times a month
 - c. 1-2 times a week
 - d. 3-4 times a week
 - e. Nearly everyday
2. How much do you think the typical (male/female) college students drinks on a typical drinking night?
 - a. 0-2 standard drinks
 - b. 3-4 standard drinks
 - c. 5-6 standard drinks
 - d. 7-8 standard drinks
 - e. More than 8 standard drinks

Drug Use Questionnaire

1. Number of days you used marijuana IN THE PAST MONTH _____
 - a. Did you use marijuana with alcohol? Yes No
2. Number of days you used cocaine IN THE PAST MONTH _____
 - a. Did you use cocaine with alcohol? Yes No

3. Number of days you used a designer drug IN THE PAST MONTH ____
 - a. Did you use a designer drug with alcohol? Yes No
4. Number of days you used hallucinogens IN THE PAST MONTH ____
 - a. Did you use a hallucinogen with alcohol? Yes No
5. Number of days you used heroin IN THE PAST MONTH ____
 - a. Did you use heroin with alcohol? Yes No
6. Number of days you used a sedative IN THE PAST MONTH ____
 - a. Did you use a sedative with alcohol? Yes No
7. Number of days you used a stimulant IN THE PAST MONTH ____
 - a. Did you use a stimulant with alcohol? Yes No
8. Number of days you used a painkiller IN THE PAST MONTH ____
 - a. Did you use a painkiller with alcohol? Yes No

Income Questions

1. What is your best estimate of your parents' or legal guardians' yearly income? If your parents are divorced but both parents provide you with financial support include both incomes in the estimate. Also if a parent provides you with income and has remarried please include that step-parent's income in the estimate.
 - a. Less than \$25,000/ year
 - b. \$25,000 - \$50,000/ year
 - c. \$50,000 - \$75,000/ year
 - d. \$75,000 - \$100,000/ year
 - e. \$100,000 - \$150,000/ year
 - f. Greater than \$150,000/ year
 - g. I don't receive any financial support from my parents
2. What is your monthly income (money you earn from a job, not including gifts/scholarships)?
3. How much money did you have available to spend for non-essential items (e.g., clothing, music/video games, entertainment, alcohol, going to the movies, etc.) during the past month?

4. How much money did you actually spend on non-essential items or activities during the past month?
5. How much money did you spend on alcohol in the past month (this includes any alcohol that you purchased, regardless of whether or not you consumed the alcohol)?
6. How much money did you spend on illicit drugs in the past month? (this includes any drugs that you purchased, regardless of whether or not you consumed them). Do not include money spent on drugs that you were prescribed or money spent on drugs that you then sold to others.

DASS-21 – Depression Subscale

Please read each statement and circle a number 0, 1, 2 or 3 that indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all

1 Applied to me to some degree, or some of the time

2 Applied to me to a considerable degree, or a good part of time

3 Applied to me very much, or most of the time

1	I couldn't seem to experience any positive feeling at all	0	1	2	3
2	I found it difficult to work up the initiative to do things	0	1	2	3
3	I felt that I had nothing to look forward to	0	1	2	3
4	I felt down-hearted and blue	0	1	2	3
5	I was unable to become enthusiastic about anything	0	1	2	3
6	I felt I wasn't worth much as a person	0	1	2	3
7	I felt that life was meaningless	0	1	2	3

Monetary Choice Questionnaire (MCQ)

Please select the amount you would prefer in the following questions. Please answer the questions quickly and honestly.

If you were given the option, would you rather have:

1.	\$50 today	OR	\$100 in 1 year
2.	\$70 today	OR	\$100 in 1 month
3.	\$100 in 6 months	OR	\$10 today
4.	\$80 today	OR	\$100 in 6 months
5.	\$100 in 1 month	OR	\$40 today
6.	\$100 in 2 weeks	OR	\$30 today
7.	\$100 in 1 month	OR	\$99 today
8.	\$100 in 1 month	OR	\$80 today

Alcohol Purchase Task (APT)

In the questionnaire that follows we would like you to pretend to purchase and consume alcohol. Imagine that you and your friends are at a party on a Thursday night from 9:00 PM until 2:00 AM to see a band. Imagine that you do not have any obligations the next day (i.e., no work or classes). The following questions ask how many drinks you would purchase at various prices. The available drinks are standard size domestic beers (12 oz.), wine (5 oz.), shots of hard liquor (1.5 oz.), or mixed drinks containing one shot of liquor. Assume that you did not drink alcohol or use drugs before you went to the party, and that you will not drink or use drugs after leaving the party. Also, assume that the alcohol you are about to purchase is for your consumption only during the party (you can't sell or bring the drinks home). **Please respond to these questions honestly, as if you were actually in this situation.**

1. How many drinks would you have if they were free?_____
2. How many drinks would you have if they were \$.25 each?_____
3. How many drinks would you have if they were \$.50 each?_____
4. How many drinks would you have if they were \$1.00 each?_____
5. How many drinks would you have if they were \$1.50 each?_____

6. How many drinks would you have if they were \$2.00 each?_____
7. How many drinks would you have if they were \$2.50 each?_____
8. How many drinks would you have if they were \$3.00 each?_____
9. How many drinks would you have if they were \$3.50 each?_____
10. How many drinks would you have if they were \$4.00 each?_____
11. How many drinks would you have if they were \$4.50 each?_____
12. How many drinks would you have if they were \$5.00 each?_____
13. How many drinks would you have if they were \$5.50 each?_____
14. How many drinks would you have if they were \$6.00 each?_____
15. How many drinks would you have if they were \$7.00 each?_____
16. How many drinks would you have if they were \$8.00 each?_____
17. How many drinks would you have if they were \$9.00 each?_____
18. How many drinks would you have if they were \$10.00 each?_____
19. How many drinks would you have if they were \$15.00 each?_____
20. How many drinks would you have if they were \$20.00 each?_____

CFC Scale

For each of the statements below, please indicate whether or not the statement is characteristic of you. If the statement is extremely uncharacteristic of you (not at all like you) please circle a "1" from the choices given; if the statement is extremely characteristic of you (very much like you) please circle a "5".

	Extremely uncharacteristic	Somewhat uncharacteristic	Uncertain	Somewhat characteristic	Extremely characteristic
1. I consider how things might be in the future, and try to influence those things with my day to day behavior.	1	2	3	4	5
2. Often I engage in a particular behavior in order to achieve outcomes that may not result for many years.	1	2	3	4	5
3. I only act to satisfy immediate concerns, figuring the future will take care of itself.	1	2	3	4	5
4. My behavior is only influenced by the immediate (i.e., a matter of days or weeks) outcomes of my actions.	1	2	3	4	5
5. My convenience is a big factor in the decisions I make or the actions I take.	1	2	3	4	5
6. I am willing to sacrifice my immediate happiness or well-being in order to achieve future outcomes.	1	2	3	4	5
7. I think it is important to take warnings about negative outcomes seriously even if the negative outcome will not occur for many years.	1	2	3	4	5
8. I think it is more important to perform a behavior with important distant consequences than a behavior with less-important immediate consequences.	1	2	3	4	5
9. I generally ignore warnings about possible future problems because I think the problems will be resolved before they reach crisis level.	1	2	3	4	5
10. I think that sacrificing now is usually unnecessary since future outcomes can be dealt with at a later time.	1	2	3	4	5
11. I only act to satisfy immediate concerns, figuring that I will take care of future problems that may occur at a later date.	1	2	3	4	5
12. Since my day to day work has specific outcomes, it is more important to me than behavior that has distant outcomes.	1	2	3	4	5

Reward Probability Index – Environmental Suppressors Subscale (RPI-ES; 9 items)

	<i>Strong disagree</i>	<i>Disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
My behaviors often have negative consequences	1	2	3	4
Things happen that make me feel hopeless or inadequate	1	2	3	4
Changes have happened in my life that have made it hard to find enjoyment	1	2	3	4
I have few financial resources, which limits what I can do	1	2	3	4
I have had many unpleasant experiences	1	2	3	4
It seems like bad things always happen to me	1	2	3	4
I often get hurt by others	1	2	3	4
People have been mean or aggressive towards me	1	2	3	4
I wish I could find a place to live that brought more satisfaction to my life	1	2	3	4

Protective Behavioral Strategies Scale (PBSS; 15 items)

	Never	Rarely	Occasionally	Sometimes	Usually	Always
Use a designated driver	0	1	2	3	4	5
Determine not to exceed a set number of drinks	0	1	2	3	4	5
Alternate alcoholic and non-alcoholic drinks	0	1	2	3	4	5
Have a friend let you know when you have had enough to drink	0	1	2	3	4	5
Avoid drinking games	0	1	2	3	4	5
Leave the bar/party at a predetermined time	0	1	2	3	4	5
Make sure that you go home with a friend	0	1	2	3	4	5
Know where your drink has been at all times	0	1	2	3	4	5
Drink shots of liquor	0	1	2	3	4	5
Stop drinking at a predetermined time	0	1	2	3	4	5
Drink water while drinking alcohol	0	1	2	3	4	5
Put extra ice in your drink	0	1	2	3	4	5
Avoid mixing different types of alcohol	0	1	2	3	4	5
Drink slowly, rather than gulp or chug	0	1	2	3	4	5
Avoid trying to “keep up” or “out-drink” others	0	1	2	3	4	5

Short Self-Regulation Questionnaire (SSRQ-31)

	Strongly Disagree	Disagree	Uncertain or unsure	Agree	Strongly Agree
I usually keep track of my progress toward my goals	1	2	3	4	5
I have trouble making up my mind about things	1	2	3	4	5
I get easily distracted from my plans	1	2	3	4	5
I don't notice the effects of my actions until it's too late	1	2	3	4	5
I am able to accomplish goals I set for myself	1	2	3	4	5
I put off making decisions	1	2	3	4	5
It's hard for me to notices when I've "had enough" (alcohol, food, sweets)	1	2	3	4	5
If I wanted to change, I am confident that I could do it	1	2	3	4	5
When it comes to deciding about a change, I feel overwhelmed by the choices	1	2	3	4	5
I have trouble following through with things once I've made up my mind to do something	1	2	3	4	5
I don't seem to learn from my mistakes	1	2	3	4	5
I can stick to a plan that's working well	1	2	3	4	5
I usually only have to make a mistake one time in order to learn from it	1	2	3	4	5
I have personal standards, and try to live up to them	1	2	3	4	5
As soon as I see a problem or challenge, I start looking for possible solutions	1	2	3	4	5
I have a hard time setting goals for myself	1	2	3	4	5

I have a lot of willpower	1	2	3	4	5
When I'm trying to change something, I pay a lot of attention to how I'm doing	1	2	3	4	5
I have trouble making plans to help me reach my goals	1	2	3	4	5
I am able to resist temptation	1	2	3	4	5
I set goals for myself and keep track of progress	1	2	3	4	5
Most of the time I don't pay attention to what I'm doing	1	2	3	4	5
I tend to keep doing the same thing, even when it doesn't work	1	2	3	4	5
I can usually find several different possibilities when I want to change something	1	2	3	4	5
Once I have a goal, I can usually plan how to reach it	1	2	3	4	5
If I make a resolution to change something, I pay a lot of attention to how I'm doing	1	2	3	4	5
Often I don't notice what I'm doing until someone calls it to my attention	1	2	3	4	5
I usually think before I act	1	2	3	4	5
I learn from my mistakes	1	2	3	4	5
I know how I want to be	1	2	3	4	5
I give up quickly	1	2	3	4	5

Other Academic and Student Engagement measures

1. In the past 2 weeks how many college classes have you skipped? _____ (do not include classes missed due to a legitimate illness)

2. What is your major(s) (if you are undeclared, list 1-2 majors you are considering)

3. What careers are you considering?

4. Do you plan to attend graduate school, medical school, or law school: no _____ yes _____ maybe _____

5. Are you involved in any campus organizations or programs (other than social fraternity or sororities) right now? _____ no _____ yes (if yes, please list)

6. Please list any hobbies or creative activities that you have pursued over the past few years

7. Please list any hobbies or creative activities that you would like to pursue during college

8. Please list any volunteer or service activities that you have engaged in over the past few years

9. Please list any volunteer or service activities that you would like to pursue during college

Time Spent on Various Activities:

Attending class or required labs/research hours (hours actually attended, not just what you are registered for) _____ Hrs/ Week

Doing homework, studying, reading, going to the library, or any other school work outside of class

_____ Hrs / Week

Participating in social fraternity or sorority activities _____ Hrs/ Week

Participating in other university organizations or programs (attending meetings, volunteering, etc.)
excluding fraternities or sororities _____ Hrs/ Week

Participating in an internship or volunteer activity related to your major or possible career

_____ Hrs/ Week

Participating in a community or civic organization or activity _____ Hrs/ Week

Paid employment _____ Hrs/ Week

Exercise or sports _____ Hrs/ Week

Family time (e.g., talking with parents, siblings, children, etc., in person or over phone)

_____ Hrs/ Week

Religious activity (e.g., church services, bible study, scripture reading, etc.) _____ Hrs/ Week

Time spent drinking _____ Hrs/ week

Time spent using drugs _____ Hrs/ Week

Time spent using Facebook, Twitter, or other social media sites _____ Hrs/ Week

Time spent using the Internet (web-browsing, etc.) NOT including social media or using the internet for academic or work activities _____ Hrs/ Week

How Would You Like to Spend Your Time?

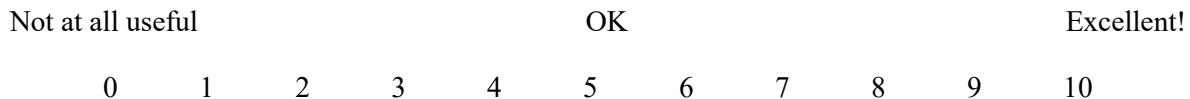
Thinking back on the past month, which activities would you like to have spent more time on?

1. Going to the gym, exercising, or playing sports	Yes	No
2. Studying	Yes	No
3. Being with friends who do not drink alcohol	Yes	No
4. Being with my family	Yes	No
5. Working	Yes	No
6. Going to an art exhibit, concert, play, dance, or other performance	Yes	No
7. Asking questions and participating in class discussions	Yes	No
8. Painting, drawing, writing stories, creating sculpture, ceramics or photography	Yes	No
9. Reading books, novels, magazines, newspapers, or going to the library	Yes	No
10. Playing an instrument, singing, dancing, creating or listening to music	Yes	No
11. Working in politics, being an activists	Yes	No
12. Participating in religious or spiritual activities (worship, reading, or fellowship)	Yes	No
13. Practicing meditation or yoga	Yes	No
14. Talking with my professors	Yes	No
15. Learning leadership and communication skills	Yes	No
16. Traveling or studying abroad	Yes	No
17. Participating in a campus club or organization	Yes	No
18. Getting a good night's sleep	Yes	No
19. Getting up early in the morning	Yes	No
20. Getting things done, being more productive	Yes	No
21. Making new friends	Yes	No
22. Talking with a faculty member or advisor about my career plans	Yes	No
23. Learning how to resolve conflicts more effectively	Yes	No
24. Volunteering, providing community service and serving others	Yes	No
25. Learning and doing new things	Yes	No
26. Tutoring or teaching others	Yes	No

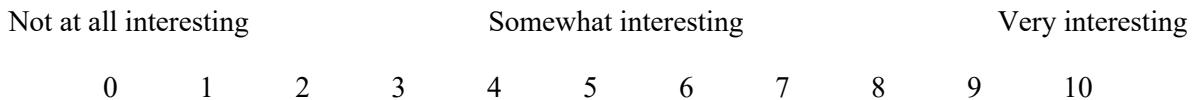
Session Ratings

We are interested in your reactions to the sessions you just completed. Your feedback will help us evaluate and improve the project. **Please answer these questions as honestly as you can. The person you spoke with will not see your responses.**

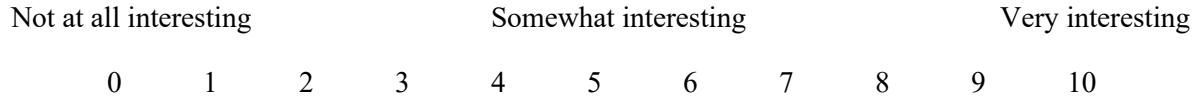
1. How would you rate the text-message sessions overall?



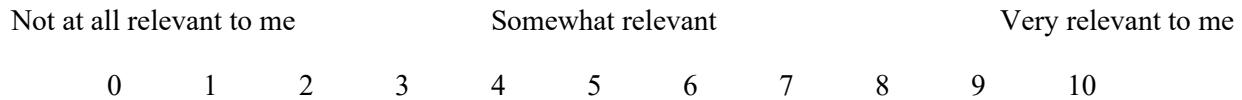
2. Overall, how interesting did you find the first 2 text-message sessions?



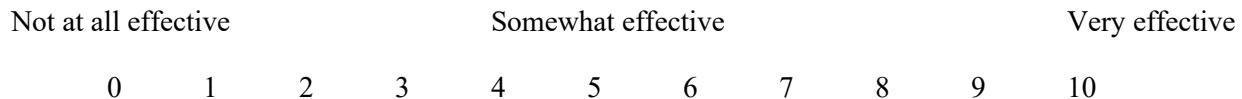
3. Overall, how interesting did you find the final 4 weeks of text-message sessions?



4. How personally relevant did you find the sessions?



Items 5-7 use the following 10-point scale:

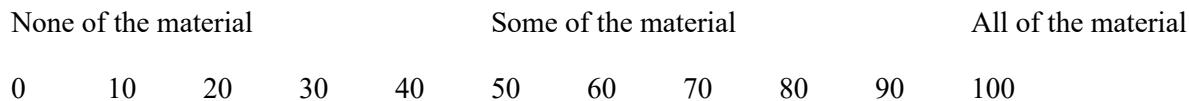


5. How effective do you think these sessions would be in modifying college students' drinking patterns?

6. How effective do you think these sessions will be in modifying your drinking patterns?

7. How effective do you think these sessions will be in increasing the time you spend studying or participating in academic or career-related activities?

8. As a percentage, how much of the texts and materials did you attend to and read?



Items 9-12 are open-ended, free-response

9. What part(s) of the sessions did you think were most useful for you?

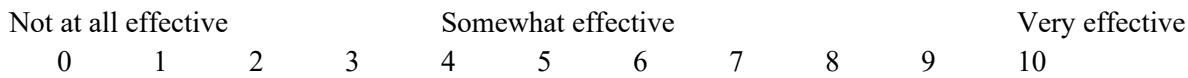
10. What part(s) of the sessions did you think were least useful for you?

11. What did you like about using text-messaging for the sessions?

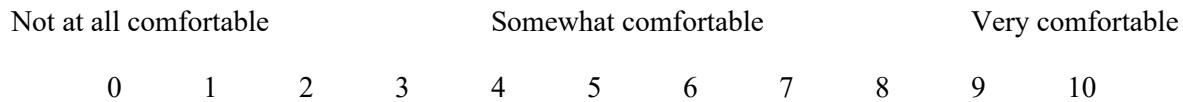
12. What did you not like about using text-messaging for the sessions?

13. How do you think these text message sessions would have compared to getting the same information or feedback from a “bot”, or if it were generated and sent by a computer?

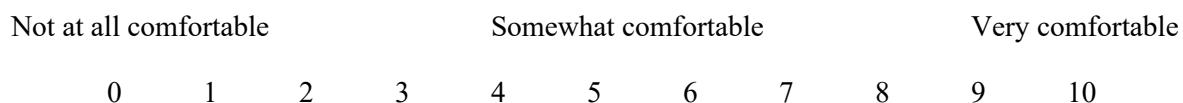
14. How effective do you think these text message sessions would be if they had been generated and sent by a computer or “bot”?



15. How comfortable were you discussing alcohol/disclosing information about your drinking patterns via text-message?



16. How comfortable would you be discussing alcohol/your drinking patterns in a face-to-face or in-person meeting (compared to text messaging)?



17. Please rate the ease/difficulty of using the encrypted app *Babelnet*.

Very difficult

Unsure

Very easy

0 1 2 3 4 5 6 7 8 9 10

18. What type of device did you primarily use to access *Babelnet*?

- a. Smartphone (iPhone/Android/etc.)
- b. Tablet (iPad/Other tablet device)
- c. Laptop computer (Apple MacBook/ Microsoft Surface/ Dell XPS/ Acer/ etc.)
- d. Desktop computer (Apple iMac/ Dell Inspiron/ HP/ etc.)
- e. Other:

Submit this completed form via email to irb@memphis.edu