

Alcohol 101 Plus™

Program Evaluation



REPORT OF RESULTS

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EXECUTIVE SUMMARY

Study Introduction

This report investigates the effectiveness of Alcohol 101 Plus, a pedagogical tool designed to increase alcohol awareness and encourage safe and responsible decision-making about drinking or the choice to abstain among college students. Alcohol 101™, an interactive, educational CD-ROM, was developed in 1997 by The Century Council in conjunction with the University of Illinois at Urbana-Champaign and has been implemented in college campuses across the country. An evaluation of the earlier version of the intervention demonstrated increased knowledge of alcohol awareness among users and proposed recommendations to improve the intervention. The Century Council modified the program based on these recommendations to create Alcohol 101 Plus™.

In 2004, The Century Council contracted with National Research Center, Inc. (NRC), an independent research firm, to conduct an evaluation of Alcohol 101 Plus. NRC, started in 1994, is one of the leading evaluation and survey research firms in the U.S. focused on the needs of the public sector. NRC principals have evaluated scores of public health, educational and civic programs. NRC invited two expert research methodologists to work on the Alcohol 101 Plus evaluation; an evaluation consultant with years of experience evaluating community health initiatives and a professor at a university with a national reputation for social norms research, especially as it relates to alcohol consumption.

The evaluation focused on two central research questions:

- Does the Alcohol 101 Plus program increase alcohol awareness, and safe and responsible decision-making about drinking or not drinking among college students on four college campuses in the U.S.?
- Does the Alcohol 101 Plus program have different effects on student-athletes, those with Greek membership, first year students and judicially sanctioned students?

This Executive Summary provides information on the key methods and learnings from the study. See the full report for more information on the study methodologies, results and implications of the findings.

Study Methods

Evaluators from NRC used a quasi-experimental design at each campus to evaluate The Century Council's Alcohol 101 Plus™ program where the results of intervention groups were compared to the results of the comparison groups. The intervention groups consisted of students receiving the Alcohol 101 Plus program as part of a general education course, or special meetings in residence halls, with fraternities/sororities, student-athletes or other groups. The comparison groups consisted of students in similar settings where the alcohol awareness component was not offered.

Researchers from NRC worked with university professors and staff to select appropriate intervention classrooms or groups and matched comparison classrooms or groups. In most cases, a proportion of the appropriate classes/groups (for example, half of the eight health

classes offered during a semester), were randomly assigned to receive the Alcohol 101 Plus intervention as part of the curriculum and the remaining classes/ groups did not receive alcohol-related education and awareness for the semester. The focus on an experiment in four schools was felt to provide more highly controlled information with greater detail about the effectiveness of the CD-ROM with supporting qualitative information about the administration of the survey and dosage. This approach maximizes the probability that observed outcomes can be attributed to the Alcohol 101 Plus CD and the immediate context of its administration.

Participating Universities

Three of four institutions of higher education participating in the study were recruited from a list of more than 150 universities that were implementing Alcohol 101 Plus or had expressed interest in the evaluation. The campuses varied by size and location which enhances the external validity (the ability to generalize results to other campuses) of the study. The study included 1) a small, northern college, 2) a large, southern university, 3) a large, eastern university, and 4) a small, eastern college. The small, eastern college previous to this study had not implemented the Alcohol 101 Plus program.

The Instruments

A 7-page pre-intervention questionnaire was developed to assess students' knowledge, attitudes and behaviors related to alcohol use. The post-intervention and follow-up surveys were based on the same question to ensure consistency across administrations and to assess change.

The tools were based on the instruments used in the earlier evaluation of Alcohol 101. Questions used in the earlier evaluation which remained relevant, clear and did not suffer ceiling effects (making improvement difficult) were retained, unchanged or modified. New questions were added to address new content areas, examine respondent stage of readiness to make behavioral changes, assess susceptibility to socially desirable responses and better quantify drinking and drinking-related behavior.

The survey was pilot-tested at the University of Colorado in November 2004. Reliability analyses were performed with the responses from the pilot-test and questions receiving lower reliability scores (Cronbach's alpha < .7) were omitted or altered for the final drafts of the instruments.

Survey Administration

Surveys designed to measure program impacts were administered to individuals in the intervention and comparison groups three times: before the Alcohol 101 Plus curriculum began ("pre-intervention"), after the curriculum was administered ("post-intervention") and then again 30 to 80 days later ("follow-up"). Although they did not receive the Alcohol 101 Plus training ("intervention"), individuals in the comparison groups were given the surveys at similar time intervals.

The study was approved by the NRC Institutional Review Board (IRB) as well as individual IRBs at each participating university. All consenting students received incentives to participate in the study, receiving a total of \$30 to complete the surveys, with \$10 at pre-intervention and

\$20 at the follow-up survey. Each university received a \$1,000 incentive to participate in the study.

NRC evaluators were present on each of the campuses to help with administration of the consent forms and the first survey, and if possible to observe the implementation of a facilitated discussion about the Alcohol 101 Plus CD-ROM. The pre-intervention survey administration also served as a training session for instructors, as they were supposed to administer the post-intervention and follow-up surveys using a similar method for the intervention and comparison groups. Pre-, post- and follow-up questionnaires were matched using unique identifiers created by each student. Approximately 512 students were administered a pre-intervention, post-intervention and follow-up survey. Of the 512 students with matched pre-, post- and follow-up surveys, there were 269 students from comparison groups.

Site Visits

As part of the study, evaluation team members visited each campus for two to four days and collected information related to the implementation environment, including a) key informant interviews, b) an environmental scan of different buildings and facilities on campus, and c) a review of institutional documents, alcohol and drug policies, and substance abuse prevention policies. The site visit also documented substance abuse education and treatment programs offered to students on the campus. Because the NRC team visits were timed to assist with pre-intervention survey administration, observation of Alcohol 101 Plus implementation was not always possible. Therefore, as a follow-up to the site visits, NRC conducted telephone interviews with the primary contact at each participating university. A structured interview script containing primarily open-ended questions was used, covering topics such as how and with whom the Alcohol 101 Plus program was implemented; success with the evaluation process; and use of the Facilitator's Guide. University contacts additionally were asked about their overall satisfaction with the program and recommended improvements.

Data Analysis

The Statistical Package for the Social Sciences (SPSS)¹ was used to define the dataset and to obtain descriptive statistics. Additionally, SPSS was used to conduct univariate General Linear Modeling to test for interactions between schools and the intervention. Given the nested structure of the data (students within university campuses), the statistical package HLM² was used to perform two-level hierarchical linear modeling to determine whether change(s) in the intervention group were greater than change(s) in the comparison groups, controlling for respondent characteristics and other factors that might be associated with the outcomes of interest (first year student status, Greek status, student-athlete status, gender, race, intention to change drinking habits at pre-intervention, drinking status at pre-intervention, participation in other alcohol prevention programs, social desirability bias). HLM also was used to determine whether, among those participating in the intervention, program impacts varied by target group or demographic characteristics.

Using factor analyses and reliability tests, indices were created to measure the outcomes of interest, resulting in 13 measures of knowledge, attitude and behavior. (See the table on the following page.)

Alcohol 101 Plus Evaluation Measures: Outcomes of Interest

Domains	Index Name*	Index Description
Knowledge	Effects	Awareness of the effects of drinking alcohol
	Consequences	Awareness of the legal consequences of drinking alcohol
	Alcohol Management	Self-reported alcohol knowledge/management skills
	Campus Environment	Awareness of campus information, resources and policies about alcohol
Attitudes	Individual Responsibility	Attitudes about individual alcohol use or non-use
	Responsibility to Peers	Attitudes about social responsibility related to alcohol use or non-use
	Social Situations	Attitudes about drinking or not drinking at social events
	Impact	Attitudes about social and academic consequences of drinking excessively
Behavior	Supporting Peers	Behaviors related to encouraging responsible alcohol use or non-use in others
	Purposeful	Behaviors related to purposeful alcohol choices
	Planning	Behaviors related to planning responsible alcohol use or non-use
	Number of days in last 30 had one or more drinks	Number of days in last 30 had one or more drinks
	Number of days in last 30 had five or more drinks	Number of days in last 30 had five or more drinks

*In the full report, see **Error! Reference source not found.** that contains more detailed information on the construction of each of these indices.

For each of the outcome variables, two change scores were calculated: the change from pre-intervention to post-intervention (to measure immediate impact), and the change from pre-intervention to follow-up (to measure the sustained impact).

Study Results

The evaluation examined whether Alcohol 101 Plus had a significant impact on students' knowledge about, attitudes towards and behaviors regarding safe, responsible decision-making about alcohol use or non-use. Results from this study demonstrated that Alcohol 101 Plus was successful at increasing the alcohol-related knowledge of students. When controlling for respondent characteristics and other factors that might be associated with the outcomes of interest, statistically significant gains were made in the following categories of knowledge: alcohol effects, the legal consequences of alcohol misuse, alcohol management strategies and available campus resources related to alcohol use. All knowledge content areas showed statistically significant knowledge increases after the program and improvement was sustained when measured approximately three months later.

Student attitudes related to individual responsibility also significantly improved after the program, although these attitudinal changes were not demonstrated at follow-up measurement. Alcohol-related behaviors did not show statistically significant change across the campuses.

When looking at the outcomes for specific target groups (those involved in intercollegiate athletics, those in the Greek system and those in their first year of college), the results were inconsistent. Small samples of respondents in target groups, significant variation in campus environments and variable student characteristics made it difficult to isolate differences in student learning and behavior change among different student groups.

Qualitative analysis of the on-site visits revealed that Alcohol 101 Plus was being implemented on campuses with varying levels of environmental support for alcohol prevention strategies and with different methods of administration. Analysis of the survey results by site showed that some campuses were able to achieve better results than others, although these differences were not great and schools with stronger implementation practices or with more comprehensive alcohol approaches did not necessarily produce better outcomes. Differences in campus environments or characteristics of the students attending each school rather than implementation of the Alcohol 101 Plus protocol may explain these outcomes.

Conclusions and Recommendations

As a teaching tool, Alcohol 101 Plus can be considered a success. Students learned negative expectancies about alcohol misuse and increased their knowledge of skills to manage their drinking behaviors. However, significant changes were not found in sustained attitudes or behaviors related to drinking.

These findings are not unique to Alcohol 101 Plus. A number of studies of alcohol interventions in college populations have been found to shift knowledge without improving attitudes or behavior.³⁻⁵ "Informational, knowledge based, or values clarification interventions about alcohol and the problems related to its excessive use"⁴ were found in the 2002 NIAAA study to be less effective at achieving behavior change unless paired with other interventions. Nonetheless, social cognitive theory, as postulated by Bandura,⁶ argues that one's cognitions, values and expectations affect behavior. Thus, changes made in knowledge may lead to behavioral change at a later date. This study followed students only for one semester.

A key to maximizing the effects of Alcohol 101 Plus involves closer collaboration with university staff to educate them on appropriate implementation strategies and context. Targeted information or resources provided to campuses will help to facilitate the movement of student knowledge to practice, achieving the end goals of the Alcohol 101 Plus program. A number of areas where increased collaboration or education might be most useful follow:

- 1) Provide participating campuses information on how to team the Alcohol 101 Plus program with other successful campus.
- 2) Provide additional information in the Facilitator's Guide on the value of facilitated discussion; host workshops to train staff or include an instructional CD-ROM for facilitators to encourage universities further to create the optimal implementation strategies for the Alcohol 101 Plus program.

- 3) Suggest a protocol using a stronger “dose” of the Alcohol 101 Plus program. Interventions found to be effective in alcohol and substance abuse often require a more significant dose than that offered by the campuses participating in this study and likely even more than suggested in the current Facilitator’s Guide for Alcohol 101 Plus. The suggested protocol for the program might include additional ideas to help maximize results such as recommending more discussions of program content, encouraging a “time release” intervention whereby the program is extended to span a semester or offer weekly email “booster shots,” and providing information on how best to use “learning incentives” to optimize the knowledge gains made by students. Incentives can work to motivate students to learn and remember information that they may otherwise discount. Provide examples of how incentives might work to create an “immediacy” of the information. Providing information on how to time the intervention with key learning opportunities for students (e.g., first year student orientation, Greek rush, homecoming, spring break) also would be useful.
- 4) Provide advertising collateral to help campuses increase publicity and promote public conversation around the program through brochures, advertising and social norms posters.

The continued success of Alcohol 101 Plus will benefit from additional evaluation. Research studies of interest might involve the use of more quantitative evaluation to determine how and when best to implement the intervention. Experiments with dosage, campus “readiness,” incentives, training for the trainers and partnering the program with additional alcohol interventions will help to test how to maximize the program’s effects. In addition, more qualitative studies with students and trainers could provide information on how best to market and administer the program in a variety of college campuses settings.