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A Pilot Study of Two Supervision Approaches for Peer-Led Alcohol Interventions With Mandated College Students

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ABSTRACT. Objective: Despite the increasing need to identify and implement effective interventions to reduce drinking with mandated college students, peer-led brief alcohol interventions have received minimal research attention. The current pilot study tested whether enhanced supervision (evidence-based application approach [EAA; group plus individual]) would improve peer counseling skills beyond those acquired by a common practice approach (CPA; group only). **Method:** Following initial peer counselor skill evaluation, drinking outcomes after intervention were compared between supervision groups with a mandated college student sample ($N = 82$; 65 men). The relationship between acquired motivational interviewing skills and subsequent drinking behaviors was also assessed. **Results:** EAA peer counselors showed higher motivational interviewing skill acquisition than CPA peer

counselors. Despite differences in counselor skill demonstration, mandated clients in both intervention groups significantly reduced drinking behaviors. Further, higher reflection-to-question ratio and motivational interviewing spirit demonstrated by peer counselors were significantly related to poorer follow-up drinking outcomes. **Conclusions:** Findings identify supervision practices that may result in optimal peer counselor learning and brief intervention implementation while also offering initial data about the way in which peer counseling session implementation may relate to drinking outcomes. Future research is needed to identify the within-session processes of peer-led interventions that predict drinking outcomes, which may offer additional direction for training approaches. (*J. Stud. Alcohol Drugs*, 75, 458–466, 2014)

HAZARDOUS DRINKING among college students continues to be a significant health concern (Dimeff et al., 1999; Hingson, 2010; Hingson et al., 2005; O'Malley and Johnston, 2002), with 18% of college students meeting the criteria for alcohol abuse or dependence (Dawson et al., 2004), and 40% of college men and approximately 30% of college women reporting at least one heavy drinking episode (five or more alcoholic drinks in one sitting) within the past 2 weeks (American College Health Association, 2012). These heavy drinking episodes sometimes lead to campus alcohol violations. In fact, of the tens of thousands of alcohol and other drug arrests on U.S. college campuses, more than half have involved alcohol (Anderson and Gadaletto, 2001). Students who receive alcohol violations are also at particular risk for alcohol-related problems (e.g., blackouts, unintended/unprotected sexual activity, legal repercussions) compared with nonsanctioned students (Caldwell, 2002; Hingson et al., 2009; O'Hare, 1997), a fact that increases the need for effective interventions with this population.

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A number of interventions have been implemented to reduce heavy drinking and associated harm in college students (Cronce and Larimer, 2011; Larimer and Cronce, 2002, 2007). Although colleges have increased the number and types of educational interventions for mandated students, few have demonstrated longstanding reductions in alcohol use (Hingson et al., 1997; Larimer and Cronce, 2007). One specific intervention often used is the Brief Alcohol Screening and Intervention for College Students (BASICS; Dimeff et al., 1999). BASICS uses individualized personal feedback sessions to enhance student motivation to change high-risk drinking behaviors, thereby reducing consequences. Efficacy studies have shown that this brief, 50-minute individual motivational feedback intervention, typically tested with professional counselors, significantly reduced alcohol consumption and negative consequences, with effects remaining through a 2-year follow-up (Marlatt et al., 1998). Larimer and colleagues (2001) extended this research, comparing peer- to professionally delivered BASICS with high-risk, volunteer (nonmandated) college students. First-year members of fraternity/sorority social organizations were assigned to either a BASICS session with a peer or professional counselor or an assessment-only control condition. Findings showed the treatment groups decreased drinks per week and estimated peak blood alcohol concentration (eBAC), whereas the control group showed an increase in drinks per week and no change in peak eBAC. Further, fraternity members who received a BASICS session from a peer provider showed larger decreases in typical peak eBAC than those who had professional providers. In sum, peer providers of BASICS were as

effective as or more effective than professional providers in reducing drinking behaviors (Larimer et al., 2001).

In both of these studies, BASICS was used within a rigorous clinical trial environment, with a strong emphasis on training and supervision of counselors. However, it is difficult to determine if BASICS intervention programs using peer counselors without supervision and/or evaluation (i.e., in frontline practice rather than in a controlled clinical trial) will be as effective in lowering high-risk drinking behaviors and related negative outcomes. Indeed, the BASICS manual (Dimeff et al., 1999), the main dissemination tool used by nonresearch programs, contains very little about training and supervision. Furthermore, counselor competences are critical components of the fidelity and efficacy of BASICS, yet only 50% of peer-led BASICS intervention programs provide ongoing supervision, and only 30% evaluate counselor competency (Mastroleo et al., 2008). As described in Mastroleo et al. (2008, 2010), the modal approach for training peers to deliver alcohol interventions in university settings is a 2-day training, followed by minimal supervision, that is typically conducted in a group format, with no assessment of peer counselor competency or behavioral outcomes (hereafter called the common practice approach [CPA]). Given its wide implementation, it is important to examine the effects of using common practice training and supervision approaches to deliver a BASICS intervention on both the skill development of the counselors and the behavior change of their clients.

In the only study to date to compare peer counselor training and supervision approaches (Mastroleo et al., 2010), two groups of peer counselors completed 12 hours of training in motivational interviewing (MI) and BASICS and delivered a peer-led BASICS with a sample of 128 heavy drinking college students. The training was followed by completion of two initial role-plays to (a) gain a baseline performance appraisal and (b) replicate past studies using baseline performance appraisal to ensure that peer counselors were qualified for intervention delivery (e.g., Larimer et al., 2001). Following performance qualification, one group received one-on-one in-person supervision (evidence-based application approach; EAA) on MI principles and microskills, and the other group received no supervision (CPA). Using session audiotapes, both groups were compared on MI skill demonstration. Overall, there were no significant differences in skill acquisition between the EAA and CPA groups. However, results found that peer counselors randomized to the supervision condition, who initially displayed deficient MI microskills compared with the CPA condition, acquired the necessary skills to adequately deliver a BASICS intervention. In addition, volunteer students who received BASICS from either EAA or CPA peer counselors reduced their drinking behaviors compared with an assessment-only control condition, with no differences between the EAA and CPA conditions. This study established that peer counselors respond to training with an improvement in skills and that

they can be effective in administering a brief alcohol intervention (Mastroleo et al., 2010). Limitations of the initial study included low intervention completion rates with a volunteer student sample and no evaluation of the effect of global MI skills on post-intervention drinking behavior. As such, a further evaluation of peer-counselor supervision approaches is a vital next step toward dissemination, including optimal implementation of peer-delivered BASICS with mandated students. More generally, research is needed to identify the role supervision plays in maintaining counselor skills beyond the initial training and subsequent effects on college student drinking outcomes.

The current study was conducted to examine different methods of peer counselor training and the efficacy of peer-led BASICS with college student drinkers who were mandated to alcohol counseling. This pilot study had three objectives: (a) to compare two training and supervision approaches, the EAA and CPA, on MI skill development with peer counselors administering a BASICS intervention with mandated college students; (b) to examine the efficacy of these peer-administered BASICS sessions on reducing the students' alcohol use and problems; and (c) to examine the link between peer counselor MI proficiency and the students' subsequent alcohol use and problems. We expected that (a) EAA peer counselors would improve MI microskills more than CPA peer counselors; (b) peer counselors in the EAA group would score higher on MI global scores (MI spirit, empathy) than counselors in the CPA group; (c) mandated students completing a BASICS intervention with a peer counselor in the EAA group would have significantly better alcohol use and negative consequence outcomes at 3-month follow-up compared with students completing a BASICS intervention with a peer counselor in the CPA group; and (d) MI skills would be significantly related to mandated student drinking behaviors, with higher skill scores leading to less drinking and fewer negative consequences.

Method

Procedure

Participants ($N = 82$) were undergraduate students who had violated campus alcohol policy at a 4-year, private, liberal arts university located in the Northeast. Students in violation of campus alcohol policies at this university were sanctioned to complete a one-on-one mandated alcohol intervention. To meet this requirement, students had the option to participate in this research study or to receive treatment as usual from the Alcohol Incidence Referral Program, which consisted of an identical peer-led BASICS session. Of 123 students invited to participate, 83 (67%) enrolled in the study. Following research consent, participants completed a 45-minute web-based baseline assessment before receiving the brief peer-led intervention. Of those who were

enrolled, 82 of 83 (98.8%) completed the intervention; one student withdrew from the study before random assignment. Participants were not paid for their baseline assessment or intervention.

Participants received email invitations and telephone reminders to complete follow-up web-based assessments (70.7% of participants completed the 6-week and 71.9% completed the 3-month follow-ups). Participants were paid \$15 for completing the 6-week follow-up and \$20 for completing the 3-month follow-up. All procedures were approved by the appropriate university institutional review boards.

Peer counselors. Peer counselors were health and wellness educators in the Office of Health Promotion and Education. Health and wellness educators were invited to participate in the research study during the university's pre-orientation training, at which point 100% (12 total; 10 women) agreed to participate and signed a consent form for inclusion. Peer counselors also completed four monthly web-based assessments of their own drinking behaviors, beliefs, and consequences.

Peer counselor training procedures

Training. Training was conducted using a 2-day protocol (12 hours total) before the start of the fall 2009 semester. Peer counselors conducted an initial 10-minute role-play (to establish pre-training MI skills). The training workshop consisted of a review of the BASICS manual and videotaped examples of BASICS, MI skill practice exercises, and review of the individual graphic feedback information used in each session. Specific components included training on reflective listening skills, use of open- and closed-ended questions, change talk facilitation, rapport-building strategies, and ways of dealing with resistant clients. Peer counselors were instructed on specific alcohol information related to BAC levels, alcohol outcome expectancies, college normative beliefs, protective behaviors, family history, and other general alcohol information as described in the BASICS manual (Dimeff et al., 1999). Following the initial training, each peer counselor conducted two audio-recorded BASICS role-plays. We have used this approach in past studies to train undergraduate peer counselors (Mastroleo et al., 2010). Training and supervision sessions were conducted by the first author.

Randomization to supervision groups. The final BASICS role-play was coded for microskills using the Peer Proficiency Assessment (PEPA; Mastroleo et al., 2009) and the Motivational Interviewing Treatment Integrity scale (MITI; Moyers et al., 2007) to record MI global proficiency. After we evaluated baseline skills, peer counselor assignment to the EAA or CPA group was conducted as a two-step process, with the goal of balancing groups on MI skills demonstration and gender. We first flipped a coin to assign one of the two men to Group 1 (leaving the other man to Group 2). Then, based on skill demonstration level, we randomly assigned the

remaining individuals across the two groups while ensuring equal skill distribution. We then made group assignments labeling Group 1 as the EAA group and Group 2 as the CPA group.

Supervision: Evidence-based application approach. Initial supervision for the EAA group (six counselors) consisted of 1 hour of individual feedback on peer counselors' final training role-play, during which the audio-recorded role-play session was reviewed and MI skill acquisition and enhancement were discussed. This initial supervision session occurred before counselors conducted intervention sessions with study participants. Implementation of MI microskills, improving MI-consistent behaviors, and reducing MI-inconsistent behaviors (e.g., closed-ended questions) were emphasized, using PEPA as a guide. Once peer counselors began implementing BASICS with participants, members of the EAA group continued in weekly individual (1 hour) and group (30–45 minutes weekly) supervision. Individual supervision consisted of weekly meetings during which evaluation of the most recently completed audio-recorded BASICS session was reviewed and discussed. Using the PEPA to guide supervision, peer counselors were offered individual feedback on their MI skill demonstration and given specific coaching to improve delivery of microskills and the BASICS intervention.

Supervision: Common practice approach. The six members of the CPA peer counselor group received no individual supervision after training. Instead, they participated in group supervision with members of the EAA group. Group supervision was focused on general issues with clients and implementation of BASICS. The distinction between this condition and the EAA condition was that EAA included individual supervision focused on personalized feedback on MI skill development. The first author conducted both individual and group supervision meetings.

Motivational interviewing skill/fidelity measures

Motivational interviewing microskills (Peer Proficiency Assessment). The PEPA (Mastroleo et al., 2009) was developed and validated specifically for the evaluation of peer counseling sessions. The current study used graduate student coders who completed training, received coding supervision, and had more than 100 hours of previous supervised coding experience. Audio-recorded intervention sessions were coded using behavior counts (open/closed questions, simple/complex reflections) to assess microskill acquisition. Number of open-ended questions (designed to elicit open-ended responses), closed-ended questions (yes/no questions, questions with answers with restricted range), simple reflections (convey understanding but offer little or no meaning to client statements), and complex reflections (substantial meaning is inferred or hypothesis testing is explored) were coded. The ratio of complex to simple reflections was calculated and

TABLE 1. Peer counselor skills

| Variable | CPA (<i>n</i> = 38) | EAA (<i>n</i> = 38) | Reliability (<i>n</i> = 28) |
|----------------------------------|-------------------------|-------------------------|---------------------------------|
| Motivational interviewing skills | | | |
| % reflections | | | |
| Complex reflections | 0.26 (0.16) | 0.36 (0.16)** | ICC = .65 |
| Simple reflections | 0.74 (0.16) | 0.63 (0.15)** | ICC = .87 |
| % questions | | | |
| Open questions | 0.37 (0.14) | 0.41 (0.13) | ICC = .96 |
| Closed questions | 0.63 (0.14) | 0.59 (0.13) | ICC = .83 |
| Reflection-to-question ratio | 0.33 (0.12) | 0.41 (0.20)* | |
| Global ratings | | | |
| Empathy | 2.42 (0.95) | 2.68 (.084) | κ = .44 |
| Motivational interviewing spirit | 2.76 (0.63) | 2.93 (0.55) | κ = .41 |

Notes: CPA = common practice approach; EAA = evidence-based application approach; ICC = intraclass correlation; κ = weighted κ ; ICC: $\geq .75$ = excellent; $.60-.74$ = good; $.40-.59$ = fair; $<.40$ = poor (Cicchetti, 1994); κ : $.81-1$ = almost perfect agreement, $.61-.80$ = substantial, $.41-.60$ = moderate, $.21-.40$ = fair, $0-.20$ = slight (Landis and Koch, 1977).

* $p < .05$; ** $p < .01$.

used as an outcome measure to evaluate the impact of supervision on peer counselors' MI adherence. All successfully recorded sessions ($n = 76$) conducted by both the EAA and the CPA groups were coded. The PEPA has been shown in research to yield comparable values and validity of behavior count evaluation to the MITI scale 2.0 (Moyers et al., 2005) yet was designed exclusively to examine brief peer-delivered feedback interventions.

Motivational interviewing global scores (Motivational Interviewing Treatment Integrity 3.0). The MITI (Moyers et al., 2007) was developed from the Motivational Interviewing Skills Code 2.0 (Miller et al., 2003) as a simplified tool for evaluating competence in the use of MI (Moyers et al., 2005). The MITI 3.0 MI spirit global rating comprises three ratings: evocation (communicating understanding that motivation and ability to carry out change reside within the client), collaboration (working together as equal partners), and autonomy/support (encourage and actively promote perception of choice). Individual scores are coded on a 5-point scale from 1 (*low*) to 5 (*high*) and are then averaged to create an MI spirit global score. Empathy, coded on the same 5-point scale, measures the extent to which the counselor understands, or makes an effort to understand, the client's perspective, experiences, and feelings and conveys that understanding to the client. Global scores of MI spirit and empathy were used as outcome measures to evaluate the impact of supervision on peer counselors' MI adherence. The full BASICS session was coded to ensure that all segments of the intervention were examined.

Tape coder reliability. Each BASICS session was coded, and approximately 15% of the sample was double coded to assess interrater reliability using intraclass correlations (ICC) and weighted κ scores. Cicchetti (1994) identified ICC categories of $.40$ = poor, $.40$ to $.59$ = fair, $.60$ to $.74$ = good, and $.75$ to 1.00 = excellent. ICC scores for the current study ranged from $.65$ to $.96$ for coded microskills (Table 1).

Weighted κ scores for MI global scores were generally moderate according to Landis and Koch (1977) (i.e., MI spirit = $.41$; empathy = $.44$; evocation = $.49$; collaboration = $.50$). However, autonomy reliability was in the low range ($.27$).

Intervention

After completion of the baseline assessment, 44 participants (81.8% male) were randomly assigned to CPA peer counselors and 38 (76% male) were assigned to the EAA peer counselors. All participants were scheduled to meet individually with a peer counselor to complete a BASICS session. The counseling interventions were conducted within 2 weeks of completing the baseline assessment. Personalized graphic feedback, community and university resources, and a brochure on reducing drinking-related harm were given to each participant. Mean session time for the BASICS session was 32.2 minutes ($SD = 9.6$), and sessions were audio recorded. A total of 76 tapes were successfully recorded and coded. The additional 6 completed BASICS audio-recorded sessions were damaged and/or were not recorded because of peer counselor error or recording equipment failure. Each peer counselor conducted between 4 and 8 sessions (mode = 7; median = 6).

Participant outcome measures

All alcohol questions used the definition of a standard drink: 12 oz. beer, 4 oz. wine, 1 oz. distilled spirits.

Daily Drinking Questionnaire. Drinking rates were evaluated using a modified version of the Daily Drinking Questionnaire (DDQ; Collins et al., 1985). Participants reported their typical drinking on each day of the week, averaged over the last month. Summaries of weekly typical daily drinking over the past month were chosen to reflect typical drinking patterns (DDQ total), and the sum of Friday and Saturday

night drinking was used to reflect typical weekend drinking (weekend sum).

Quantity/Frequency/Peak Index (Dimeff et al., 1999). Participants reported their past-month highest number of drinks consumed and the time spent drinking on one occasion (peak). Estimations of peak blood alcohol levels were calculated based on the quantity and rate of consumption, body weight, and gender (Matthews and Miller, 1979).

Heavy episodic drinking (National Institute on Alcohol Abuse and Alcoholism, 2004). Heavy drinking was assessed by asking students, "Think back over the last 2 weeks. How many times have you had five or more drinks (four for women) in a row within 2 hours?"

Young Adult Alcohol Problems Screening Test. The Young Adult Alcohol Problems Screening Test (YAAPST; Hurlbut and Sher, 1992) is a 27-item questionnaire that assesses frequency of negative consequences of alcohol use. Response options were dichotomized to a yes/no response and summed. At the follow-up, the measure covered the past 6 weeks and 3 months. The YAAPST demonstrated good internal consistency with coefficient α of .87 at baseline.

Data analysis

Descriptive statistics examined variable distributions and success of randomization. The effects of supervision group on PEPA-coded MI skills (percentage of complex reflections, percentage of open questions, reflection-to-question ratio) and MITI-coded MI global scores (empathy and MI-spirit composite) were tested in a series of independent samples *t* tests. Repeated-measures analysis of variance then tested group (EAA vs. CPA), time (baseline, 6-week and 3-month follow-ups), and group by time effects on alcohol use (weekend sum, peak eBAC, DDQ total, number of heavy episodic drinking events) and alcohol-related consequences (sum of dichotomized YAAPST items). Finally, ordinary least squares regression analyses tested MI-skills and global skills in relation to the primary outcome variables at each time point (6-week, 3-month), controlling for the baseline value of the dependent variable.

Results

Participants

Of 82 participants, 65 (79.3%) were male. Participants were primarily White (90.2%), followed by 3.7% American Indian/Alaskan Native, 2.4% African American, 2.4% multi-racial, and 1.2% Native Hawaiian or other Pacific Islander. In addition, 2.4% of the sample identified as Hispanic/Latino. This distribution is consistent with the university population as a whole. The mean age of the sample was 19.4 years ($SD = 1.3$). The majority of mandated students were cited for drinking in their place of residence (59.8%), followed

by drinking at a friend's residence (28%) and drinking at another off-campus location (12.2%).

Peer counselors (6 CPA, 6 EAA) were primarily female ($n = 10$), and White ($n = 11$), with one identifying as Asian. The EAA group had a mean age of 19.7 years ($SD = 0.5$). The CPA group's mean age was 19.8 years ($SD = 0.8$). Independent *t* test and chi-square analyses revealed no significant differences between groups on any peer counselor demographics before training. Peer counselors in both groups had no prior MI training or experience.

Motivational interviewing skills and global ratings: Supervision effects

Table 1 summarizes supervision group (EAA vs. CPA) effects on peer counselor MI skills and global ratings. Peer counselors in the EAA condition approached proficiency as determined by MITI 3.0 (Moyers et al., 2007) scoring standards (i.e., rating of 3 or higher on a 5-point scale). EAA peer counselors scored higher than CPA counselors did on all quality indicators, although these differences were not significantly different (i.e., percentage of complex reflections, percentage of open questions, reflection-to-question ratio, global empathy, and MI spirit), and supervision group differences for percentage of complex and simple reflections and reflection-to-question ratio were statistically significant ($p = .002$).

College student alcohol use and consequences by supervision group and time

Despite differences in some measures of MI skill, there were no significant peer supervision group effects on the alcohol and consequence outcome variables of interest at 6-week and 3-month follow-ups (Table 2). Across peer supervision groups, however, significant time effects were demonstrated for student weekend sum, peak eBAC, DDQ total, and negative consequences (YAAPST sum). Table 3 shows results and effect sizes for these time effects. Here, partial eta-squared estimates showed 8.1%–12.8% of the variance attributable to the factor of time. Alcohol-related consequences (YAAPST) showed an eta-squared of 27.2% variance explained. However, after an initial reduction in total number of consequences at 6 weeks, a slight increase was noted at 3-month follow-up (Table 3).

Motivational interviewing skills and global scores in relation to alcohol use and consequences

Motivational interviewing skills. Regression results determined that the reflection-to-question ratio was significantly related to 6-week YAAPST outcomes ($b = 20.86$, $t = 2.30$, $p = .026$). The direction of results suggests that a higher reflection-to-question ratio was related to higher YAAPST

TABLE 2. Treatment outcomes by intervention condition

| Variable | Baseline | | 6 weeks | | 3 months | | <i>F(df)</i> | <i>p</i> | <i>e</i> ² |
|--------------------------------------|---------------------------|-----------------|---------------------------|-----------------|---------------------------|-----------------|---------------|----------|-----------------------|
| | <i>M</i> (<i>SD</i>) | | <i>M</i> (<i>SD</i>) | | <i>M</i> (<i>SD</i>) | | | | |
| Drinking outcomes | | | | | | | | | |
| Sum weekend alcohol use ^a | 15.48 (9.8) | 13.04 (8.2) | 13.39 (9.5) | 11 (8.2) | 12.13 (8.0) | 10.2 (7.2) | 1.14 (1, 46) | .29 | .024 |
| Peak BAC | .15 (.08) | .16 (.09) | .15 (.12) | .11 (.09) | .11 (.07) | .10 (.06) | 0.543 (1, 46) | .47 | .012 |
| DDQ total ^b | 20.24 (15.1) | 16.43 (12.4) | 16.5 (13.1) | 14.21 (12.1) | 14.72 (10.2) | 13.09 (10.1) | 0.693 (1, 43) | .41 | .016 |
| Heavy drinking | 2.08 (1.9) | 2.44 (2.4) | 1.83 (2.4) | 2.0 (2.6) | 1.88 (2.7) | 1.92 (2.8) | 0.118 (1, 47) | .73 | .003 |
| Consequence outcome | | | | | | | | | |
| YAAPST sum | 28.15 (21.9) | 29.95 (15.7) | 14.1 (12.3) | 16.18 (11.3) | 17.3 (19.0) | 15.82 (14.9) | 0.042 (1, 40) | .84 | .001 |

Notes: EAA = evidence-based application approach; CPA = common practice approach; BAC = blood alcohol concentration; DDQ = Daily Drinking Questionnaire; YAAPST = Young Adult Alcohol Problems Screening Test. ^aCombined sum of Friday and Saturday drinking; ^btotal drinks per week.

scores at the short-term follow-up. Reflection-to-question ratio analyses were not significant for any other drinking outcomes.

Motivational interviewing global scores. Regression results identified a significant relationship between MI spirit and heavy drinking at 3-month follow-up ($b = 1.38, t = 2.27, p = .028$) with trends toward significance for two 6-week outcomes, YAAPST ($p = .065$) and heavy drinking ($p = .058$). To investigate significant and trend results further, tests of the relationship between global collaboration, autonomy, and evocation were conducted separately for heavy drinking and YAAPST outcomes. Results showed that collaboration and evocation were both significantly related to 6-week heavy drinking ($b = 0.554, t = 2.03, p = .047$, and $b = 0.569, t = 1.97, p = .05$, respectively), whereas collaboration and autonomy were significantly related to 3-month heavy drinking ($b = 0.808, t = 2.12, p = .039$, and $b = 1.77, t = 2.51, p = .015$, respectively). These positive significant relationships suggest that higher global scores are related to higher subsequent rates of heavy drinking and negative

consequences. Results for empathy on all drinking outcomes were nonsignificant, as were results for MI spirit on results other than heavy drinking.

Discussion

To our knowledge, this is the first study to systematically compare EAA with CPA on peer counselors' MI competence (i.e., skills and global ratings) as well as mandated college student drinking outcomes. Consistent with our expectations, enhanced supervision improved peer counselors' MI adherence behaviors. Specifically, peer counselors in the EAA group showed significantly higher skills ratios than CPA peer counselors, indicating that using an enhanced supervision approach (group plus individual) positively influences the quality and fidelity of MI delivery by nonprofessional peer counselors. However, students reduced their alcohol use and problems regardless of whether they worked with peer counselors who had been assigned to the EAA or CPA supervision. Both findings have implications for the use of

TABLE 3. Change in mandated college student alcohol use and consequences over time

| Variable | Baseline <i>M</i> (<i>SD</i>) | 6 weeks <i>M</i> (<i>SD</i>) | 3 months <i>M</i> (<i>SD</i>) | <i>F(df)</i> | <i>p</i> | <i>e</i> ² |
|--------------------------------------|------------------------------------|-----------------------------------|------------------------------------|---------------|----------|-----------------------|
| Drinking outcomes | | | | | | |
| Sum weekend alcohol use ^a | 14.02 (9.04) | 12.15 (8.82) | 11.12 (7.6) | 4.06 (2, 46) | .020 | .081 |
| Peak eBAC | .16 (.08) | .13 (.11) | .11 (.06) | 6.77 (2, 46) | .002 | .128 |
| DDQ total ^b | 18.4 (13.78) | 15.33 (13.52) | 13.89 (10.08) | 4.34 (2, 43) | .016 | .092 |
| Heavy drinking ^c | 2.35 (2.18) | 1.95 (2.37) | 2.06 (2.71) | 0.53 (2, 46) | .588 | .011 |
| Consequence outcome | | | | | | |
| YAAPST sum | 29.09 (18.71) | 15.19 (11.68) | 16.55 (16.80) | 14.95 (2, 40) | >.001 | .272 |

Notes: As indicated in Table 2, time by group effects were nonsignificant for all outcomes. Therefore, supervision groups (common practice approach, evidence-based application approach) were combined for repeated-measures analysis of variance analyses. Results were additionally replicated in longitudinal analyses incorporating all-available-pairs of observations (generalized estimating equations; Liang and Zeger, 1986). eBAC = estimated blood alcohol concentration; DDQ = Daily Drinking Questionnaire; YAAPST = Young Adult Alcohol Problems Screening Test. ^aCombined sum of Friday and Saturday number of drinks; ^btotal drinks per week; ^cnumber of heavy episodic drinking events.

peer counselors to deliver BASICS with mandated college students.

First and foremost, the reduction in drinking among the mandated students at follow-up is consistent with prior research showing reduced drinking with volunteer students following a peer-led BASICS (Mastroleo et al., 2010), and this effect is similarly established in other studies of professionally led BASICS with mandated students (Barnett et al., 2007; Borsari and Carey, 2000; Carey et al., 2006, 2009). Although the current study did not test the efficacy of a peer-led BASICS with mandated students, and it may be that the act of mandating students to an intervention results in initial drinking reductions, peer interventions avoided possible iatrogenic effects that have been found when MI is delivered poorly (Miller et al., 1993). The continued rise in university alcohol violations nationwide (Hoover, 2003; Nicklin, 2000) suggests that an effective and sustainable approach is needed to reduce harmful drinking behaviors in identified students. Support from the current study identifies peer-led BASICS as a viable cost-effective option for intervention. A response by universities to student alcohol violations is necessary; the current study found that the minimal supervision approach was sufficient to assist in short-term drinking reductions following peer-led BASICS. Specifically, mandated students in both treatment groups significantly reduced total drinks consumed over the week-end, peak eBAC, and total drinks per week. Similar findings in past research have been maintained for up to 1 year with volunteer as well as mandated students (Barnett et al., 2007; Marlatt et al., 1998; White et al., 2007).

Also promising was the finding of reductions in alcohol-related consequences at follow-up. Past studies have found that consequences remained unchanged despite reductions in drinking behaviors (Larimer et al., 2001; Mastroleo et al., 2010; Turrisi et al., 2009); the current study is the first to offer support for peer-led BASICS as a harm-reduction approach. It may be the combination of peer-led BASICS and targeting a mandated student population that helps to explain this finding. Past research has indicated that mandated students often have strong reactions to the incident resulting in the mandated sanction (Barnett et al., 2006). These experiences may lead to motivation or desire to reduce drinking and specific consequences, as documented in past research following a professionally led brief MI (Mastroleo et al., 2011). More research is needed to understand the way in which college students experience consequences and the way in which peer-led BASICS has the potential to influence their occurrence.

Although offering personalized supervision appears to enhance the delivery of MI microskills within BASICS, our hypothesis that empathy and MI spirit scores would be significantly different between EAA and CPA groups was not supported. This was in contrast to previous research in which enhanced training approaches significantly improved

professional counselor MI spirit scores compared with only completing an MI training workshop (Miller et al., 2004). Furthermore, all of the peer counselors demonstrated below traditional threshold markers on skills and global scores. It may be that nonprofessional young adult counselors require more time to develop the therapeutic capacities measured within the dimensions of collaboration, evocation, and autonomy/support. This may be particularly relevant given the evidence of a link between MI microskills and student drinking behaviors, as interventions delivered by peer counselors who used lower level MI microskills (i.e., closed questions, simple reflections) have resulted in poorer drinking outcomes with nonmandated college students (e.g., Tollison et al., 2008, 2013).

Contrary to our expectations, we found that higher MI spirit scores were associated with more heavy episodic drinking and associated negative consequences. This puzzled us, as previous research has linked both global and microskills scores to drinking reductions in treatment-seeking and non-treatment-seeking college students (e.g., Apodaca et al., 2013; Tollison et al., 2008, 2013). On the one hand, we found that MI global scores were rated below threshold competency, similar to those in previously published studies using peer counselors (e.g., Turrisi et al., 2009). However, although other studies examining peer counselor MI microskills have consistently found increases in drinking related to lower level skill demonstration (Tollison et al., 2008, 2013), we did not find this relationship.

It is possible that the aggregate global measures are in large part driven by specific microskills commonly used by peer counselors (e.g., open questions, simple reflections). It is also possible that the association between low MI skills and reduced drinking behaviors is attributable to other, unmeasured constructs inherent within the peer relationship dynamic. For example, peer counselors share many characteristics with the students they counsel and therefore may be especially able to build rapport and motivate behavior change despite their relatively low levels of experience, training, and delivery of MI. Other research has found parallel outcomes with novice counselors and non-treatment-seeking young adults (Gaume et al., 2013). In support of this possibility, Gaume and colleagues (2013) reported that MI consistent behaviors (e.g., complex reflections) do not always result in reduced drinking when interventions are delivered by less experienced providers. Perhaps the use of complex reflections such as summary statements may sound "strange" coming from a peer counselor, or the use of too many simple reflections may sound like the peer is "parroting" the student, either of which might interfere with the overall session. In the current study, the timing of counselor and client statements was not recorded by the MITI or PEPA coding instruments, but a more detailed evaluation of the session audiotapes may clarify counterintuitive findings. Such exploration of the peer intervention

dynamics may yield information important for selection, training, and supervision of interventionists.

Limitations

Limitations to the current research should be noted. First, findings reflecting participant behavior change are promising, but the lack of a no-treatment control group precludes us from concluding that the intervention conditions resulted in participant behavior change. Given past studies supporting this approach (Larimer et al., 2001; Mastroleo et al., 2010) and the focus on the role of supervision on MI skill adoption, it was important to test two active supervision conditions to explore potential differences between treatment groups. In addition, an assessment-only control group would conflict with responsible adjudication of high-risk students. Second, group supervision was conducted in a combined meeting with peer counselors in the CPA and EAA groups. The focus of these group supervision sessions exclusively discussed individual mandated student cases rather than microskills and MI delivery. However, there may have been some profit for the CPA group to meet with the EAA group, and given the real practice implementation of the current study, we were unable to isolate the groups and maintain complete confidence in avoiding contamination. Another limitation is that the current sample was quite homogeneous, so findings may not generalize to a larger, more diverse campus. In addition, the majority of peer counselors were female, which may not generalize to other campus programs. More research surrounding the way in which male and female peer counselors interact with the male and female mandated students is needed to help guide peer counselor recruitment and training for optimal implementation. Finally, only short-term follow-up data were collected. Given that past research has identified significant changes in drinking with mandated students at 6 weeks and 3 months (Borsari et al., 2007), and the fact that this is the first test of peer-led BASICS with mandated students, we feel that examining early and immediate changes in drinking behaviors is a valuable contribution.

Conclusion

The findings from the current pilot show that undergraduate peer counselors can be trained to display specific MI skill behaviors traditionally noted as important for fidelity standards. Using cost-effective peer counselors with common training approaches seems to be an appropriate method for counseling mandated college students. However, results did not support a stronger effect of EAA-trained counselors on participant short-term drinking outcomes despite their greater acquisition of MI skills. Future research should further investigate methods for training and supervision and more clearly examine within-session processes. Specifically,

more research is needed to identify the specific process variables (e.g., peer counselor and client interactions) tied to reduced drinking, because not all students will eliminate harmful drinking behaviors. A clearer understanding through detailed within-session analyses may help elucidate meaningful differences regarding the delivery of MI skills by peer counselors and the subsequent impact on drinking behaviors.

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