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Short Communication

Parental Consent Procedures: Impact on Response Rates and Nonresponse Bias

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Abstract

This study examined the impact of passive versus active parental consent procedures on response rates and nonresponse bias when recruiting 9th grade students for a school-based alcohol intervention. Results indicated a significant difference in response rates when using passive parental consent procedures (91.8%) compared to active parental consent procedures (30.4%). Additionally, students recruited with active parental consent procedures reported lower rates of alcohol use and lower levels of alcohol-related consequences than those recruited with passive parental consent procedures. There were no differences in demographic variables between the two groups. Findings indicate active parental consent procedures may result in an underrepresentation of students reporting alcohol use and alcohol-related consequences, compromising the generalizability of findings in school-based alcohol intervention research. We suggest researchers incorporate strategies shown to increase response rates when using active parental consent procedures to minimize nonresponse bias.

INTRODUCTION

Underage drinking is a significant problem in the United States, with national survey data indicating approximately 70% of adolescents report alcohol use by the end of high school [1]. Adolescent survey data provide important information regarding adolescent alcohol use, including prevalence and demographic data that are used to develop prevention and intervention programs. Collecting data from adolescents, however, involves complex ethical and legal issues [2] that may impact the generalizability of the data collected. One such issue involves using active or passive parental consent procedures to recruit adolescents for research studies.

Both active and passive consent procedures provide parents with an explanation of the research study and an invitation to have their child participate. Passive consent procedures require parents to respond to consent letters only if they do not want their adolescent to participate ("opt-out"). In contrast, active consent procedures require a returned signed consent form indicating approval for adolescent participation ("opt-in"). Historically, parental consent could be obtained using either passive or active parental consent procedures. Changing research environments, however, have led to an increased demand for active parental consent procedures by school districts and Institutional Review Boards [3].

A review of the substance abuse survey research identifies several advantages of passive parental consent procedures compared to active parental consent procedures in school-based survey research [2]. Response rates are higher when passive parental consent procedures are used, with estimates as high as 90% for passive parental consent procedures compared to 30-60% for active parental consent procedures [2]. Researchers have consistently found that active parental consent procedures result in lower response rates compared to passive parental consent procedures among middle and high schools students [3,4], although this may be more pronounced for younger students [5].

School samples recruited with active parental consent procedures are also less diverse and have fewer high-risk participants [2]. Researchers have found that active parental consent procedures are associated with nonresponse bias, including the underrepresentation of male students [3,6] and diverse students [6]. Additionally, active parental consent procedures are associated with an underrepresentation of students who use substances and engage in other problem behaviors [3-7]. Lower rates of lifetime prevalence of alcohol use [3,7], past 30-day alcohol use [3], being drunk [3], high-risk drinking [7], smoking [6], and other drug use [5] are associated with active compared to passive parental consent procedures. Similarly, the use of active parental consent procedures is

associated with lower levels of antisocial behavior [3] and other problem behaviors [4].

Overall, researchers have found that the use of active parental consent procedures in school-based survey data collection results in lower response rates and the associated nonresponse bias, yielding samples under representing specific groups. There is limited research, however, directly comparing passive versus active parental consent procedures when recruiting adolescents for school-based alcohol interventions. Because school districts and Institutional Review Boards increasingly require the use of active consent procedures, it is important to understand how active consent impacts response rates and nonresponse bias in school-based alcohol intervention research. Additionally, because alcohol use increases substantially in the transition from middle school to high school, examining the impact of active parental consent procedures in the recruitment of students for alcohol interventions is particularly important for this age group. Thus, the aim of this study is to examine differences in response rates and nonresponse bias between passive and active parental consent procedures in recruiting 9th grade students for a school-based alcohol intervention.

MATERIALS AND METHOD

Participants and Procedures

Participants were recruited from public junior high schools in the North West over a two-year period during the fall semester. The participating schools sent information about the study to all parents of 9th grade students ($N = 1286$). We used passive parental consent procedures in Year 1 and active parental consent procedures in Year 2. In Year 1, the schools contacted all parents of 9th grade students ($n = 584$) via letter by mail at their permanent addresses provided by the registrar's office. A project-addressed, stamped decline postcard was enclosed in the letter. If a parent did not want their child to participate in the research project, they were asked to print their name and student's name and return the postcard, call, or send an email indicating their option to decline. In Year 2, the schools contacted all parents of 9th grade students ($n = 702$) via letter by mail at their permanent

addresses provided by the registrar's office. A consent form with a pre-addressed stamped return envelope was enclosed. We required parents to sign and return the consent form for their child to be allowed to participate in the study.

The final sample consisted of 749 students ($n = 536$ Year 1; $n = 213$ Year 2). Participants were 51.3% female, with age ranging from 13 to 16 ($M = 14.25$, $SD = 0.48$). Participants were primarily Caucasian (74.2%), with 10.1% Hispanic, 5.4% Asian, 4.4% African-American, 4.1% American Indian/Alaskan Native, 1.3% Hawaiian/Other Pacific Islander, and 0.6% other. A school counselor recruited students with parental consent during class periods. Participants logged onto the survey website and were presented with an informed assent statement and were asked to indicate their assent by clicking "Agree". They were then routed to a 15 minute survey. Teachers gave students without parental consent and those who declined participation an alternative activity to complete during the class period. The School District Research Board approved all study procedures in Year 1 and Year 2. In Year 1, the University Institutional Review Board approved secondary analyses of data. In Year 2, the University Institutional Review Board approved all study procedures.

Measures

The Quantity /Frequency /Peak questionnaire (QFP) [8,9] was used to assess prevalence of drinking. Participants were asked to indicate frequency of drinking on an 8-point scale with options ranging from 0 (Do not drink alcohol at all) to 7 (Every day). Students who endorsed "do not drink at all" were classified as non-drinkers.

The Rutgers Alcohol Problem Index (RAPI) [10] was used to assess alcohol-related consequences. The RAPI is a 23-item self-administered screening tool for assessing adolescent problem drinking. Participants were asked "how many times have the following scenarios happened to you while you were consuming alcohol or as a result of your drinking in the past 30 days." Responses were measured on a 5-point scale ranging from never to more than 10 times. A total consequence score was created by summing the 23 items ($\alpha = .96$).

RESULTS

Response Rates

The response rates were 91.8% and 30.4% for parental passive and parental active consent procedures, respectively. We conducted a chi square analysis to examine differences in response rates between the two groups. Results indicated a significant difference in response rates between the two groups, $\chi^2(1) = 475.22$, $p < .001$, with a significantly lower response rate in the active consent condition compared to the passive consent condition.

Demographic Variables

Demographic data for the passive and active parental consent procedure groups are reported in (Table). We conducted chi square analyses to examine differences in demographic variables between the parental consent groups. Results showed no significant differences between the two groups on either gender or ethnicity.

Table 1: Demographic Characteristics by Consent Procedures.

| Demographic Variables | Passive Consent ($n = 536$) | Active Consent ($n = 231$) |
|---------------------------------|----------------------------------|---------------------------------|
| Gender | | |
| Male | 47.8% | 50% |
| Female | 52.2% | 50% |
| Ethnicity | | |
| Caucasian | 73.8% | 75.1% |
| Hispanic | 10.2% | 9.8% |
| Asian | 5.7% | 4.7% |
| African-American | 4.3% | 4.7% |
| American Indian/Alaskan Native | 3.7% | 5.2% |
| Hawaiian/Other Pacific Islander | 1.6% | 0.5% |
| Other | 0.7% | 0.0% |

Alcohol Use

Prevalence rates of alcohol use were 43.4% and 34.0% for passive and active consent procedures, respectively. We conducted a chi square analysis to examine differences in prevalence of alcohol use between the parental consent groups. Results demonstrated a significant difference between the two groups, $\chi^2(1) = 5.42, p < .02$, with a significantly lower percentage of student classified as drinkers in the active parental consent condition compared to the passive parental consent condition.

Alcohol-Related Consequences

The alcohol-related consequences variable was first examined for normality. The distribution substantially deviated from the normal distribution (> 3 skew and > 10 kurtosis) so we used a logarithmic transformation to normalize the distribution [11]. We conducted an independent sample t-test using the log-transformed variable to examine differences in alcohol-related consequences between the two parental consent groups. Students in the active parental consent condition reported significantly lower levels of alcohol-related consequences ($M = 1.56$ raw score; $M = 0.18$ transformed score) than those in the passive parental consent condition ($M = 2.69$ raw score; $M = 0.26$ transformed score), $t(713) = 2.37, p < .02$, Cohen's $d = .20$.

DISCUSSION

Findings from the current study indicate lower response rates are achieved when using active parental consent procedures compared to passive parental consent procedures. Additionally, participants in the active parental consent group reported less prevalence of alcohol use and fewer alcohol-related consequences compared to those in the passive parental consent group. Results support prior research indicating active parental consent procedures are associated with lower response rates, lower prevalence of alcohol use, and lower levels of high-risk drinkers when compared to passive parental consent procedures [3-5,7]. In contrast, we did not find significant differences in demographic variables between the two groups. This finding is not consistent with prior research indicating active parental consent procedures are associated with an underrepresentation of males and students of diverse backgrounds [3,6].

This study adds to the literature examining differences between active and passive parental consent procedures in school-based alcohol intervention research. Study limitations, however, include reliance on self-report and limited generalizability due to a primarily Caucasian sample from the Northwest region. Additionally, data were collected across a two-year period. Differences, therefore, could be related to cohort effects rather than actual differences between the two parental consent procedures. Future researchers should use a randomized design, randomly assigning schools to active versus passive parental consent procedures. Researchers should also examine these differences within schools with more diverse samples.

Results of this study have important implications for understanding the impact of parental consent procedures on intervention efficacy data. Findings indicate that the use of active consent procedures is associated with lower response rates and an underrepresentation of students using alcohol and reporting

alcohol-related consequences. Unfortunately, these are the students alcohol interventions are designed to reach. Therefore, it is unclear if interventions adopted as evidence-based are effective with at-risk students who are underrepresented in efficacy studies. For these reasons, it is important for researchers to utilize strategies to increase response rates when using active consent procedures to minimize nonresponse bias.

Researchers have found that active parental consent response rates can be improved through several processes. These include regular communication with school staff, providing incentives, using a multi-pronged approach for reaching parents, and encouraging students to return forms through classroom visits [12]. Researchers have suggested other strategies to increase response rates including attaching consent forms to student report cards or other documents requiring parental signature [13,14] or presenting information to parents during a school meeting [14]. Additionally, researchers have suggested that consent forms should be easy to read, simple to complete, and should catch parents' attention with cover sheets printed on colored paper [15]. Although some of these strategies require an investment of resources that may not be feasible for all researchers (e.g., providing incentives), researchers can incorporate many of the above strategies into active parental consent procedures.

CONCLUSION

The aim of this study was to examine differences in response rates and nonresponse bias between passive and active parental consent procedures in school-based 9th grade alcohol intervention research. Results showed that *active parental consent procedures yielded lower response rates and were associated with nonresponse bias, including lower rates of alcohol use and alcohol-related consequences, compared to passive parental consent procedures*. Active consent parental procedures may result in an underrepresentation of students reporting alcohol use and alcohol-related consequences, compromising the generalizability of findings in school-based alcohol intervention research. We suggest researchers incorporate strategies shown to increase response rates into active parental consent procedures when possible to decrease nonresponse bias.

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