

## Adolescent Substance Use Assessment in a Primary Care Setting

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**Abstract:** Health initiatives suggest that adolescent substance use assessment may be beneficial as part of primary care to screen for early problematic behaviors. To examine the accuracy of such reporting, we compared the anonymous and confidential self-reports of 180 adolescents in a primary care setting. Matching samples to control for demographic variables, we found that adolescents were more likely to report marijuana use and substance use behaviors, such as selling drugs, when reporting anonymously vs. reporting confidentially. These results challenge the accuracy of confidential self-reports within this setting, and suggest further research is needed.

**Keywords:** Adolescent, PESQ, primary care, substance abuse

### INTRODUCTION

Adolescent substance use has been linked to a variety of problems including dropping out of school, motor vehicle accidents, and violence (1). Although the prevalence of adolescent substance use has been on the decline in recent years, it still remains high, particularly among older adolescents (2). Results from the most recent Monitoring the Future study show that 75% of 12th graders report having tried alcohol and 50% report ever having tried an illicit drug (2).

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In light of these findings, health groups, like the American Medical Association and the American Academy of Pediatrics have begun to recommend routine, periodic assessments of adolescents for substance use and substance use disorders during primary care visits (3, 4). However, implementation of these recommendations remains problematic at primary care clinics where staff may be overburdened and unfamiliar with the techniques of substance use assessment. In fact, Wilson et al. found that medical care providers significantly underestimated adolescent substance use, abuse, and dependence when they based their impressions solely on an interview with the patient (5).

One way to make substance use assessment less cumbersome and more efficient for primary care clinics is to give adolescents a self-report measure of substance use. Several well-validated self-report screening instruments (e.g., the Personal Experience Screening Questionnaire [PESQ] (6); the Problem Oriented Screening Instrument for Teenagers [POSIT] (7); and the Substance Abuse Subtle Screening Inventory [SASSI] (8)) are available to aid in assessment. But the accuracy and efficacy of self-reporting for risky behaviors such as alcohol and drug use has been questioned and may depend on the manner of instrument administration (9).

A possible way to increase the accuracy of self-reported use would be to make responses anonymous. Researchers have found that self-reports of substance use by adolescents are higher when the survey is anonymous rather than confidential (10, 11). However, these studies compare results obtained from school surveys (anonymous) vs. those obtained from household surveys (confidential). Other studies that have compared the reliability of self-report surveys in only a school setting obtained mixed results depending on age and gender (12, 13). Additionally, very few studies explore the issue within the context of a primary care facility. If using self-report assessment tools in order to screen for substance use is to be part of primary care, it is essential to know the degree to which adolescents will accurately report their use in this setting.

To examine the difference between anonymity and confidentiality on self-reported substance use behavior in a primary care setting, we administered a short questionnaire consisting of demographic questions, the PESQ, which is a measure of substance abuse problem severity, and questions about lifetime substance use to adolescents, either anonymously or confidentially. We hypothesized that adolescents completing the instrument anonymously would report higher rates of substance use and substance use behaviors compared to those adolescents completing the survey under confidential conditions.

## METHOD

### Participants

Participants between the ages of 12 and 19 were recruited from a multi-service, adolescent primary care center in an urban area of North Carolina. None of the participants were known substance users or known to be receiving treatment for substance abuse at the time of this study.

A total of 180 adolescents completed the questionnaire, 101 in the anonymous condition and 79 in the confidential condition. The participants' average age was 15.78 (SD = 1.99) years. Participants were largely female (71.1%) and African American (76.1%).

### Measures

In addition to reporting basic demographic information (gender, age, and race), participants completed the PESQ (6). The PESQ is an 18-item, self-report survey originally developed for use as a brief screening tool to help assess the severity of adolescents' substance abuse (14). Responses on the PESQ range from 1 = *never* to 4 = *often*. This measure has previously demonstrated good internal consistency reliability ( $\alpha = .90$  to  $.95$ ) across gender and ethnic groups (14). Participants also responded to 13 *yes* or *no* questions that asked them to indicate whether they had ever tried alcohol or various other drugs, whether they were concerned about their use of any substances, and whether they had ever been or currently were in treatment for substance abuse.

### Procedure

Participants in the anonymous group were asked if they would like to participate by front desk staff. If they agreed, they completed the surveys in the waiting room and deposited them in a locked box. Participants received \$5 for their participation. Participants in the confidential group completed the survey in the waiting room, along with other confidential paperwork, as part of routine care. All of the paperwork was collected from the patient and placed into the patient's chart upon completion.

## RESULTS

To examine differences between the two groups, *t*-tests were conducted on the 18 PESQ items, and  $X^2$  tests were conducted on all dichotomous

**Table 1.** Differences between anonymous and confidential groups in matched and unmatched sample

Item	Matched sample			Entire sample		
	Anon. <i>M</i> ( <i>SD</i> )	Non-Anon. <i>M</i> ( <i>SD</i> )	<i>t</i> ( <i>df</i> ), <i>p</i>	Anon. <i>M</i> ( <i>SD</i> )	Non-Anon. <i>M</i> ( <i>SD</i> )	<i>t</i> ( <i>df</i> ), <i>p</i>
3. How often have you used drugs/alcohol with older friends?	2.18 (1.21)	1.42 (.87)	3.42 (87), <b>.001</b>	1.84 (1.14)	1.46 (.94)	2.36 (175), <b>.02</b>
4. How often have you used drugs/alcohol at the homes of friends and relatives?	1.96 (1.09)	1.46 (.94)	2.35 (89), <b>.02</b>	1.78 (1.09)	1.41 (.89)	2.48 (177), <b>.01</b>
10. How often have you gotten drugs from a dealer?	1.65 (1.06)	1.24 (.60)	2.30 (90), <b>.02</b>	1.52 (1.01)	1.29 (.72)	1.67 (178), <b>.10</b>
13. How often have you been upset about other people talking about your drug use/drinking?	1.20 (.54)	1 (0)	2.45 (90), <b>.02</b>	1.16 (.52)	1.01 (.11)	2.43 (178), <b>.02</b>
17. When using drugs/alcohol, how often have you found out things you said or did while using/drinking that you did not remember?	1.61 (.96)	1.13 (.54)	2.96 (90), <b>.004</b>	1.50 (.92)	1.18 (.62)	2.64 (178), <b>.01</b>

18. In order to pay for drugs/alcohol, how often have you sold drugs?	1.32 (.65)	1.02 (.15)	2.96 (84), <b>.004</b>	1.32 (.73)	1.10 (.41)	2.30 (163), <b>.02</b>
Total PESQ Score	1.45 (.51)	1.19 (.34)	2.86 (90), <b>.005</b>	1.35 (.54)	1.22 (.46)	1.82 (178), <b>.07</b>

	Anon.	Non-Anon.	$\chi^2, p$	Anon.	Non-Anon.	$\chi^2, p$
Have you ever tried alcohol?	65%	50%	1.56, .21	63%	42%	8.36, <b>.004</b>
Have you ever tried marijuana?	61%	30%	7.4, <b>.007</b>	51%	28%	9.8, <b>.002</b>
Have you ever tried ecstasy?	9%	0	2.15, .14	7%	0%	3.91, <b>.048</b>

Note: The full questionnaire and observed differences are available by request from the author.

items. Significant differences were found between participants in the anonymous condition and those in the confidential condition on questions 3, 4, 13, 17, and 18 on the PESQ (see Table 1). In addition, those in the anonymous condition were significantly more likely to report having ever tried alcohol, marijuana, and ecstasy.

However, significant differences were also found between the two groups on all demographic information: gender,  $X^2(1) = 5.91, p = .02$ , age,  $X^2(178) = 4.13, p = .0001$ , and race,  $X^2(3) = 17.25, p = .006$ . It is possible that these demographic differences lead to the observed substance use-related differences; therefore, we created a sample that matched participants on these variables.

For the new sample, participants were identically matched on age, race, and gender, resulting in 46 participants in each group. The sample was 82.6% female, 89.1% African American, and an average of 16.02 ( $SD = 1.98$ ) years old. On the PESQ, significant differences were found between participants in the anonymous group and those in the confidential group on questions 3, 4, 10, 13, 17, and 18. For all questions, participants in the anonymous group reported higher drug related behavior, had a higher overall PESQ score, and reported higher rates of lifetime use of marijuana as compared to participants in the confidential group (see Table 1).

## DISCUSSION

The results of our matched sample analyses suggest that adolescents administered the survey anonymously reported higher rates of marijuana use and substance use behaviors, such as, substance use with friends, attitudes and perception of substance use, unknown behaviors while using substances, and selling drugs as compared to adolescents administered the survey confidentially. No differences were found between the groups regarding alcohol use or other drugs such as cocaine and LSD. However, this is understandable given that over half of the participants in both groups reported having tried alcohol, which is viewed as a more socially acceptable drug. In addition, few participants, if any, reported other drug use (excluding marijuana), which did not give us enough statistical power to obtain significant differences between the two groups.

These findings suggest that adolescents within a primary care setting are more likely to report certain substance use and related behaviors when reporting anonymously rather than reporting confidentially. This is consistent with other studies that have reached the same conclusion in other settings. Kann et al. studied differences in adolescent substance use reporting at home and at school (10). In general, they

found that as privacy and confidentiality increased, reporting of substance use increased.

## **LIMITATIONS AND FUTURE RESEARCH**

Our sample consisted of considerably more females than males, as is typical of primary care settings, and more African Americans than other races, consistent with the overall population the clinic serves. The composition of our sample was a noteworthy limitation to our research. It also greatly decreased our generalizability. Further research should be performed to study a sample that more accurately represents both genders, as well as other races and ethnic groups.

Previous reports have shown that adolescents' willingness to respond and the type of responses they give to other health care queries can depend on many factors, including the presence and behavior of a health-care professional (15). Consequently, it may be beneficial to develop a study that implements different training modules for health care staff that are administering surveys regarding substance use to adolescents (16).

It may also be important to train staff to further define and substantiate confidentiality with the adolescent to insure that they fully understand the meaning of "confidentiality" (i.e., your parents won't find out). Ford et al. compared groups of adolescents receiving varying degrees of confidentiality assurance ranging from unconditional confidentiality to no confidentiality and found that the more an adolescent is assured of their confidentiality, the more likely they were to reveal sensitive information, such as substance use (17).

Overall, this study is a cautionary tale. Substance use is a serious, persistent health problem among adolescents, but assessment remains complicated. While the suggestion that substance use assessment for adolescents be implemented as a component of primary care seems logical; reliable, non-anonymous evaluation remains difficult.

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