
EMERGING FACTORS OF ALCOHOL AND SUBSTANCE ABUSE: IMPLICATIONS FOR COUNSELLING

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Abstract

This paper discussed the emerging factors of alcohol and substance abuse and how theorists have tried to account for why people use alcohol and other drugs, and especially why they continue or relapse despite negative consequences. Some theories suggest genetic and other biological factors, while others emphasize personality factors or social-environmental factors. While these factors have all been shown to contribute to persistent substance use and to relapse following periods of abstinence, no one set of factors can account for all types of substance use. Rather, substance use appears to result from complex interactions of biological, psychological and social-environmental structures and processes. Some counselling implications suggested were that drug taking could be reduced through a variety of avenues and also by experimenting with biological, psychological and environmental interventions.

Introduction

Alcohol is described by Colloman as cited in Tambawal (2008) as a depressant drug that is produced by fermentation of sugar and is the psychoactive constituent of intoxicating beverages. Its pharmacological action though not fully understood, is in part at least through the facilitation of the inhibiting neurotransmitter. While a drug is perceived as any chemical substance that can affect the structure or function of a living body, often used as a medicine or taken for its pleasurable or satisfying effects. A drug is, therefore, any substance that, once inside the body, changes how the body works. Drugs can be swallowed, sniffed, inhaled, injected, absorbed through the skin,

or dropped into the eye. No matter the route of administration, most drugs will eventually travel through the circulatory system and reach the brain. In the brain, drugs can affect almost any step in the communication between neurons by increasing or decreasing the amount of neurotransmitter that reaches the receiving neuron. A drug can also bind directly to a receptor in place of a neurotransmitter. In the case of drug abuse, the interference in nerve communication often causes a temporary pleasurable sensation. With drug addiction, a person craves the pleasurable sensation produced by a drug and compulsively uses it despite its negative consequences. The use of certain kinds of drugs may also produce a physical addiction or dependence, meaning

that the drug must be present for the body to function normally. In this case, when the drug is withdrawn, the user may experience mild to severe effects ranging from nausea to death.

This paper was prompted by the fact that the use of alcohol and drug is rising at an alarming rate among our populace especially the young ones. The rate of end kinds of substances that they are using now so unbelievable and disturbing. Also, to highlight that the use of alcohol and drug can be traced back to factors that are biological, psychological, and social-environmental, this can play a great role in finding ways of ameliorating it. It was also prompted by the consideration that both the family and the society are taking things concerning alcohol and drug use for granted not realizing the full implication of that and the appropriate ways of tackling it. It is hoped that all concerned should now have an insight into the dangers and possible factors causing drug abuse.

In this paper therefore, the two terms drugs and substance would be used interchangeably to mean one and the same thing.

Alcohol and Substance/Drug Abuse

Colloman as cited in Tambawal (2008) see substance abuse as a maladaptive use of a drug, resulting in impairment of functioning or distress, as manifested by a failure to perform adequately at home, school or work. Impliedly, therefore, substance or drug abuse can be seen as the overindulgence in and dependence on a drug or other chemicals leading to effects that are detrimental to the individual's physical and mental health, or the welfare of others. Substance abuse is sometimes used as a synonym for drug abuse, drug addiction and chemical dependency, but actually refers to the use of substances in a manner outside sociocultural conventions. All use of illicit drugs in a manner not dictated by convention (e.g. according to physician's orders or societal norms) is abuse according to this definition.

Substance abuse can take many forms, from the misuse of legal products (e.g., alcohol, prescription medications) to the use of illegal drugs (e.g., cocaine, marijuana). Because of parallels regarding addiction and dependence, smoking is also often considered a type of substance abuse or drug abuse. Many theorists have tried to account for why people use alcohol and other

drugs, and especially why they continue or relapse despite negative consequences. Some theories suggest genetic and other biological factors, while others emphasize personality factors or social-environmental factors. While these factors have all been shown to contribute to persistent substance use and to relapse following periods of abstinence, no one set of factors can account for all types of substance use. Rather, substance use appears to result from complex interactions of biological, psychological and social-environmental structures and processes. This paper outlines the emerging factors and the implications for counselling.

Biological Factors

Genetic Inheritance

There is growing evidence that alcohol use is influenced by genetic factors (Alcohol Health and Research World, 1995; Shuckit, 1999). The strongest evidence comes from studies of family histories, twins and adopted children, different racial groups, and animals. Genetic factors seem to influence the ways in which humans respond to and metabolize alcohol, and seem to contribute to neurological dysfunctions common in people whose drinking problems begin at an early age (see the discussion of psychological factors, below).

Genetic factors also appear to play a role in people's use of tobacco and other drugs (Madden & Heath, 2002). It is believed that many genes influence people's responses to alcohol, and that their responses reflect a continuum of vulnerability to alcohol problems. This understanding is consistent with behavioural studies that have failed to clearly distinguish between people with drinking problems and others. The influence of genetic factors is sometimes interpreted as meaning that, in those who are vulnerable, alcoholism is an inevitable, progressive and irreversible condition. This reflects a limited understanding of the role of genetics in determining complex behaviours, and is inconsistent with research. For example:

- i. There is overwhelming evidence that in both clinical and survey samples many people labeled "alcoholics" have periods of moderate drinking.
- ii. Several early experiments showed that "alcoholics" are able to limit their drinking in laboratory settings when they view the benefits of reduced drinking as worthwhile. These experiments demonstrated the role of environmental factors (such as price) in moderating

alcohol consumption, even among "alcoholics" (Mello & Mendelson, 1965; Mello, McNamee and Mendelson, 1968).

Of course, this does not rule out the influence of genetics on drinking behaviour and alcohol problems. There are wide individual differences in preferences for alcohol and the capacity to drink large amounts, and genetic factors contribute to these differences. However, other factors are clearly important and need to be included in theoretical models.

Tolerance and Physical Dependence

The repeated use of alcohol and other drugs can change the body's ability to adapt to the presence of these substances. One result is that people become less sensitive to the substance and so need to increase the dosage to obtain the desired effects. This loss of sensitivity is called *tolerance*.

The body's adjustment to the presence of a drug may also result in withdrawal symptoms when use stops. This condition is called *physical dependence*. In extreme cases, the effect of rapid withdrawal can be life-threatening, because the body has become so dependent on the drug that withdrawal interferes with normal bodily processes.

The adaptive changes that underlie tolerance and physical dependence are not yet fully understood. However, they seem to involve changes to metabolic pathways, cellular adaptation, activation of parallel biochemical systems and changes to the release of neurotransmitters. These changes may help explain why some people who use alcohol and other drugs heavily find it so difficult to stop. Research on neurobiological aspects of drug use has led to the identification of many relevant structures and processes (e.g., drug-specific receptor sites in the brain and the effects of specific drugs and their metabolites on neurotransmitters). It has been suggested that all addictive behaviours may be the result of common physiological or biochemical actions in the brain, and a good deal of research is currently focused on the neurotransmitter dopamine. Some theorists have suggested that all pleasurable activities, including drug use, result from the release of dopamine in specific areas of the brain. Some animal research supports this view, but it is likely that other mechanisms are also involved.

Psychological Factors

Personality Traits

Several studies have sought to identify personality characteristics associated with the onset of heavy drinking and other drug use in adolescence. The results suggest that such use is more common among adolescents who show pre-drug use signs of one or more of the following: rebelliousness, other adjustment problems, depression, and sensation seeking (Kandel & Yamaguchi, 1985; Stein, Newcomb and Bentler 1987; Shedler & Block, 1990). However, no specific pre-drug use traits or clusters of traits have been shown to fully account for the onset or maintenance of drug use in adolescents or others.

There is evidence for common pre-drinking personality traits in one type of problem drinker (Allen, 1996; Molina, Buckstein, and Lynch 2002). These are people who have alcohol problems from an early age (late teens or early 20s) and strong antisocial tendencies. Evidence also suggests that such people have a genetically determined brain disorder involving the prefrontal lobes (Tarter, Alterman and Edwards 1988). The relevant neurological disturbances may involve the brain's "executive" functions of planning and goal formulation, persistence, self-monitoring and self-evaluation.

These disturbances manifest in attention-deficit disorders, childhood hyperactivity, pre-alcoholic essential tremor (a neurological movement disorder that most commonly affects the hands), left-handedness, low academic achievement, impulsiveness, lack of inhibition, emotional instability, aggressiveness and antisocial and psychopathic tendencies.

However, the relationships between mental health and substance use are complex and difficult to disentangle. Some people with serious mental disturbances (e.g., phobias, rage, anxiety, depression, mania, paranoid delusions) appear to use alcohol and other drugs to self-medicate for mental distress. For others, mental health problems are caused or exacerbated by substance use, and these problems tend to decrease with abstinence. Reiger, Farmer, Rae, Locke, Keith and Judd (1990) study found the prevalence of mental disorders among people with drug use problems varied depending on the drug, from 50 per cent of people who met criteria for a diagnosis of marijuana abuse to 76 per cent of those who met criteria for a diagnosis of cocaine abuse. Almost half the people with such drug use problems also had drinking problems during their lifetime.

Psychodynamic Processes

A psychodynamic approach to understanding human behaviour emphasizes psychological forces, structures and functions as they develop and change over time. There is a special interest in childhood experiences and conflicts and their influences in later life. Psychodynamic perspectives on substance use problems focus on unconscious motivation, emotions, self-esteem, self-regulation and interpersonal relationships. Psychodynamic theories can be traced to the writings of Sigmund Freud and his followers and revisionists. There are perhaps as many variants of a psychodynamic approach to substance use as there are psychodynamic theorists. Freud originally proposed that "alcoholics" were "orally fixated" (i.e., stuck at an early developmental stage) and thus unable to cope with the demands of adult life. Thus they used alcohol to "escape from reality" (a Freudian concept). Later, Freud proposed that "alcoholism" was an expression of repressed homosexuality. He reasoned that male homosexuals turned to drink because they were disappointed with relationships with women and because drinking gave them an excuse to be with other men. Other psychodynamic theorists have proposed that alcoholism is a reflection of unresolved dependency

conflicts, a striving for power or a form of self-destruction. "Fixations" at Freud's anal and phallic stages have also been proposed as explanations for alcoholism (Barry, 1988). Though, the theory does not feature prominently in the mainstream of current substance use research, and it has not been expanded to accommodate recent research on biological factors. Psychodynamic formulations of human behaviour have not led to testable assumptions and, in general, they have little clear empirical support.

Learned Cognitions and Behaviours

Use of alcohol and other drugs activates two basic learning mechanisms. The first, called *classical conditioning* occurs when an initially neutral stimulus eventually produces the same responses as an existing stimulus with which it has been paired; the best-known example is the experiments of Ivan Pavlov. Example of a classically conditioned response is the onset of cravings and withdrawal symptoms in response to stimuli associated with substance use. These stimuli, or cues, may be internal to the person (e.g., feelings of depression or anxiety) or may be found in the external environment (e.g., advertisements, social situations or the sight of a syringe). Through classical conditioning,

alcohol- or other drug related stimuli may also invoke mild drug effects that arouse the person's appetite for more. Classical conditioning has been used to account for increased tolerance of the effects of alcohol and other drugs. Tolerance is typically greater in situations or locations where alcohol or other drugs have previously been used. One theory proposes that these familiar situations become classically conditioned stimuli that evoke unconscious, compensatory physical responses whenever alcohol or other drugs are used. These tolerance responses reflect the body's need to re-establish biological equilibrium disrupted by substance use. By being frequently paired with substance use, the (now conditioned) tolerance responses become stronger, and more of the substance is needed to produce intoxication (Sherman, Jorenby and Baker, 1988).

The second learning process activated by drug use is called *operant conditioning*. This occurs when behaviours are shaped by their consequences. Through operant conditioning, positive reinforcements (rewards) are used to increase the frequency of specific behaviours in specific situations, and negative reinforcement (withholding of rewards) or punishments are used to decrease or eliminate behaviours. Behaviours come to be evoked in

response to the various stimuli associated with the conditioning process. Depending on the schedules of reinforcement used (e.g., continuous, intermittent, response-dependent or time-dependent), behaviours may be very persistent if the appropriate cues are present. All drugs used for pleasure can act as positive reinforcers. This is clear from studies showing that animals will learn to perform tasks when drugs are used as rewards. Alcohol and other drugs are, of course, positive reinforcers for drinking and other drug use, and through experience can become associated with a variety of internal and external cues. For many people, these cues may be rather limited (e.g., only at family meal times and never more than once a week). For others, drinking cues can become highly generalized (e.g., when they are happy, sad, alone, with others, and at any time of the day). One apparent problem with this view of substance use is that many people continue to use alcohol and other drugs despite negative consequences such as hangovers, ill health, and social and legal problems. This appears to be contrary to an operant conditioning analysis. However, this is not the case because these negative consequences do not occur immediately after alcohol or other drug consumption. The immediate effects (the effects of the substance

and the relief of withdrawal symptoms) continue to be positive and reinforcing. It is widely believed that the use of alcohol and other drugs can relieve stress, which may motivate and sustain a person's consumption. Retrospective and prospective studies with humans lend some support to this stress-reduction theory, but other relationships between stressful events and substance use are not as strong as the theory suggests. A likely explanation is that stress relief from alcohol or other drug use is influenced by expectations that relief will occur (Cohen and Baum, 1995). Expectations of the effects of alcohol or other drugs are cognitions and, like other cognitions, they both influence and are influenced by classical and operant conditioning.

Social-Environmental Factors

Many social and other environmental factors have been cited as contributing to the onset and maintenance of substance use and to relapse. However, no one factor has been shown to be either necessary or sufficient for use or relapse to occur. Thus, like other factors that influence substance use, social-environmental factors exert their influence in the context of a complex, dynamic multi-factor system.

Aspects of Family Life

Many other aspects of family life may also contribute to substance use and relapse. Family members may present models of substance use that are emulated by children. Childhood experiences within distressed or dysfunctional families may leave children vulnerable to substance use and a variety of other problems as adults. Family-related factors that can contribute to the onset and maintenance of substance use (and possibly to relapse) include: poverty, membership in a group devalued by the larger society, alcohol or other drug problems among family members, parental abuse and neglect, parental separation, low cohesion and low mutual support (Goplerud, 1990).

Systems theory has drawn special attention to the influence of other family processes (Pearlman, 1988). This theory views individuals' behaviour as being determined and sustained by the dynamics and demands of the key people with whom they interact. Further, systems theory proposes that behaviours have *functions* within dynamic systems, even when the behaviours and their supporting systems cause problems for those involved. The theory draws attention to ways in which a substance user's family copes with and possibly reinforces substance use, and the implications for the

family if the person changes his or her behaviour. The theory proposes that families and other social networks develop "rules" of interaction that can sustain pathological behaviours (e.g., the family implicitly agrees never to plan family events on Friday nights because that is when father goes out to get drunk with his friends). Family members also assume roles, such as "enabler," "martyr" or "sick person," that maintain the homeostasis within the family.

Peer Influence

Adolescence (the period of development between the ages of 10 and 19 years) is a time of transformation. While there is some doubt about the popular notion of adolescent transition as necessarily involving turmoil or "storm and stress" (Steinberg as cited in Obot, 1999), many adolescents do experience problems in psychosocial transition which make them vulnerable to peer influence. For example, the need to establish a self-identity may sometimes lead to conflict with parental authority, and association with drug using peers. The need to be accepted by the group members is a powerful motivation to try a tobacco or cannabis, cigarette, or share a bottle of beer. At first this behaviour "is intended primarily as a symbolic gesture of group cohesion, and the [pleasure] or comfort derived

from the use of the drug is secondary. With time however, the two become inseparable." (Rathod as cited in Obot, 1999, p. 17).

Availability and Cost

The availability and cost of alcohol and other drugs clearly influence overall patterns of use (Single, 1988; Godfrey & Maynard, 1988) and can contribute to use and relapse. It has been already noted that, at least in the laboratory, price manipulations can influence the drinking behaviour of "alcoholics." There is also evidence that price influences people who drink heavily in the community. Some clinicians have contracted with clients to increase the cost of alcohol and other drugs to deter relapse. Clients agree that if they drink or take other drugs, they will make a donation to a despised cause or forfeit a returnable deposit.

Obot (1999) rightfully pointed out that a recent example of this is the case of heroin and cocaine in Nigeria. Abuse of these two drugs started when they became available through the activities of traffickers in the early 1980s and has kept pace with increased availability. Even the trend in increased consumption of alcohol in the 1970s and 1980s can be attributed to the dramatic growth in the number of breweries and distilleries in the country in the two decades.

Culture of the Dominant Society

The substance use culture of the dominant society can contribute to continuing substance use and relapse. This is especially so in cultures that promotes heavy or illegal substance use, or substance use to solve problems. In the case of alcohol abuse, what has been called a community's "drinking sentiment" – its values, attitudes and norms – contributes to the pattern of drinking in that community (Kumpfer as cited in Obot, 1999). An additional cause of drug abuse identified by Jones et al as cited by Okorie (2006) was ignorance; inaccurate perceptions of the risks of abuse.

Some Counselling Implications

A description of various techniques for treating or managing alcohol and other drug dependent persons is provided below as proposed by Daley and Marlatt (1992).

1. Help client identify high-risk situations and develop strategies to deal with them: Assessments using inventories of risk situations, behavioural rehearsal, covert modelling, assertiveness training, coping imagery, reframing reactions to relapse, meditation and relaxation and exercise.
2. Help client understand relapse as a process and as an event: Methods to help client identify factors that contribute to relapse (e.g., functional analysis or instruments such as the Inventory of Drug Taking Situations [IDTS], which help clients identify high risk situations for relapse).
3. Help client understand and deal with substance cues and cravings: Monitor cravings, Behavioural interventions such as avoiding, leaving or changing situations that trigger or worsen cravings; and redirecting activities or getting involved in pleasant activities, help and support from others, self-help meetings to learn how others have coped, medication such as Naltrexone (ReVia®) or Disulfiram (Antabuse®).
4. Help client understand and deal with social pressure to use substances: Identify high-risk relationships. Assess effects of thoughts, feelings and behaviours. Plan and practice alternative coping skills using role playing, evaluate results and modify the coping strategy if required.
5. Help client develop and enhance a supportive social

network: Involve family and significant others. Refer to self-help groups. Help client decide who should be included in or excluded from social network. Rehearse asking for help/support. Develop a written action plan.

6. Help client develop ways of coping with negative emotional states: Various methods depending on the sources, manifestations and consequences of client's emotional state may include: treatment for mental health problems, anger management and leisure planning (for boredom). Counselling on attitudes and beliefs.
7. Assess client for psychiatric disorders and facilitate treatment: Monitor target moods, participate in pleasant activities, develop routines and structures for daily living, and identify signs of relapse. Psychotherapy and Pharmacotherapy.
8. Facilitate transition to follow-up outpatient care or aftercare (for residential programs): Motivational therapy prior to discharge, telephone or mail reminders for initial appointments, and reinforcers for participation in aftercare (e.g., coupons, certificates).

9. Help client learn to cope with cognitive distortions ("stinking thinking"): Use worksheets to list faulty beliefs such as "awfulizing," over-generalizing, selective, abstraction and jumping to conclusions. Help show what is wrong with these beliefs and help develop new beliefs.

10. Help client develop a more balanced lifestyle: All of the above. Identify sources of stress and pleasure/self-fulfillment. Develop and implement plans to avoid or deal with stress, and to do more fulfilling things.

11. Facilitate pharmacological interventions as an adjunct to psychosocial treatment: Naloxone as an adjunct to psychosocial treatments. Medication for psychiatric disorders and Methadone for opioid addiction.

12. Help client develop plans to manage a lapse or relapse: Self-talk or behavioural procedures, talk to the family, go to self-help group, seek professional help, carry a list of names and phone numbers of people who can help, carry a reminder card about what to do in the case of a lapse and learn from the experience.

Conclusion

Substance use, and especially continued use despite negative consequences, cannot be explained by any single set of factors. Rather, substance use is determined by several types of factors that interact in complex ways. Clinicians who counsel people with substance use problems need to be aware of these complexities, while giving clients practical advice and help. Despite its overall complexity, however, substance use and relapse can be prevented or reduced if clients acquire appropriate cognitions and skills. Skilled and sensitive counsellors can contribute a great deal to this process.

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