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Neighborhood Norms and Substance Use Among Teens

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**TECHNICAL APPENDIX TO**  
**“NEIGHBORHOOD NORMS AND SUBSTANCE USE AMONG TEENS”**

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This Appendix provides additional details on data and measures not presented in the text of “Neighborhood Norms and Substance Use among Teens.” It includes information on questionnaire items and coding, comparisons of substance use attitudes and behavior in the L.A. FANS and other data sources, and correlations among key neighborhood-level variables.

**QUESTION WORDING AND CODING OF KEY VARIABLES**

**Child Questionnaire Items**

***Smoking***

Have you ever smoked a cigarette?

During the past 30 days, on how many days did you smoke a cigarette?

On the days you smoked, how many cigarettes did you usually smoke each day?

These questions were combined to create a measure of the intensity of smoking behavior, coded:

1=never had a cigarette

2=has tried smoking

3=had a cigarette in the past 30 days

4=usually has more than one cigarette

***Drinking***

Have you ever had a drink of alcohol?

During the past 30 days, on how many days did you have one or more alcoholic drinks?

In the past 30 days, how many times did you have 5 or more drinks in a row?

All questions are followed by the clause: *By a drink we mean a can or bottle of beer, a glass of wine, a mixed drink, or a shot of hard liquor. Do not include sips that you might have had from someone else’s drink.*

These questions were combined to create a measure of the intensity of smoking drinking behavior, coded:

1=never had a drink

- 2=has tried drinking
- 3=had a drink in the past 30 days
- 4=had five or more drinks at once in the past 30 days

### ***Marijuana and other drugs***

- Have you ever used marijuana, for example: grass or pot?
- In the past 30 days, on how many days have you used marijuana?
- Have you ever used drugs other than marijuana (such as crack, cocaine, speed, methamphetamines, heroin, LSD or inhalants)?
- In the past 30 days, how often have you used drugs other than marijuana?

These questions were combined to create a measure of the intensity of drug use, coded:

- 1=has never tried marijuana or other drugs
- 2=has tried drugs
- 3=smoked marijuana in past 30 days
- 4=had other drugs in past 30 days

### ***Teen Perceptions of Neighborhood Boundaries***

When you are talking to someone about your neighborhood, what do you mean? Is it.... the block or street you live on; several blocks or streets in each direction; the area within a 15-minute walk from your house; an area larger than a 15-minute walk from your house?

We constructed an indicator for those who define their neighborhood as no bigger than several blocks or streets in each direction, a definition most closely corresponding to tracts.

### ***Teen Exposure to the Neighborhood***

Here are some questions about your neighborhood. For these questions, “neighborhood” means both the block or street you live on and several blocks or streets in each direction. Please keep this in mind when you answer these questions.

How many of the adults or grown-ups in your neighborhood do you know? Would you say you know most, some, or none of them?

How many of the kids and teens in your neighborhood do you know? Would you say most, some, or none of them?

Now think about your best friends. Do any of them live in this neighborhood?

Are most of the places where you go with your friends close enough to walk to? (*this comes from a later section of the interview schedule, not immediately preceded by the above stem.*)

We created indicators for whether teens know most adults in the neighborhood, whether they know most other teens in the neighborhood, whether any of their best friends live in the neighborhood, and whether they are able to walk most places they go with their friends. Teens responding yes to at least two of these items were coded as having a high level exposure to their neighborhood.

## **Adult Questionnaire Items**

### ***Smoking***

Do you smoke cigarettes?

On the average, how many cigarettes per day do you usually smoke?

These questions were combined to create a measure of the intensity of smoking behavior, coded:

1=does not smoke

2=smokes less than a pack a day

3=smokes a pack or more a day

### ***Drinking***

In the past 30 days, have you had at least one drink of any alcoholic beverage such as beer, wine, wine coolers, or liquor?

In the past 30 days, how many days did you drink any alcoholic beverage?

On the days your drank alcohol, about how many drinks did you have on average? A drink is 1 can or bottle of beer, 1 glass of wine, 1 can or bottle of wine cooler, 1 cocktail, or 1 shot of liquor.

In the past 30 days, how many times did you have 5 or more drinks on one occasion?

These questions were combined to create a measure of the intensity of drinking behavior, coded:

1=did not have a drink in the past 30 days

2=had a drink in the past 30 days

3=typically has more than one drink

4=had five or more drinks at once in the past 30 days

### ***Marijuana***

In the past 30 days, have you used marijuana? (asked only of primary caregivers)

Drug use is coded as a dummy:

0=did not smoke marijuana in past 30 days

1=did smoke marijuana in past 30 days

### ***Attitudes about Smoking, Drinking, and Marijuana Use***

People differ in whether or not they disapprove of certain things. Would you disapprove of people who are 18 or older doing each of the following?

Smoking one or more packs of cigarettes per day?

Taking 1-2 drinks nearly every day?

Trying marijuana once or twice?

If the respondent said yes, interviewers were instructed to ask: Would you disapprove or strongly disapprove?

These items were scored from 1 (don't disapprove) to 3 (strongly disapprove).

***Child-Centered Social Control***

Next I have three other statements. For each one, please tell me if it is very likely, likely, unlikely or very unlikely that people in your neighborhood would do the following:

If a group of neighborhood children were skipping school and hanging out on a street corner, how likely is it that your neighbors would do something about it?

If some children were spray-painting graffiti on a local building, how likely is it that your neighbors would do something about it?

If a child was showing disrespect to an adult, how likely is it that people in your neighborhood would scold that child?

Response options ranged from 1 (very likely) to 5 (very unlikely). We recoded all items to go from 1 (low child-centered social control) to 5 (high child-centered social control). We averaged responses to the five items (alpha coefficient = .71). At the neighborhood level, we created an indicator for neighborhoods in which half or more of all residents scored a 4 or higher on this scale, i.e., for neighborhoods with a high degree of child-centered social control.

**TEENAGERS' SUBSTANCE USE IN L.A. FANS COMPARED TO OTHER STUDIES**

Appendix Table 1 shows how the lifetime prevalence of substance use among teenagers in the L.A. FANS compares with estimates from other surveys. Because Los Angeles contains a larger proportion of foreign born teenagers than the rest of the nation, we present these results for the total sample and separately for native born and foreign born teenagers. We compare substance use in the L.A. FANS to use reported in three surveys: the 2000 National Household Survey on Drug Abuse (NHSDA); Monitoring the Future (2000); and the 2001 Youth Risk Behavior Surveillance System (YRBSS). Both MTF and the YRBSS are large, nationally representative, school-based surveys in which teenagers report their own substance use. The 2000 MTF obtained substance use reports from students in grades 8, 10, and 12. The 2001 YRBSS obtained reports from 9<sup>th</sup>-12<sup>th</sup> graders. We show lifetime use for the full YRBSS sample as well as for the subsample from Los Angeles. The NHSDA differs from the school-based MTF and YRBSS by sampling individuals in households rather than in schools.

**-- Appendix Table 1 about here --**

Overall, L.A. FANS data show a lower lifetime prevalence of substance use than do the other surveys. Our results are closest to those from the 2000 NHSDA. For marijuana use, the estimates from L.A. FANS and the NHSDA are very similar. For cigarette smoking, the estimates from L.A. FANS are similar to those in NHSDA for 8<sup>th</sup> and 9<sup>th</sup> graders, but are lower than the NHSDA for teens in grades 10 and 12. Likewise, the percentage of 8<sup>th</sup> graders who had ever had a drink of alcohol is similar in L.A. FANS and in the NHSDA, but the percentages ever drinking in L.A. FANS do not increase at the same rate as in the NHSDA (and even decrease from 10<sup>th</sup> to 12<sup>th</sup> grade, although cell sizes become small). The YRBSS data allow a comparison of lifetime usage for Los Angeles and the United States holding sample design and question

wording constant. The last two columns of Appendix Table 1 show that percentages of high-schoolers who have ever smoked a cigarette, had a drink of alcohol, or used marijuana are lower in Los Angeles than for the country as a whole in the first part of high school, but by the end of high school this differential has disappeared or even turned around. Differences between Los Angeles and the United States as a whole may be due to differences in population composition, including the higher percentage of immigrants in Los Angeles and differential rates of high school attendance and completion among subgroups that vary in their substance use.

Two important differences in study design contribute to variation across surveys in estimates of teenagers' substance use (see Fowler and Stringfellow [2001] for a review of differences in estimates produced by the NHSDA, MTF, and YRBSS). First, school-based studies like the MTF and YRBSS usually show higher rates of substance use than household surveys like the NHSDA and L.A. FANS. Lower reports of these sensitive behaviors in household surveys may be due to social desirability bias even in settings where confidentiality is assured. Second, question wording may also contribute to the higher estimates in some surveys than in L.A. FANS. The notes to Appendix Table 1 show the question wording for each survey. It is plausible that the YRBSS question "Have you ever tried cigarette smoking, even one or two puffs?" would elicit higher levels of smoking than the comparable L.A. FANS question "Have you ever smoked a cigarette?" Because the phrase "even one puff" encourages reports of very minor experimentation.

## **ADULTS' SUBSTANCE USE AND ATTITUDES IN L.A. FANS COMPARED TO NHSDA**

Appendix Table 2 compares data from the NHSDA and L.A. FANS on adults' attitudes and behaviors with respect to smoking, drinking, and drug use. The table shows the comparison for all adults and for mothers because we use information about all adult neighbors as well as the teenager's mother in our analysis. Whereas levels of teen substance use are lower in the L.A. FANS survey than in other sources, levels of adult smoking, drinking, and marijuana use are very similar for the L.A. FANS and NHSDA. Adults (and mothers) in the L.A. FANS data are somewhat less likely to have had at least 5 drinks on one occasion in the past 30 days than in the national sample. For most substances, mothers in both surveys are less likely to report substance use than are all adults.

**-- Appendix Table 2 about here --**

For cigarettes and alcohol use, adults' attitudes about smoking and drinking are similar for L.A. FANS and NHSDA. In both studies respondents report about whether they disapprove of the behavior for adults. The L.A. FANS question asks about someone age 18 or older. About 40% of adults strongly disapprove of adults smoking a pack or more of cigarettes a day and just under a third disapprove of drinking every day. Disapproval of marijuana use is lower in Los Angeles than in the country as a whole. Nationally, over half of adults strongly disapprove of adults trying marijuana, but in Los Angeles only about 40% strongly disapproved. The low education distribution of the L.A. FANS sample suggests that these attitudes may be less reliably measured than for a more highly educated sample, although the association between education

and attitude reliability varies among attitude items (Alwin and Krosnick, 1991; Schuman and Presser, 1981).

The NHSDA survey also asked adult respondents about their neighbors' attitudes about smoking, drinking and marijuana use. Most adults think that their neighbors are substantially more accepting of cigarette smoking and alcohol use than they are. Only 12% think that their neighbors would strongly disapprove of smoking more than a pack of cigarettes a day and just over 13% think their neighbors would disapprove of adults drinking alcohol every day. The lower levels of perceived disapproval for neighbors are due to much higher percentages of respondents saying that their neighbors would neither approve nor disapprove of the behavior. In contrast, neighbors' perceived disapproval of trying marijuana is very similar to the level of respondents who report their own disapproval of marijuana use, 56 and 57%, respectively. The greater perceived disapproval of marijuana use may occur because marijuana is an illegal drug, as opposed to cigarettes and alcohol (for adults). The large discrepancy between adults' own attitudes and their perceptions of neighbors' attitudes about smoking and alcohol suggest that adults may not accurately perceive the extent of disapproval for substance use in their environments, i.e., what we are treating as "norms" in our analysis. Alternatively, adults are reporting about what they think is inappropriate for themselves, perhaps because of health concerns, but they – and their neighbors – may be willing to accept these behaviors in others who are legally free to smoke and drink.

### **YOUTHS' PERCEPTIONS OF ADULT ATTITUDES BY SUBSTANCE TYPE**

Appendix Table 3 shows that youths perceive much greater disapproval of substance use than adults report (these data are from the NHSDA; the L.A. FANS survey did not ask about youths' perceptions of others' attitudes). NHSDA youths, however, were asked if adults' (parents') would disapprove of them smoking, drinking, and trying marijuana, whereas we have data on adults' disapproval of other adults' substance use. This discrepancy might result in a weaker signal of norms, but it is likely that those who disapprove of adults' smoking, drinking, and using marijuana would also disapprove of teenagers' substance use.

**-- Appendix Table 3 about here --**

### **CORRELATIONS AMONG NEIGHBORHOOD-LEVEL VARIABLES**

Appendix Table 4 provides a correlation matrix of key neighborhood variables in our analysis of the L.A. FANS. This matrix shows that smoking, drinking, and marijuana use do not move in unison. Namely, mean levels of smoking are negatively correlated with mean levels of drinking. And although the mean disapproval of drinking is negatively related to the mean level of drinking, it is positively related to the mean level of smoking. This holds true of marijuana use as well. These correlations strongly suggest that there is not a single norm about substance use, but norms relating specifically to smoking, drinking, and drug use. Thus it seems appropriate to examine the influence of norms about smoking on teenagers' smoking behavior, the norms about drinking on teenagers' drinking behavior, and the norms about marijuana use on teenagers' drug behavior.

**-- Appendix Table 4 about here --**

## REFERENCES

- Alwin, D.F., and J.A. Krosnick. 1991. The reliability of survey attitude measurement: The influence of question and respondent attributes. *Sociological Methods and Research* 20, 139-181.
- Fowler, F.J., Jr., and V.L. Stringfellow. 2001. Learning from experience: Estimating teen use of alcohol, cigarettes, and marijuana from three survey protocols. *Journal of Drug Issues* 31, 643-664.
- Schuman, H., and S. Presser. 1981. *Questions and Answers in Attitude Surveys: Experiments on Question Form, Wording, and Context*. Academic Press, New York.



**Appendix Table 1. Teenagers' Substance Use by Grade in School and Data Source**

Behavior and Grade	Data Source				MTF <sup>c</sup>	YRBSS <sup>d</sup> National	Los Angeles
	LA FANS <sup>a</sup>		Foreign Born	NHSDA <sup>b</sup>			
	Total	Native Born					
Ever smoked a cigarette (%)							
8th	23	22	29	23	41	---	---
9th	32	30	37	36	---	58	44
10th	31	29	37	45	55	63	72
12th	41	39	<sup>e</sup>	55	63	71	65
Ever had a drink of alcohol (%)							
8th	28	29	23	29	52	---	---
9th	36	38	30	42	---	73	67
10th	49	48	53	53	71	76	80
12th	45	47	<sup>e</sup>	71	80	85	84
Ever used marijuana (%)							
8th	15	17	7	9	20	---	---
9th	17	18	14	16	---	33	26
10th	28	24	23	25	40	42	47
12th	33	35	<sup>e</sup>	37	49	52	53

SOURCES: The Los Angeles Families and Neighborhood Survey (L.A.FANS); National Household Survey on Drug Abuse (NHSDA) 2000; Monitoring the Future (MTF) 2000; Youth Risk Behavior Surveillance System (YRBSS) 2001.

NOTES: All results are weighted.

L.A. FANS is a probability sample of about 3,250 households from sixty-five neighborhoods in Los Angeles County. L.A. FANS contains 1,650 children aged 9 to 17 who were asked about smoking and 1,100 teens aged 12 to 17 who were additionally asked about drinking and drugs. The NHSDA is a nationally representative survey of households. In 2000 15,665 teens in grades 8 through 12 were interviewed. The 2000 MTF is a school-based survey that is nationally representative of students in grades 8, 10, and 12 (N=26,423). The 2001 YRBSS is a school-based survey that is nationally representative of students in grades 9 through 12 (N=13,601). The YRBSS sampled schools in the Los Angeles Unified School District, the boundaries of which roughly correspond to the City of Los Angeles (N=1,295).

<sup>a</sup>The L.A.FANS questions are: "Have you ever smoked a cigarette?"; "Have you ever had a drink of alcohol? By a drink we mean a can or bottle of beer, a glass of wine, a mixed drink, or a shot of hard liquor. Do not include sips that you might have had from someone else's drink."; "Have you ever used marijuana, for example: grass or pot?"

<sup>b</sup>The NHSDA questions are: "Have you ever smoked part or all of a cigarette?"; "Have you ever, even once, had a drink of any type of alcoholic beverage? Please do not include times when you only had a sip or two from a drink."; "Have you ever, even once, used marijuana or hashish?"

<sup>c</sup>The MTF questions are: "Have you ever smoked cigarettes?"; "Have you ever had any beer, wine, wine coolers, or liquor to drink--more than just a few sips?"; "On how many occasions (if any) have you used marijuana (grass, pot) or hashish (hash, hash oil) in your lifetime?"

<sup>d</sup> The YRBSS questions are: "Have you ever tried cigarette smoking, even one or two puffs?"; "During your life, on how many days have you had at least one drink of alcohol?"; "During your life, how many times have you used marijuana?"

<sup>e</sup>Cell contains less than 20 sample members.

**Appendix Table 2. Adults' Behavior and Attitudes by Substance Type and Data Source**

Attitude or Behavior	NHSDA	L.A. FANS
<b>Smoking<sup>a</sup></b>		
<i>Adults' Attitudes:</i>		
Percent who strongly disapprove of adults smoking 1+ packs per day	41.9	43.6
Percent who say that their <i>neighbors</i> would strongly disapprove of adults smoking 1+ packs per day	12.1	---
N	(32,233)	(2,532)
<i>Adults' Behavior:</i>		
Percent who smoke <sup>b</sup>	17.8	16.6
N	(32,233)	(2,539)
<i>Mothers' Attitudes:<sup>c</sup></i>		
Percent who strongly disapprove of adults smoking 1+ packs per day	46.7	46.8
Percent who say that their <i>neighbors</i> would strongly disapprove of adults smoking 1+ packs per day	10.6	---
N	(6,822)	(1,937)
<i>Mothers' Behavior</i>		
Percent who smoke	18.2	12.4
N	(6,822)	(1,929)
<b>Drinking<sup>d</sup></b>		
<i>Adults' Attitudes:</i>		
Percent who strongly disapprove of adults drinking daily	30.7	29.5
Percent who say that their <i>neighbors</i> would strongly disapprove of adults drinking daily	13.5	---
N	(32,588)	(2,527)
<i>Adults' Behavior:</i>		
Percent who drank alcohol in past last 30 days	48.9	52.3
Percent who had 5 or more drinks on one occasion in last 30 days	20.5	14.6
N	(32,588)	(2,540)

(continued...)

Appendix Table 2 (continued)

Attitude or Behavior	NHSDA	L.A. FANS
<i>Mothers' Attitudes:</i>		
Percent who strongly disapprove of adults drinking daily	41.9	42.2
Percent who say that their <i>neighbors</i> would strongly disapprove of adults drinking daily	15.1	---
N	(6,906)	(1,937)
<i>Mothers' Behavior:</i>		
Percent who drank alcohol in past last 30 days	45.7	38.1
Percent who had 5 or more drinks on one occasion in last 30 days	13.4	6.4
N	(6,906)	(1,931)
<b>Marijuana<sup>c</sup></b>		
<i>Adults' Attitudes:</i>		
Percent who strongly disapprove of adults trying marijuana	56.7	39.4
Percent who say that their <i>neighbors</i> would strongly disapprove of adults trying marijuana	55.8	---
N	(32,361)	(2,527)
<i>Adults' Behavior:</i>		
Percent who used marijuana in past last 30 days	4.3	---
N	(32,361)	(--)
<i>Mothers' Attitudes:<sup>b</sup></i>		
Percent who strongly disapprove of adults trying marijuana	60.1	45.3
Percent who say that their <i>neighbors</i> would strongly disapprove of adults trying marijuana	57.0	---
N	(6,861)	(1,936)
<i>Mothers' Behavior:</i>		
Percent who used marijuana in past last 30 days	2.5	3.6
N	(6,861)	(1,945)

SOURCES: National Household Survey on Drug Abuse (NHSDA) 1999; The Los Angeles Families and Neighborhood Survey (L.A.FANS)

(continued...)

Appendix Table 2 (continued)

NOTES: All results are weighted.

<sup>a</sup> The NHSDA and L.A. FANS questions on attitudes toward smoking ask about "smoking one or more packs of cigarettes per day." The response categories in the NHSDA are 1=neither approve nor disapprove; 2=somewhat disapprove; 3=strongly disapprove and in L.A. FANS are 1=don't disapprove; 2=disapprove; 4=strongly disapprove.

<sup>b</sup> In the NHSDA we define "smokers" as persons who responded that they had smoked every day in the past 30 days to the question "During the past 30 days, that is since...on how many days did you smoke part or all of a cigarette?" In L.A. FANS "smokers" are those who respond "yes" to the question "Do you smoke cigarettes?"

<sup>c</sup> Mothers in the NHSDA are women with at least one child under the age of 18 in the household. In the L.A. FANS data these are primary caregivers nearly all of whom are mothers.

<sup>d</sup> The NHSDA questions on attitudes toward drinking ask about "having one or two drinks of an alcoholic beverage nearly every day." The L.A. FANS question asks about "taking 1-2 drinks nearly every day." The categories for these questions are the same as those listed in note a.

<sup>e</sup> The NHSDA questions on attitudes toward marijuana ask about "trying marijuana or hashish once or twice." The L.A. FANS question asks about "trying marijuana once or twice." The categories for these questions are the same as those listed in note a.

**Appendix Table 3. Youths' Perceptions of Adult Attitudes by Substance Type**

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Attitude	NHSDA
<b>Smoking</b>	
<i>Youth Perceptions of Adult Attitudes (Grades 8-12):</i>	
Percent who say that <i>adults</i> would strongly disapprove of them smoking 1+ packs per day	57.3
Percent who say that their <i>parents</i> would strongly disapprove of them smoking 1+ packs per day	84.8
N	(11,010)
<b>Drinking</b>	
<i>Youth Perceptions of Adult Attitudes (Grades 8-12):</i>	
Percent who say that <i>adults</i> would strongly disapprove of them drinking daily	65.2
Percent who say that their <i>parents</i> would strongly disapprove of them drinking daily	88.0
N	(11,054)
<b>Marijuana</b>	
<i>Youth Perceptions of Adult Attitudes (Grades 8-12):</i>	
Percent who say that <i>adults</i> would strongly disapprove of them trying marijuana	74.4
Percent who say that their <i>parents</i> would strongly disapprove of them trying marijuana	88.8
N	(11,039)

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SOURCE: National Household Survey on Drug Abuse (NHSDA) 1999.

NOTES: All results are weighted. The NHSDA response categories are 1=neither approve nor disapprove; 2=somewhat disapprove; 3=strongly disapprove.

**Appendix Table 4. Correlations between Neighborhood-Level Variables (N=65)**

	(1)	(2)	(3)	(4)	(5)	(6)
(1) Mean adult smoking behavior	1.00					
(2) Mean adult drinking behavior	-0.22	1.00				
(3) Mean adult marijuana use	0.19	0.22	1.00			
(4) Mean adult disapproval of smoking	-0.24	-0.15	-0.26	1.00		
(5) Mean adult disapproval of drinking	0.37	-0.62	0.08	0.21	1.00	
(6) Mean adult disapproval of marijuana use	0.28	-0.54	-0.06	0.31	0.80	1.00

SOURCE: The Los Angeles Families and Neighborhood Survey (L.A.FANS)