Comprehensive Theory of Substance Abuse Prevention

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Introduction

There are so many ways of looking at substance abuse and substance abuse prevention that a clear view of the relation of all parts to a coherent whole is very hard to attain. Typically each person has familiarity with one or two segments of the issue, at best, and generalizes from their limited experience in conjunction with their overall belief system.

In order to make effective plans for prevention, a better understanding is needed. In order to judge the merits of any particular proposed policy or strategy, one should have some idea of not only the likely result but also the alternatives and the comparative effects of each.

This paper is a proposed model for understanding substance abuse and substance abuse prevention, in search of the "big picture". Its goal is not to capture every detail of the very complex set of facts and issues involved, but to lay out enough of an overview so that a framework exists for connecting and reconciling beliefs and research findings that may sometimes seem contradictory, or at least not clearly related. It is based on the author's multi-decade search for such understanding while working on various aspects of substance abuse prevention. It is intended to be consistent with all valid research findings, but to also draw from the experiences of many people who have been involved in prevention. It applies most directly to dynamics and trends in the United States of America, but some of the concepts seem to generalize to many other counties.

Overview

The theory is based on the following points, each discussed below:
1. Substance abuse prevention is largely about what happens in the first twenty years of life. This includes large scale social environment issues as well as less widely experienced issues common enough to affect the overall prevalence of substance abuse in a population. One of the most consistent and powerful findings of drug (alcohol and other drug) research is that the younger a person is when they start regular use of a substance, the more likely to have a number of other problems including substance abuse in adulthood, in comparison to young people who don't drink before age 21 or who don't drink or use other substances at all.
2. Although most dichotomies are ultimately continuums, the best possible understanding of the development of substance abuse rests on considering two different main routes of risk: profoundly challenged children and socially influenced teens.

3. The preventive actions needed to address each of these main routes is very different, and failure to recognize the differences can lead to frustration and decreased effectiveness in prevention planning.
4. Preventing substance use due to profound childhood challenges is best done by preventing or intervening in the causes of the challenges, while preventing teen use due to social influences involves preventing or intervening in either the messages of influence or substance availability (or both). Teaching youth about drug dangers is not likely to be very effective, compared to interrupting or countering social influence messages (from peers, adults, or media) that promote use.
5. Most principles of primary prevention of youth substance use are relevant to tobacco, alcohol, and marijuana use but not to post-gateway substance use, because the factors influencing progression beyond gateway substance use are as much defined by the effects of currently used substances as by pre-existing factors. In other words, the main feasible way for primary prevention of use of cocaine, methamphetamine, heroin, etc. is to prevent or successfully intervene in youth use of any gateway substance.
6. Parents play an important role in regard to prevention of profound challenges to young children and social influence on teens, but that role is different for one route than the other. The main role of parents in regard to preventing social influences toward alcohol and other drug use among teens is to communicate disapproval of youth substance use, establish family rules against it, and attempt to keep teens out of situations in which peer alcohol or other drug use will occur or is occurring. To prevent profound challenges to children, their parents most of all need to get whatever help they require early in their adult life to avoid establishing a family in which children face fetal effects from alcohol or other drugs, child neglect, child abuse, or other domestic violence. Human service systems that can provide appropriate help to young parents or soon-to-be parents are vital to prevent or intervene in situations that pose a threat to children.
7. When planning prevention initiatives regarding teen substance use, due consideration should be given to whether there are a large number of youth among the population to be served who have experienced profound childhood challenges, or even some more recent challenges. A combination of positive youth development efforts and encouragement of norms against youth substance use may be the best course of action to prevent or delay substance use among youth who have faced such challenges. For youth who have not faced profound challenges to their social-emotional development, efforts specific to countering pro-drug (alcohol and other drug) influences are most needed. Typically, the latter are "universal" prevention strategies, while the programs for teens who have faced profound childhood challenges are "selected" or "indicated".
8. When large scale trends in youth substance use (such as national prevalence of use over a period of decades) are considered, the predominant power (to affect youth substance use) of adult norms about youth use becomes clearer.
9. Once the overall dynamics of youth substance use and prevention are understood, resolution of various debates about prevention strategy becomes easier, as demonstrated with two examples of issue analysis in the current text.

Profoundly Challenged Children

Children who begin regular use of alcohol or other drugs prior to age 10 are very likely to have faced profound social developmental challenges in their early years. Challenges may start as early as conception, in terms of effects of maternal substance use on a developing fetus. Many of the other profound challenges to capacity for social-emotional functioning occur during the first 2-3 years of life, when children are especially vulnerable to major lapses in care, which threaten their ability to form a solid bond with their parent or other adult caretaker. Other profound challenges in the first ten years can include child abuse, other domestic violence, or other major disruptions in parental functioning.

The meaning of "profoundly challenged" centers on impact of life events and/or early neurologic impairments on a child's social-emotional functioning. This refers not to intelligence or physical abilities, but the capacity to function socially in some positive manner. Not all children exposed to child neglect, child abuse, or domestic violence will develop early risk for substance use, but such traumas put children at risk for a variety of later behavioral problems, with precocious substance use and substance abuse being among the possible problems. The actual extent to which a child is affected by such events depends on a number of factors, such as personal resiliency factors, the timing and duration of exposure to a destructive environment, and the degree to which parents or other caretakers are able to provide nurturing and emotional healing after the destructive elements are removed from a child's life. Genetic traits can also play a role, for example putting a child at greater or less risk of later addiction once substance use is initiated.

Even if a child with such challenges in life doesn't begin regular substance use by age 10, they may remain more at risk for early initiation of use, as well as later substance abuse and other behavioral problems. If they begin regular use of a substance (typically alcohol), they are more at risk than other persons to progress to other substance use, and to have difficulty attaining a stable recovery.

To some extent, the notion of a profoundly challenged childhood influencing later substance use and other behavior is widely recognized. One of the problems of effectively addressing substance abuse prevention is that this notion is insufficient as a sole or main view of the development of substance abuse. A whole other dynamic as youth reach adolescence plays an equally important, though different, role in the incidence of youth substance use and abuse. Importantly, though at-risk children may remain at-risk in adolescence, any other young person may become "at-risk" in adolescence through this very different dynamic of causation. No one is absolutely immune.

Socially Influenced Teens

Any person can be influenced to some extent by the words and actions of others, or even the perceived attitude of others. For teens in general, this is especially true, as the prime

developmental task of adolescence is to recognize and shape one's own identity. As young people enter teen years and move through those years, they are becoming more independent from their parents. Parents still have very important roles to play, but can't be with their adolescent children all the time, and have to compete for teens' attention as young people increase attention to the views of peers and popular culture. As a result of teens' independence and increased attention to messages they perceive around them, many of them that hadn't used substances previously are exposed to alcohol and other substances, and choose to take a drink or a smoke or a pill to see what it feels like or to fulfill role expectations that they perceive, either accurately or not. Some don't continue use, but others begin regular use of a substance, particularly alcohol. Most or all sets of youth survey data from anywhere in the world show a significant increase in the prevalence of substance use as a cohort of young people moves from young teen years to their older teens and young twenties. Some substances, particularly inhalants, reach their greatest prevalence prior to age 16, and some substances, such as heroin, are rarely used before older teen years or later. However, the prevalence of ongoing alcohol, tobacco, and marijuana use tends to increase with age throughout adolescence. "Recreational" use of prescription drugs also follows that pattern, though it is still not as prevalent as marijuana, which in turn is still not as prevalent as regular alcohol use among teens.

For most teens, the increase in risk of use is based not so much on adverse life events, past or present, but on easier access to substances and a perception that drinking or other substance use is expected or normal for teens. Some of the connection between such norms ("descriptive" norms and also "injunctive" norms) and substance use is due to substance-using students seeking peers who also drink and use other drugs and who serve as their reference group for normal behavior, but much of the connection between perceived norms and substance use is due to the impact of pro-use messages on risk of use. These messages can come from peers, parents, other adults, and from media. So, while individual risks from a "profoundly challenged childhood" usually apply to a whole range of potential problems and often require a variety of individual and family interventions to prevent or reverse, the risks from social influences may be very specific to alcohol or other drugs and require preventive initiatives that are very focused on the use of particular substances, or at least on the issue of use of substances to get intoxicated (stoned, high, drunk, etc.).

Understanding the relative power of perceived peer norms helps understand why drug education hasn't succeeded as a key societal answer to substance use. For many years, persons familiar with substance abuse prevention research have known that "drug education" is not a powerful way to prevent youth use of substances. School prevention curricula can range from very helpful (addressing elements such as "media literacy" and revision of perceptions of peer use) to counter-productive (unintentionally reinforcing perceptions that most youth use substances, or even showing how to use), but simple education about the effects of drugs tends to produce no effect. Understanding why is best approached from two perspectives, the first concentrating on facts about "gateway" drugs: alcohol, marijuana, tobacco, and inhalants.

These four substances can be considered "gateway" because young people who begin regular use of a substance for the first time in their life will almost always do so with one of these four. Sometimes only one gateway substance (especially alcohol) is used by a young person, but often two or more are eventually used. Gateway substances tend to be ones that are relatively available and widely used. Teens who haven't begun regular use of a substance are likely to know peers who use one or more of the gateway drugs. Therefore, any facts taught or told to young people about dangerous effects of any of the gateway drugs are very likely to be tested by perceptions about youth who use them. Unless a particular fact about a danger of a specific gateway drug is validated by being somewhat common and observable among teen users, it may easily be dismissed as adult hyperbole, rather than a fact about probabilities of damage. This is particularly true for cumulative dangers such as addiction or liver disease, as teens can choose to believe not only that those will never happen to them but also that there will be plenty of time to perceive such dangers and avoid them.

Since the power of taught (but not observed) facts about gateway drug dangers to affect youth behavior is weak, drug education and media communication efforts aimed at teens are unlikely to have much positive effect unless they instead focus on the more powerful dynamic of social influence. Examples include messages that correct the usually mistaken impression that most peers use a substance, messages that debunk pro-drug media messages (typically by building teens' "media literacy"), and messages that in any other ways show that teen use of a particular gateway substance is not an inevitable, necessary, or desirable part of growing up.

Drug facts about "post-gateway" drugs such as cocaine, meth, and heroin are also typically ineffective when aimed directly at youth (rather than adults in regard to youth), but the main reason for this is different from the dynamic discussed for gateway substances. Analysis of prevention of post-gateway substance use must be heavily driven by recognition of the characteristics that distinguish those who engage in such use, particularly the extent and effects of their previous experiences with gateway substances.

Progression to Other Substance Use and to Other Problem Behaviors

When either main route (Profound Childhood Challenges and Social Influences on Teens) toward youth substance results in initiation of regular use, it is almost always use of one the gateway substances. Only after regular use of one or more of these substances has begun does the likelihood for use of other illicit drugs (such as cocaine, LSD, methamphetamine, or heroin) or of prescription drugs for "recreational" purposes begin to grow. The question of which substances beyond any one person's "gateway" substance(s) will be used seems to depend mainly on what drugs are available and popular in that community at that time. In other words, once a teen or young adult becomes part of the pool of those who regularly use one or more substances for psychoactive effect, they are at heightened risk for other substance use and abuse. The heightening of risk of other drug use (sooner or later) among youth who use a gateway substance doesn't necessarily mean that a very high percentage of drinkers or marijuana

users go on to using other drugs, but that the risk of a young person starting use of any other drug before they regularly use one or more gateway drugs is very close to zero.

In essence, the only way to achieve true "primary prevention" of use of post-gateway substances is to succeed at preventing or stopping use of "gateway" substances, particularly alcohol and marijuana. Media campaigns against a specific drug (other than alcohol, tobacco, marijuana, or inhalants) such as heroin or methamphetamine may succeed only in diverting use from one dangerous substance to others, if there is any success at all. Worse, there is some likelihood that a media campaign against a particular post-gateway drug like methamphetamine or heroin may actually increase use. To understand why, one must think about the effects of the message on two different groups: those who are already regular users of at least one gateway substance (typically alcohol) and those who have occasional (less than monthly) or no use of any substance. The latter group is very unlikely to start use of a post-gateway drug (methamphetamine, for instance) in the foreseeable future, so a media campaign about dangers of meth use would have no effect on their substance use. The group who regularly use at least one substance, however, includes some proportion whose interest is in what other substances to use in search of a better "high" than they have already experienced. To such a person, an anti-meth campaign focusing on the negative effects of the drug can act like an advertisement that says, "If you think you're already getting powerful effects from what you're taking now, just imagine the high that people find when they risk using this dangerous drug." Others in the group of users, who are not so driven by risk taking and the search for a new high may be warned away from meth, but are not likely to stop use of other substances they use, nor to avoid trying some other drug. So, funding that could have been used for media campaigns against gateway substances or for treatment of persons who are abusing any drugs goes instead for less effective or counter-productive uses if aimed toward warning about specific drug dangers.

Once any young person starts to regularly use one or more substances, they increase their risk of substance-related problems, ranging from DUI car crashes to unintended pregnancy, and from involvement in violence to development of drug dependency. Depending on the nature (frequency, duration, circumstances, etc.) of their use, the increase in risk may be slight, moderate, or extreme. Extreme risk can be present even if the person only uses alcohol or marijuana, but use of multiple substances further increases risk.

The Special Roles of Parents

Parents can play an important role in regard to either kind of risk, but the specifics of their role tends to be very different in regard to profound childhood challenges than to social influence of teens. The first and foremost action parents can take to prevent the development of risk due to profound challenges to youngsters is to avoid being part of the problem. In other words, parents who avoid substance use themselves during pregnancy and avoid substance abuse at all times, and who ensure a safe and nurturing family environment for their children's early years are being the best single resource for

lowering risk of their children later using substances, as well as other problem behaviors. Beyond that, parents or other caretakers can proactively seek appropriate social and psychological services when needed for themselves and/or a child for whom they are responsible. The best prevention approach in regard to profound challenges in childhood is the combination of those kind of positive parenting efforts and the availability of needed social services to help parents (birth parents, foster parents, adoptive parents, guardians, etc.) of young children cope with major life problems. The earlier in life these are addressed, the better. Efforts specific to drug prevention have little relation to the services needed, except to the extent that substance abuse prevention and/or treatment for parents (before or after they become parents) can decrease or prevent parental substance abuse and fetal alcohol or other drug exposure.

The role of parents in reducing social influences toward drinking or other drug use among teens is different. Parents still need to try to avoid becoming part of the problem (e.g. to not provide alcohol to youth), but beyond that the greatest need is for parents to attempt to pro-actively understand and counter any popular ideas or practices that make alcohol accessible to youth or that imply that youth alcohol or other drug use is acceptable or desirable. Parents who have rules against youth substance use, clearly convey disapproval of such use, and actively monitor their teen's activities to veto exposure to alcohol or other drugs can substantially cut the risk of their son or daughter drinking, binge drinking, or using marijuana.

Parents (or other family members) can also act as advocates beyond their family for public policies that decrease youth access to substances or that in other ways lead to less substance use by youth in their community.

Applying This Theory to Prevention Planning

To the extent that this theory accurately represents the major routes toward substance use and substance abuse, understanding it can help resolve debates about how to best prevent use.

People (preventionists, parents, public officials, etc.) who understand the "profoundly challenged childhood" route but not the "socially influenced teens" route tend to favor use of social services and positive youth development models to support youth in basic ways that may decrease risk for multiple youth problems, including substance use. The earlier in the development of the predisposing conditions in childhood interventions can be engaged and effective, the more likely they are to achieve success at relatively low cost, especially in comparison to no prevention efforts. From this perspective, efforts such as media campaigns against gateway substance use may appear to be unlikely to have much impact. Similarly, efforts to rally public opposition to substance use are seen as ineffective at best, and perhaps insensitive to the extent that they may embody "blaming the victim." Parents or other adults who believe that only troubled youth are at risk may underestimate the need to apply anti-drinking or anti-marijuana rules and expectations to all youth.

On the other hand, people who understand the "socially influenced teen" route but not the "profoundly challenged childhood" route may advocate preventative sanctions against youth use that, if not combined with intervention services as needed, are both ineffective and provocative toward youth who come from profoundly challenged childhoods. Unless prevention planning discussions include due understanding of the two different routes, persons with different points of view of how substance use and abuse develops may become locked in debate for one view or the other, rather than respecting both views in discussions about prevention.

Any particular initiative may be designed to affect just one of the two routes as long as the initiative is designed with understanding of the limits of each prevention approach in light of the larger picture. In fact, the goals and strategies needed for each of the two main routes often are too different to be combined. The most cost-efficient way to prevent drinking or other drug use caused by profound challenges in childhood is to prevent those challenges from occurring. The most cost-effective ways to prevent substance use among the general population of teens are policies and messages that focus specifically on youth substance use issues. Initiatives to counter the effects of social influence toward use often need to be very substance-specific, with separate messages or separate initiatives for each substance: alcohol, tobacco, marijuana, and inhalants.

Rather than substance-focused and belief-focused prevention, work on the prevention of profound challenges to children's social emotional development depends on a strong array of services for prevention and intervention among young families. Intervention with substance abusing parents can be among the interventions needed, but often parental substance abuse is only one of multiple issues to be overcome in order to decrease risks among children in families that experience profound challenges such as were described above. Effects of these actions on youth use rates generally won't show up for years, because the young people typically won't have enough interest in substance use and access to substances for much use to occur before pre-teen years.

Drug prevention efforts toward teens need to be designed with due recognition of the extent to which the particular population of teens includes many who had profound childhood challenges. For example, one can expect a high proportion of teens in the juvenile justice system to have faced profound childhood challenges, but in general youth populations this typically wouldn't be the case. Teens who experienced profound challenges in childhood (and perhaps also some youth with less profound or more recent major life challenges) typically need a combination of asset (or protective factor) building along with specific messages about alcohol or other drug use, while other teens need only (for purposes of substance abuse prevention) a sufficiently potent combination of protections from social influence toward substance use. In general, this means that most social influence initiatives (including polices against youth access) should use a "universal" model, while other prevention initiatives may often use a "selected" or "indicated" type of program.

Even when a program is designed specifically for teens who had a profoundly challenged childhood, it should include strong standards against youth substance use. Youth who experience profound challenges in childhood will, by being part of the overall population, also be exposed to social influences toward substance use when they are teens. Having both kinds of risks means needing both kinds of prevention. One exception is instances in which successfully overcoming one or more profound challenges of childhood acts as a protective factor against youth use, such as the determination of some youth to avoid alcohol or other drug use based on their experience of growing up in a family in which one or both parents were addicted to alcohol or other drugs. In most cases, though, a mentoring program or other positive youth development initiative for teens that doesn't specifically include a norm against youth substance use will be providing only half of what its clients need to avoid substance use.

Applying This Theory to Interpreting National Trends

For alcohol, tobacco and marijuana, variation in population-wide substance use rates, particularly among older teens, is numerically much more driven by social influence factors than by changes in the number of youth who faced profound challenges in childhood, as defined previously. The upward trends (increased numbers of youth using each of these three substances) as cohorts of youth move through their teens are far too strong to be caused by the relatively fewer number of youth who experienced profound challenges in their childhood. Up and down changes in large communities, in states, and in the nation over a five year period of annual measurement are also not likely to be explainable by changes in the number of children who face such challenges or who resolve them. While any individual may experience profound improvement or worsening of problems in a five year period, the nature of "profound challenges" as described previously makes progress slow on a community-wide level, and also makes major increases in substance use among teens unlikely to be due to their childhood challenges rather than social influence. Only if very large scale decreases in relevant human services have occurred throughout a community, state, or nation would the effects of profound childhood challenges on teens worsen more than average on a year to year basis.

On a national level, therefore, changes over a five year period in the percent of teens using alcohol, tobacco, or marijuana are extremely likely to be due to social influence factors, including substance accessibility to teens, rather than to increases or decreases related to profoundly challenged childhoods.

The question of how to achieve progress in advancing positive social influence regarding youth substance use probably has two different answers, one for short term and one for longer term. To affect use rates in any particular community in less than five years, prevention strategies may target youth substance access policies, youths' perceived peer norms about use, adult norms about youth substance use, strengthening the capacity of teens' parents to be proactive in countering social influences toward substance use, or

some combination of these strategies. Limiting teens' access to substances is crucial, but difficult to accomplish unless supported by strong adult norms against youth use.

In the long run, success at lowering the prevalence of youth use of a substance depends on making mutually reinforcing progress in: (1) strengthening adult beliefs about the importance of opposing youth use of the substance and, (2) development of policies or laws that limit youth access and for which support for enforcement is strong. The more that an adult population recognizes and is concerned about the impact of youth substance use on individuals, families, communities, and economies, the more it will try to communicate an anti-use norm and enforce laws and policies limiting youth access.

Adult norms against youth substance use tend to be eroded by oppositional forces. For each of the main gateway substances (alcohol, tobacco, and marijuana) there are organizations and individuals who are actively promoting adult use or opposing limits on access because of one or more of three motivations:
    (1) Financial gain by those who produce or market the substance,
    (2) Desire to continue use by those who use the substance, and
    (3) Belief that freedom to produce, market, purchase, and use psychoactive substances is a basic human right that is or should be protected by the United States Constitution.
Although oppositional forces don't typically advocate youth substance use, the reasoning or suggestions they offer typically minimize the perception of dangers of a substance, which in turn leads many adults to view heightened concern about youth use as unnecessary.

Adult norms against youth substance use also can be eroded by "generational forgetting". When prevention initiatives have enough success to greatly decrease youth use of a substance, problems stemming from such use that were self-evident during the times of greatest use of the substance may be forgotten as new cohorts of youth move into pre-teen and teen years.

The importance of adult beliefs and practices about youth use of a substance was highlighted in regard to alcohol by the Institute of Medicine's 2004 report, *Reducing Underage Drinking: A Collective Responsibility*. That report and the congressional action following that report have served as indicators of the evolution of adult norms about youth drinking, and also have served as influences toward greater effort by adults to keep alcohol away from teens and reduce youth exposure to pro-drinking messages. Although there are a number of potential contributing factors to the fact that youth alcohol use has declined during the past decade, theoretically the most potent have been the changes in adult beliefs about youth drinking, and associated tightening of polices and laws about youth access to alcohol and about youth alcohol use.

A similar trend can be identified regarding cigarettes. Growing public recognition of the dangers to smokers, dangers to non-smokers who inhale ambient cigarette smoke, and some of the more reprehensible practices of tobacco companies to deceive the public about the dangers led to increasing adult concern and increased governmental action,

culminating in the "master settlement" of late 1998. Substantial decreases in youth smoking have occurred during the past decade as the policies from that settlement were implemented, and the public support for those policies was maintained and perhaps strengthened.

Unlike alcohol and tobacco, which have been widely used in the United States for hundreds of years, the widespread use of marijuana was a phenomenon first seen in the 1960s and 1970s. The theoretical importance of adult norms about youth use of a substance is more challenging to see in rises and falls of national marijuana use rates among youth, but can be found. Key points include: (1) How did the trend toward widespread marijuana use start and increase? (2) What reversed the trend (1980-1992)? (3) What has influenced the percent of youth using marijuana since 1992?

In the context of controversy over the Vietnam war and military draft, the civil rights movement, women's "liberation," the "sexual revolution", and perhaps other powerful issues of the 1960s and 1970's, a strong, multi-faceted counter-culture emerged among many young adults of the time. The words, "Question Authority" and the saying, "Don't trust anyone over thirty" characterized the theme of this sub-culture. In some ways the emergence of the counter-culture may have been an appropriate reaction to the times, but the unfortunate inclusion of drug use as a part of that identity for many seems to have been the source of the increased use of marijuana and other drugs. More than any other time since then, and more than any time in the two or three preceding decades, a substantial number of teens and young adults defined themselves by the ideals of the young adult counter-culture rather than the norms of their parents and grandparents. The assertion that the most powerful effect on youth substance use comes from adult norms about youth substance use was perhaps most clearly demonstrated when youth of the 1960's and 1970's had to choose WHICH set of adult norms would guide them.

Among the possible reasons why the increase in drug use peaked in 1979 and started to fall were the resolution of some issues that had driven the counter-culture (particularly the Vietnam war), a growing recognition of drug problems, and the efforts of the parent anti-drug movement. All three of these are consistent with the assertion that adult norms about youth substance use are the most powerful drivers of youth use rates, in the long run. With the fading of the counter-culture as a salient part of day-to-day public discourse, the new generation of teens reverted to the norms of mainstream adult culture regarding substance use. In the same cycle that can produce "generational forgetting" when drug use decreases, but opposite to that effect, the rise in drug-related problems led many adults to question their belief in the benign nature of recreational drug use. And, the "Parent Anti-Drug Movement" gave expression to those concerns, advocating strongly not only among parents but in wider public forums about drug policy. The convergence of these three strong cultural changes is sufficient to account for the 1980-1992 reversal of the trend toward greater youth substance use.

Although these three factors achieved a reversal in youth substance use rates, they didn't completely "undo" the bias toward substance use among the "baby boomer" generation. While substance use and lax attitudes about use followed the more universal pattern of

increasing among an age cohort until they reach their mid-twenties, and then decreasing, the decrease among the baby boomer generation was not enough to blend with previous generations. As a result, that generation has continued to influence adult norms about youth substance use toward a more liberal view, as they influenced later generations and replaced older generations over time. The belief system for legalization of marijuana (and, to some extent, other drugs) over the past thirty years, and the financial power behind the legalization movement, has come largely from baby boomer influence, if not always baby boomers themselves. Apparently, 1992 was the year when the effects of that influence on overall adult norms about substance use in the United States began to overcome the influences that had produced a trend toward decreased youth use in the 1980s. The baby boomers who had turned 18 between 1964 and 1979 were, as of 1992, between 46 and 31 years of age, and had displaced enough of the older generations to erode the strength of adult norms against substance use. Generational forgetting may have helped, but the numbers suggest that the strongest factor was the replacement of older generations by baby boomers, who also, by 1992, accounted for a large number of the parents of teens.

Since 1992, the various factions for and against lax attitudes toward marijuana use have striven against each other in public advocacy, extending the controversy that blossomed in the 1960's and 1970's. The trend of level or slightly decreasing youth marijuana use from 1998 to 2007 and the slight increase in the past three years reflect those struggles.

Applying This Theory to the Analysis of Key Issues in Substance Abuse Prevention

Understanding this theory of how all the "pieces" of substance abuse prevention (particularly the research findings) fit together allows for improved answers to common questions or debates about preventing youth substance use and abuse. For example, here are theory-based analyses of some selected important questions/issues in prevention.

1. Are restrictions against youth access to substances effective, or a waste of time (since motivated youth will get a substance anyway), or even counter-productive (due to a "forbidden fruit" effect)?

Restrictions against youth access to alcohol, tobacco, or marijuana are very effective to the extent that adults in general have enough understanding of the reason for those restrictions or enough trust in policy-makers to stand by the law or policy. "Stand by" means to not be the "weak link" that provides or allows provision of the substance to youth, but also to not give youth the impression that violating the rule would be a trivial matter, free of risk to a young person and those around the substance user. Enactment of a law or policy and enforcement of a law or policy must be done with due consideration of current level of adult belief/support, and how to communicate with the adult population (of the community or state) in a way that increases that support. If a policy fits within the range of public support, is designed to act upon a youth substance access channel that is among the main ones for youth in that place, and is free of problems such as technical details that are impractical to carry out or enforce, it will be successful.

Success in this case doesn't mean that no teen will drink or use the drug again, but that the number of youth users of the substance will decrease. While some youth may continue to find a way to obtain the substance, less devoted users won't bother, and even the youth who make the effort will tend to use less because of the greater effort needed. The notion that young people will exert more effort to get a substance when it is illegal for them than when it is allowed (the "forbidden fruit" effect) may hold true for a few individual youth, but in a community or larger population the effectiveness of an adult-supported policy limiting youth access to a substance is far too great to be reversed by any youth who are exceptions to the general rule of decreased access leading to less use.

2. Are media campaigns about drugs worthwhile, a waste of time, or counter-productive?

Media campaigns must be well constructed in order to be effective, but even a campaign that is carefully crafted can be a waste of time or worse if it is based on erroneous assumptions about youth substance use. Media campaigns that attempt to convey to potential users of specific post-gateway substances some of the dangers of that substance are likely to be ineffective or counter-productive, as discussed previously. Media campaigns aimed at youth that focus on the dangers of gateway drug use may be counter-effective if they greatly exaggerate the dangers of a substance, but otherwise are likely to be ineffective. Media campaigns that focus on one of the gateway substances and convey to youth that use by young people their age is neither typical among peers nor expected by peers may be effective in the short run. Media campaigns that focus on one of the gateway substances and target parents and other adults in regard to use by teens or pre-teens (approximately ages 10-20) may have the greatest chance to have a long-term effect on future youth use rates of the substance, due to the power of adult peer norms and the preventive steps that parents can take. Adults need exposure to messages that effectively convey the importance of supporting laws and policies that limit youth access to substances. Parents need that same kind of message but also need specific encouragement about expressing disapproval of youth substance use, establishing family rules against youth substance use, and monitoring their son's or daughter's activities closely enough to identify and veto their teen's participation in activities that include use of alcohol or other drugs. For the long-term prevention of profound childhood challenges in the next generation of youth, current young adults (young parents and soon-to-be parents) could benefit from media campaigns that decrease fetal exposure to alcohol or other drugs and that promote use of services to prevent or overcome family violence (partner violence and/or child abuse), parental substance abuse, and/or child neglect, especially in the first few years of life.

Conclusion

This version of the proposed theory is comprehensive enough to be examined, discussed, and applied, but can be expected to become more comprehensive in scope, detail, and accuracy as additional issues and facts are connected to it.