

Substance Use Initiation among Street Youth: A Test of the Gateway Theory

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Better known as "gateway" progression through drugs (10), stage theory has been used to explain the phenomenon in which an individual's initial substance use starts with legal substances such as tobacco or alcohol, progressing to illicit but "softer" drugs such as marijuana, and finally escalating to more addictive drugs such as crack/cocaine, methamphetamines, or heroin. Gateway theory does not seek to explain what leads youth to begin using substances. Instead it predicts a pattern of substance use, making it quite practical and easy to translate into policy and intervention. But progression from one stage to the next is not inevitable, therefore, at each stage there is a possibility of abstinence, maintenance of drug use, or progression to the next level. A potential pitfall for programs is that they might become focused on the substances deemed as leading to use of harder substances while not considering those issues that drive the youth to try those initial substances in the first place.

Previous Research on the Gateway Theory

Examination of the gateway theory across various populations has revealed some inconsistencies. In studies of normative, non-clinical populations, the gateway progression through substance use appears to be the modal pathway (4). When considering "serious substance users" (7) or deviant arrestees (11) it has been argued that marijuana is actually the first drug of use in the gateway progression. A recent study of American Indian youths (14) has also substantiated the growing concern for early use of inhalants among this population. These studies, which focus on higher risk groups, suggest that gateway theory is not as good a fit for explaining substance use behaviors of special/clinical populations or across diverse ethnic groups. This study questions whether street youth, who experience numerous risk factors, use substances in ways that can be explained by the gateway theory – is the theory a good fit?

What Do we Know about Substance Use among Homeless Adolescents?

Homeless adolescents (or street youth) are a marginalized group, and often misperceived as pervasively troubled individuals, forced to the streets by their own habits. This generalization fails to take many factors into account.

- From one-half to three-fourths of homeless youth experienced physical and/or sexual abuse while living at home (2, 3, 19, 21, 22)
- A disproportionate number (one-half or more) of street youth have a substance-abusing parent (16, 21), another etiological factor for youth substance use (15, 17).
- Numerous studies have detailed the inordinately high rate of substance use in the street youth populations internationally (5, 6, 8, 18, 20)
- There is evidence that some street youth use substances as a coping mechanism (1, 13, 18) or that substance use was just one of a number of deviant, problem behaviors (9).

Other studies have shown that regardless of age (13), there is a steep initiation curve in which escalation of drug use happens shortly after a youth leaves home, marking this time as a potentially critical opportunity for intervention. If, in fact, the gateway theory predicts initiation of homeless youths' substance use then the theory could be used to inform prevention and intervention programs. However, the theory may not help explain such behaviors among this population, and more importantly may not do as well explaining the escalation in use of serious drug users.



Study Conducted Among Seattle Street Youth

Our study looked at 375 homeless adolescents between the ages of 13 to 21 ($M = 17.14$ yr.), who were participating in a larger study of street youth in Seattle, and interviewed between 1994 and 1999 (2). Participants were recruited by interviewers who intercepted the youth at strategic street locations or at one of seven youth service agencies. The majority of participants identified themselves as Caucasian (52.5%), followed by American Indian or Alaskan native (18.9%), Black (17.6%), Hispanic/Latino (7.2%), and Asian/Pacific Islander (2.7%). Slightly more than 45% were female.

Alcohol use was assessed by asking participants if they had ever tried any alcohol, and if so, at what age. Participants were also asked about the frequency of alcohol use in the past year. In this study, both categories of alcohol use were considered together, and the age of first use was taken as the earliest for the two types of alcohol if the participant had tried both.

Marijuana and other drug use were assessed by questions about their lifetime use of marijuana and of 12 other categories of drugs. If youth reported using a drug, they were asked their age at first use, and their frequency of use in the past 6 months.

Data Analysis

The sequence of substance use was analyzed by determining the particular pattern of progression for each individual, with drugs classified into the categories of alcohol, marijuana, and other drugs --- a similar classification to that used by Mackesy-Amiti (12). The "other" category of drugs included cocaine, LSD, psychoactive mushrooms, ecstasy, crank, heroin or other opiates, speed, crystal methamphetamines, tranquilizers, Quaaludes, inhalants, or abused over the counter drugs.

Participants who had not tried all three categories of drugs defined in our gateway sequences (alcohol, marijuana, and other drugs) were classified as '*nonprogressors*,' and those who had tried all three were classified as '*progressors*.' In sequencing the progressors in the sample, it was necessary to determine what to do with 'ties;' that is, participants' reporting of having tried more than one category of substances at the same age. We alternated assignment of the possible sequences in the event of ties. For example, if two subjects reported that they initiated use of both alcohol and marijuana at age eleven, and tried cocaine first at the age of thirteen, one subject would be classified in the alcohol, marijuana, then other sequence, and the other would be grouped as using marijuana, alcohol, then other drugs. In the event that all drugs were reportedly initiated at the same age, we alternated among the six possible combinations of sequences. Thirty-six youth (9.6%) initiated their substance use with alcohol and marijuana within the same time frame (i.e., two-way ties), and 30 youth (8%) initiated their substance use with all three categories of substances within the same time frame (i.e., three-way ties).

Subsequently, we analyzed the likelihood that participants who tried one class of drug would then initiate use of other drugs along the hypothesized gateway progression. The next set of analyses examined whether current use of substances was related to the order of initiation of the gateway drugs. We also tested the effects that age, "age that youth first left home," "age that youth first used any substance (except tobacco)," and "number of times the youth has left home," have on the sequence of substance initiation to determine whether there were any differences in age among the different progressions patterns.

Results

The data reveal that while a significant proportion of the street youth interviewed followed the gateway progression of substance initiation, this progression is not prevalent enough to consistently predict the order of initiation among a majority of street youth. One-third of the youth tried alcohol first, marijuana second, and a 'harder' drug third. However, 44% of the youth initiated these three classes of substances in a different order and 22% have not even initiated all three classes of substances. Thus, our sample has among the lowest rates of individuals following the gateway progression when compared to normative populations, although the one-third rate has been found in non-normative or deviant populations (7, 12)

Sequence	Frequency	Percent	Cummulative Percent
Have not used all 3 categories (nonprogressors)	84	22.4	22.4
Alcohol, Marijuana, Other (AMO)	125	33.3	55.7
Alcohol, Other, Marijuana (AOM)	60	16.0	71.7
Marijuana, Alcohol, Other (MAO)	49	13.1	84.8
Marijuana, Other, Alcohol (MOA)	24	6.4	91.2
Other, Alcohol, Marijuana (OAM)	19	5.1	96.3
Other, Marijuana, Alcohol (OMA)	14	3.7	100.0
Total	375	100.0	100.0

Drug Use Initiation Sequences for Homeless Adolescent Sample (N = 375)

In general, these data were able to shed light on several pertinent issues in the substance abuse literature. Gateway theory did not increase our understanding of substance use initiation for street youth, leaving the behaviors of many in our sample unaccounted for. To illustrate, for street youth who start using substances at a younger age, there *is* a greater likelihood of progressing in a typical gateway fashion, starting with alcohol and moving through marijuana to harder drugs. Moreover, this finding concurs with that of Mackesy-Amiti et al. (9). However, *these individuals are no more likely to be using substances currently than youth who tried all three categories of drugs in a different sequence.* For an even larger proportion of the participants, there is an atypical progression to serious drug use. This may indicate that a view of alcohol or marijuana as necessary steps in the progression to substance abuse problems is shortsighted. Alternatively, it may be that early initiators, particularly those who begin using heavily before leaving home, do not have many options other than the most common substances such as alcohol and marijuana. Subsequently, when the late initiators begin using, their cohort has a wider exposure to a greater number of drugs via association with the early initiators, who have already moved on to other illicit substances. Late initiators, therefore, are less likely to start with the most common substances, or they move to more serious substance use rapidly.

With the current sample of street youth this could very well be the case, in that there is a high rate of substance use, particularly experimentation with drugs such as methamphetamine and heroin that are considered to represent a high level of risk. The general public and professionals consider these drugs to be an endpoint drug, in that people progress toward these drugs as their substance use moves in a more extreme direction. Unfortunately, experimentation with methamphetamine and heroin, for example, often leads to more involved use because of the addictive nature of these drugs. Thus, regardless of whether youths get a running start by more heavily using more common substances of use such as alcohol or marijuana, once they begin using highly addictive drugs (e.g., cocaine, amphetamines, heroin, etc.) their use patterns are more likely to become heavier and riskier (e.g., intravenous route of administration). Street youth, unlike many other samples of youth examined with regard to their sequential progression of substance initiation, are less likely to fit a typical gateway pattern, and more importantly, their current use is not as likely to relate to the substances they previously tried.

Comments

Identifying gateway drugs also ignores the changing face of the drug scene. Currently, there is growing concern over the use of crystal methamphetamines and ecstasy, but historical trends would suggest that in the next decade the youth who are coming into serious drug use will find another substance being brought to them by the drug using pioneers. Certainly alcohol and marijuana were the substances most used, so programmatically it seems rational to keep the intervention focus on these substances. However, we need to be aware that the chaos present in the lives of homeless youth may be mirrored in the choices they make about using substances. Interventionists might capture a broader slice of this population if programs are not substance specific, but rather focus on the risks faced by street youth for general substance use initiation, as well as progression and maintenance of use.

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