CHROMING AND HARM MINIMISATION

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A wide assortment of consumer products including surface cleaners, solvents, air fresheners and paints lend themselves to abuse by inhalation and contain a wide variety of chemicals that are known to be harmful. Reported affects include neurological symptoms that reflect damage to parts of the brain involved in the control of cognition, movement, vision and hearing as well as damage to the heart, lungs, liver and kidneys.

However these reported affects remain controversial, as they are based on occupational exposures in industrial settings as opposed to the short periods of exposure typical of inhalation. To further obscure matters, most published material regarding these harmful affects ignore the distinctions between materials, and attributes to each and every product the potentially harmful effects of them all.

Research utilizing electroencephalogram tracings revealed that abnormalities due to inhalant use were temporary and readings reverted to normal once the solvents effects had worn off. Challenging the belief that glue sniffing causes permanent brain damage researchers have noted that such claims seem to stem from isolated case reports. “Long term studies of young people who have engaged in VSA are comparatively rare (and)...there is a scarcity of reliable information on the long term damage which young people may be doing to themselves through VSA”. Dr Joyce Watson found that of the 788 glue users in the Strathclyde Study, it was clear the risk of developing any impairment due to solvent abuse was small.

This uncertainty results in a situation best summed up in an address given to an International Conference on Forensic Psychiatry in Auckland where it was stated that when it comes to “toxicology the mythology about solvent abuse reaches its hysterical crescendo”. Indeed there is a dearth of reliable information regarding these substances as drugs. Primers of pharmacology that devote over 50 pages to the pharmacodynamics and pharmacokinetics of heroin or cannabis often contain 5 or less regarding the inhalants. This lack of coverage can probably be explained by the lack of expertise regarding these substances. Drugs like heroin/cannabis/amphetamine can be usefully considered in terms of things like: which neurotransmitters are released in the brain in response to the drug; which brain receptors are affected and in what way; whether there is a recognised dependency/tolerance/withdrawal syndrome connected to their use; which brain regions (and by extension which functions such as memory, balance etc) are most effected by their use.

When we ask similar questions about inhalants we are usually unable to specify the chemical (there are 100’s), the effected brain region, target receptors and so on. This leaves us dependent on case studies dealing with occupational exposures in industrial settings for information regarding the negative effects of volatile substances on human beings. The significance of such findings may be negligible in relation to the specific chemical cocktail to which young chromers are exposed.

Even if we could accurately specify which chemicals are in a particular product, further difficulties are created by the fact that concentrations vary, leading to variations in effect. We then need to factor in complicating issues like tolerance, body mass, genetic peculiarities, other substances ingested, individual metabolic rates, and the environment in which inhaling takes place (closed room, room with open window, air-conditioned etc.)

Kwikgrip provides an interesting example of these confounding variables. It contains very high levels of the well-known toxin toluene [53%], yet tests show toluene leaks from the bag at a far greater rate than the other major constituents N-Heptane [35%] or methyl ethyl ketone (MEK) [12%]. “Toluene at no time accounted for more than 40% of the vapor cocktail. Its concentration after a few minutes falls rapidly whereas the concentrations of the other less toxic compounds rose steeply”. These findings demonstrate that toluene, the principal component in liquid Kwikgrip, is not necessarily the principal volatile substance inhaled under typical sniffing conditions.
Currently all that can be stated with any confidence is that glue sniffing is probably the least harmful form of Volatile Substance Abuse, as the vapors are made up of hydrocarbons rather than the more complex (and more toxic) fluorocarbons found in aerosol and other products. Glue also has the advantage of being a solid so only the solvent vapors are inhaled, rather than the substances meant to be left behind after these solvents have evaporated. This difference may be critical as many products contain chemicals such as copper, lead, zinc or vinyl chloride that are far more toxic than the solvent and cannot be excreted by the body. This last point has clear and critical implications for petrol sniffers. The complexity of these factors, coupled with uncertainty regarding the threat of sudden sniffing death (which can occur in even first time users) tends to strongly reinforce an atmosphere in which harm reduction is perceived to be ineffective and demand reduction is thus viewed as the only appropriate response.

Panaceas or Shibboleths

Though education programs have continuously evolved from early shock campaigns emphasising drug horror stories to attempts to inculcate moral disapproval of drug use, and then to more sophisticated information approaches, one factor has remained consistent - demand reduction has failed in its stated objective of reducing the demand for drugs among young people. The decision to ignore the evidence of failure and soldier on because changing tack might send the wrong message has sown some unfortunate seeds. Adolescents know from their own experience that marijuana use does not lead inevitably to 'hard drugs' or addiction. The shock horror approaches lead to widespread and undifferentiated cynicism among youth in relation to the pronouncements of health promoters, while attempts to present drug use [and by extension, all risk taking] as wholly abnormal or negative failed to resonate with adolescents perfectly capable of recognising that there are pleasurable and functional aspects of drug use. All this well-meaning activity has led youth to discount both the message and the messenger.

The unintentional role primary prevention played in entrenching drug use, as a major symbol of generational difference should have led to a reassessment. Instead of questioning the implicit assumptions upon which the campaigns were based, the notion that peer pressure could explain various forms of deviancy came to the fore. This led to the adoption of peer refusal approaches, most famously captured in the admonition to ‘just say no’. Indeed ‘peer pressure’ has attained ‘conventional wisdom’ status despite the dearth of methodologically sound research support for the notion. The wholly negative connotations of peer pressure (which suggests coercion or at the very least persuasion by peers) has no inherently better explanatory value than positing peer preference (which suggests actively choosing to associate with a particular group who tolerate or approve of an individual’s attitudes or behaviour). This is, of course, old news to anyone who has heard the old line about birds of a feather.

“There is an all too widespread lack of recognition of the reciprocal nature of peer relationships where delinquent behaviour is concerned. This is most obvious in the area of alcohol and drug education. For example, drug education in schools is based on models of delinquency development, which place undue emphasis on peer pressure. These models tend to become over simplified as the theoretical research becomes transformed into educational packages, failing to take into account the reciprocal nature of relationships between young people and their peers. This results in drug education, especially school based drug education, failing to tackle the desire of many young people to use drugs on a recreational basis because they want to do so, not because they lack knowledge, social skills or have a poor self image. Some drug education still revolves around ‘just say no’ messages, so called decision-making skills, or refusal skills. In other words, resist pressure from your peers – which will be ineffective if you actually want to do it.”
While the failure of peer pressure models did not lead to the demise of ‘just say no’, it did speed the development of alternative approaches based on similarly faulty assumptions. The best known of these are those based on building self-esteem, such as the U.S. inspired DARE programs. D.A.R.E is an acronym for Drug Abuse Resistance Education. Most researchers have been unable to find any long-term effects for such programs in either preventing or even reducing adolescent drug use. Others have questioned the very assumptions upon which these programs are based.

Confusion arises because many chronic heavy users of drugs are indeed traumatised, alienated, lacking in impulse control and distressed – all of which lends a sense of legitimacy to deficit explanations of drug use. But at the other end of the continuum total abstinence have also been found to be anxious, emotionally constricted and lacking in social skills. In fact the psychologically healthiest subjects seem to be drug experimenters.

Most prevention programs misunderstand the role of self-esteem. While low self-esteem is almost certainly implicated in chaotic and self- destructive drug use, such patterns emerge too late in a ‘using career’ to provide any relevance for prevention. There is no evidence to support the contention that there is a causal relationship between low self-esteem and experimental or recreational drug use. In fact, as noted above, the opposite appears to be closer to the truth. It is young people with high self-esteem who are most likely to experiment with drugs.

evel. … up to 27 per cent of young people with high self-esteem had used illicit substances compared with only 20 per cent of their less confident peers. Experts say the new research means an overhaul of drug education programs is necessary. Two factors are thought to explain the results. More confident children are more likely to be sociable, have more money and thus have more opportunity to experiment with drugs. And they are also often more willing to indulge in ‘risk taking’ activities, ranging from extreme sports to Class A drugs.

One of the implicit assumptions upon which demand reduction is based is the notion that wanting to alter one's level of awareness is deviant. This is a questionable proposition at best, most people do it, and the main differences between users of licit and illicit substances are methodological. The view that adolescent drug use must necessarily arise from either pathological personal characteristics or pathogenic socialization seems all the more unlikely given that risk taking and experimentation are developmentally appropriate adolescent activities and the fact that in many Western nations illicit drug use is in fact normative.

These findings are especially relevant to inhalant interventions because the very wide range of products with legitimate domestic or industrial uses which can be sniffed are cheap, readily available and necessarily legal. Thus any prevention education must balance the dubious success rate of such processes with the risk of advertising the existence of a product that in many instances may be found in any household’s laundry and kitchen.

“The first point to emphasize is very simple, but one many people refuse to accept despite the evidence. Primary prevention does not work. A host of evaluative studies have shown that all kinds of primary prevention education programs and media campaigns have failed to prevent or reduce illicit drug use amongst young people. (Kinder, Pape and Walfish, 1980; Schaps et al., 1981; Sheppard, 1985; Bagnall and Plant, 1987; De Haes, 1987; Coggans et al., 1990; Dorn and Murji, 1992)”

Inhalant related literature confirms the lack of efficacy of prevention efforts: “. . . measures to prevent volatile substance abuse have had little impact over the last 20 years”. Citing the issues raised above in relation to the different legal status of inhalants and the dangers of ‘advertising’ the influential Institute for the Study of Drug Dependence baldly stated that prevention is not feasible, a view echoed by Re-Solve and The National Children’s Bureau, Solvent Misuse Project.
Brecher notes that once the hitherto unheard of practice of ‘glue sniffing’ was publicized in The Empire, the Sunday supplement of The Denver Post in 1959 it spread to every city in the USA on a wave of media reports ‘advertising’ the practice. Titled ‘How to launch a nationwide drug menace’ Brecher’s paper primarily underlines the dangers of involving an essentially sensation-seeking media in such issues, but serves also to underline the potential advertising effect of any prevention efforts.

It has often been argued that the resolution of the drug debate lies in moving responsibility for the issue from law enforcement to health. This is a necessary but insufficient change because the notion of health is an ideal, which is usually misrepresented as a norm. We all know that the person who exercises regularly (but not obsessively), who eats a balanced diet of whole foods (yet manages to avoid becoming puritanical and life denying while ruthlessly suppressing the aberrant desire for cheese cake and chocolate), who maintains a healthy weight (without developing body dysmorphic problems), who doesn’t smoke, who manages stress without SSRI’s, cannabis or alcohol is entirely mythical. Thus constructed the healthy person is an ideal from which we all inevitably deviate. One might say this is so obvious it does not require stating yet the stagnation of current prevention discourses is rooted in the failure to see that labelling an activity as healthy is not so much a matter of identifying an attribute as making a judgement regarding what constitutes wellness.

Simply put measuring health is not a value free exercise. The ruler we choose to use is a social decision (medical professionals are said to be at 30 to 100 the risk of developing substance use disorder yet you will never see either medical training or a medical degree presented as a risk factor). Health is no different from anything else associated with needs or wants. Like the amount of food, deemed necessary, “good health” is a fluid concept, varying across cultures and over time. 80 years ago toothpaste was a luxury item, body fat a sign of good health, and hyperactive kids simply required strict parents less willing to spare the rod.

One group of young people discussing cannabis use reported that using it helped them see the humour in situations, added to the pleasure of listening to music or watching a movie, helped form strong social bonds with peers, represented an alternative currency, filled the vacuum left by unemployment, and helped them to relax. All these attributes have positive health impacts that cannot simply be ignored because they are unpalatable. Intoxication (whether caused by drugs or behaviour e.g. gambling) is a state sought after and valued specifically because it is different to everyday consciousness. It is pointless to measure it by its deficits compared to everyday consciousness (unless of course we are confronted by someone who believes drinking improves their driving or that gambling will improve their finances).

Even a prevention agenda that did move to quantify these qualities of substances in the harms benefits analysis would be insufficient. Youth are faced with a range of tasks essential to their development into mature adults. Many of these tasks require exploratory and risk taking behaviours that many adults will find either terrifying or abhorrent. This is contingent on their differing roles not on who is right and who is wrong. This paper concerns itself with the problematic assumptions underlying our current approaches to inhalant use. Anyone whose work involves inhalant users must manoeuvre through a delicate intersection where these assumptions and individual dynamics meet. Because work with drug users is directed or limited by social pressures it is necessary to discern whether we are responding to a threat to health or simply behaviour of which society disapproves.

This paper commenced by detailing the complex picture presented by solvent pharmacodynamics. This undoubtedly complicates the task of developing a harms/risk analysis, which alongside the level of alarm created by the issue has served to fuel resistance to harm minimisation endeavours.
This is unfortunate. While these factors have slowed development of an inhalant version of pharmacological harm reduction strategies such as reducing heroin overdoses by using Naloxone or substituting methadone for street heroin supplies, strategies can be developed targeting inhalant specific risk factors. The campaign to reduce asphyxiation by encouraging ‘chromers’ to switch from using large plastic bags to small ones has been very successful.

Just as the lack of solvent specific pharmacotherapies should not deter us from developing strategies to reduce mortality and morbidity the failure of demand reduction efforts should not deter us from developing effective prevention programs. But for prevention to be effective a thorough overhaul of current strategies is necessary. Individual harm reduction approaches involve the worker gaining an understanding of the factors that influence a particular young persons chroming, so that they will recognise times when higher levels of support may be required. Prevention approaches involve gaining an understanding of the function of drug use.

Some young people report using inhalants for fun or out of curiosity or because they are cheaper and more easily available than cannabis. Others find the effects helpful in ameliorating the discomforts attendant upon homelessness, or the boredom of unemployment. Many of the young people presenting at YSAS have backgrounds of significant trauma. Children who have been exposed to overwhelming experiences suffer from a ‘re-setting’ of their arousal baseline such that even when no threat is present they remain in a state of physiological alarm. This makes them more ‘reactive’ increasing the likelihood they will be pushed into a state of terror by quite minor stressors. These changes in arousal levels as a result of abuse and neglect play a major role in the behavioural problems associated with such young people. For these young people inhalants provide an escape from unbearable feelings.

Effective prevention involves the recognition that the greatest potential for reducing drug problems might fall outside the domain of targeted drug policy. Targets worthy of consideration include a crisis driven child protection system, youth homelessness and unemployment, media representations of young people as troubled and predatory, police harassment, refusing young people the right to use privately owned public spaces (malls, etc). In short effective prevention involves replacing blanket prescriptions with holistic approaches, replacing the knee-jerk genuflection to the shibboleth of demand reduction education with programs that increase the community connectedness of young people by consideration of the factors above constituting as they do what some have termed the building blocks of an illegitimate identity.
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