

THE BIOPSYCHOSOCIAL THEORY: A COMPREHENSIVE DESCRIPTIVE PERSPECTIVE on ADDICTION

Alcohol and Drug Services

INTRODUCTION

This paper describes the Biopsychosocial Theory and contrasts it to the traditional theories of addiction. Included in the discussion is how the new theory incorporates the strengths of the older traditional theories while remaining a distinct entity with a unique set of hypotheses, and the addition of the spiritual dimension, which, from the Alcohol and Drug Services' (ADS) perspective, has generally been underemphasised in most discussions of the biopsychosocial theory. ADS also views this theory as an articulation of the "holistic health" or "public health" concept of total health. Therefore, the term "biopsychosocial" will be used for convenience throughout this paper to represent the "biopsychosocialspiritual" or "holistic health" concept.

Before discussing any substance misuse theory, a general description of what a theory is and what a theory does should be considered. An addiction philosophy or theory is an abstract framework that organizes the concept of substance misuse into a set of fundamental intuitive principles. As such, any theory permits its adherents to prioritize problems and to search for and discover solutions to these problems within the context or boundary conditions of the theory. Through distinct relationships between terms and concepts, each theory provides a unique perspective of substance misuse easily recognizable to its proponents. Finally, a good theory is scrutinizable, and rigorous scientific evaluation via randomized controlled trials is considered to be the "gold" standard. Such a verification mechanism permits adherents to become increasingly confident in the correctness of their choice as empirical support accumulates.

Once a critical mass of individuals is 'tuned into' both the aesthetics and the problem solving potential of a theory, the group is then ready to be guided in their behaviour by the principles of the theory. These principles become the

rules of the game. Because these rules are accepted almost unconditionally, members of an organization are able to focus their attention on the fulfilment of the mission of the organization without constantly having to debate underlying philosophical principles. Instead, they concentrate on articulating goals and objectives evolving out of the world view established by the theory. Relevant problems are isolated and potential viable solutions are visualized allowing the process of problem solution to proceed at a quickened pace.

TRADITIONAL THEORIES OF ADDICTION

1. Moral Theory

The moral theory denotes substance misuse as a vice or a sin. The theory implies that some individuals, through their own free will, make a conscious choice to become substance misusers.

Within the context of the moral theory, treatment involves: holding people accountable for their substance misuse, very often through the application of shame and blame; avoiding enabling of their substance misuse, and; not protecting them from the consequences of their substance misuse. In some instances, treatment may be punitive, e.g. religious persecution or criminal incarceration, with the expectation that specific punishment will eliminate the "bad" behaviour.

2. Spiritual Theory

The spiritual theory attributes substance misuse to the absence of a metaphysical focus within the affected individual. This theory suggests that some individuals are powerless over their substance misuse. With regards to the spiritual theory, recovery is only possible if affected individuals acknowledge their inability to self-correct without the assistance of a spiritual force guiding them through the process of recovery.

3. Disease Theory

In this instance, substance misuse is deemed to be a unitary disease characterized by specific features including loss of control over substance use or consumption. Substance misusers are considered to be different from non-misusers. Substance misuse is a progressive illness with an identifiable natural history as well as a permanent condition or lifetime illness. A percentage of the total population inherits a genetic predisposition for the disease.

Some implications of the disease model are:

- a) all substance misusers require the same treatment goal, i.e. abstinence;
- b) individuals with a family history of substance misuse are at higher risk of becoming substance misusers themselves due to the presence of an inherited defective gene(s);
- c) treatment is required in order to avoid the consequences of untreated substance misuse up to and including death;
- d) spontaneous recovery is unlikely;
- e) even with treatment, the potential for relapse is always present regardless of the duration of sobriety.

4. Symptomatic Theory

Within this context, substance misuse is a symptom of another primary mental disorder, e.g. anxiety, depression, neurosis, personality disorder.

The major implication of this theory is that treatment of the underlying psychiatric disorder will lead to remission of substance misuse. Therefore, attention is focused on diagnosing and treating coexisting psychiatric illness. Like the disease theory, this theory discounts the possibility of recovery without formal treatment.

5. Social Theory

This theory hypothesizes that substance misuse develops and endures as a result of disruptive social forces such as unemployment, poverty, violence, family dysfunction, as well as gender and age inequities. These forces are believed to act as social stressors and substance misuse is considered to be an adaptation to the resultant misery and unhappiness.

Treatment concentrates on environmental modification and attempts to improve the ability of the affected individual to function socially. Rehabilitation may include the development of job and social skills plus modification of the daily living environment. Broader social modification might be achieved through decreasing the availability of various substances along with the application of constraints upon patterns and styles of use of substances or by reducing social inequities confronting disadvantaged groups such as women, the elderly and racial minorities.

6. Chemical Dependency Theory

Here, substance misuse is a syndrome characterized by a clustering of both biological and psychological phenomena, as described by Lindstrom (1992). These phenomena are signs and symptoms of:

a) *An altered behavioural state:*

an increase in substance use that transcends both social norms and former individual consumption levels; diminished variability in pattern of consumption; lack of concern about the opinion of others regarding personal consumption patterns; a continuation of heavy consumption in spite of serious consequences such as physical illness, poor work performance, family dysfunction or legal problems.

b) *An altered subjective state:*

lack of control over consumption; a heightened desire for substances, i.e. craving; a pre-occupation with substances to the extent that daily routine narrows to activities that involve substance use.

c) *An altered psychobiological state:*

presence of withdrawal symptoms such as trembling, sweating, vomiting, anxiety, depression, irritability; withdrawal symptoms relieved by further substance use; an increased tolerance to the effects of specific drugs such that increasing amounts are required in order to achieve intoxication.

The dependency theory implies that cognitive factors regulating consumption (i.e. cognitive impulse control) and the potency of biological factors (i.e. genetic predisposition; chemical and structural central nervous system damage secondary to substance abuse) are both important prerequisites of substance

misuse. The theory also separates signs and symptoms of dependence from the consequences of substance misuse; within this framework, one can be a heavy user who has suffered from negative consequences of misuse without being dependent. At a severe level, dependency resembles a disease state as defined by Maltzman (1994): a constellation of signs and symptoms following a predictable and recognizable pattern - a syndrome which deviates away from a normal state of health and may be life-threatening. One very important feature of this theory is that it permits measurement of severity of dependency through the application of standardized assessment or testing.

7. Learning Theory

This theory contends that substance misuse is learned through the complex processes of behavioural acquisition and reinforcement. Many learning theories have evolved from simple classical and operant conditioning theories through to more complicated social learning theories that emphasize the interactions between personal dispositions and environmental situations.

There is general agreement that a complex behaviour like substance misuse cannot be acquired through a single learning mechanism. Several contingencies appear to reinforce or maintain substance misuse including: the psychopharmacological properties of specific drugs, social aspects of substance use, individual ability to tolerate aversive environments and/or aversive physical states related to substance use, and individual need to alter unpleasant psychological states.

The learning theory implies that treatment should focus on creating and maintaining behavioural change usually through a structured system of behaviour modification.

THE BIOPSYCHOSOCIAL THEORY

Over the past decade, researchers and clinicians have been developing and testing a model known as the **Biopsychosocial Theory**. This theory postulates

that substance misuse is the net result of a complex interaction between a combination of biological, psychological, social, and spiritual determinants. By adopting a multivariant approach, the biopsychosocial theory has provided a new conception of substance misuse that directs attention towards a new set of questions about the nature of substance misuse, although the causes may be vague. One writer has summarized these questions as follows: " what substance misuse syndromes at which stage of their development and in what kinds of patients respond under what conditions in what short and long range ways to what measures by whom?"(Lindstrom, 1992)

Although knowledge of *causality* remains elusive, several hypotheses related to *how we think about and respond to addictions* can be generated from the biopsychosocial theory including:

1. substance misuse embraces a variety of syndromes including dependency syndrome and substance misuse related disabilities.
2. substance misuse lies upon a continuum of severity.
3. the development of substance misuse follows a variable pattern over time and may or may not progress to a fatal stage depending on the type of syndrome and/or degree of severity.
4. because the elements in the experience of addiction will differ between individuals, there is no one superior treatment for all substance misuse.
5. the population of substance misusers is heterogenous and defy stereotyping.
6. successful treatment is contingent upon accurate and comprehensive assessment and matching of affected individuals to the most appropriate treatment.
7. recovery may or may not require abstinence, depending upon the degree of severity and/or the type of syndrome.

ADVANTAGES OF THE BIOPSYCHOSOCIAL THEORY

Consideration #1

The Biopsychosocial Theory is a conceptual framework that allows attention to be focused on all problems related to substance misuse.

This allows those who develop policy and programs for, or provide services to, people affected by substance misuse (either their own or someone else's) to address the broad range of problems, from problems which are just beginning to those that are long standing. The continuum of substance misuse generates a continuum of services. Furthermore, early intervention services for those clients with less severe substance misuse problems are considered to be as important as services for people with more severe problems.

The Biopsychosocial Theory characterizes the population of substance misusers as heterogenous and recognizes the importance of comprehensive individual assessment in order to adequately determine client treatment needs.

The Biopsychosocial Theory also allows for the delivery of harm reduction services that minimize health risk to substance misusers who continue to engage in high risk behaviour. The Theory considers substance misuse as embracing a variety of substance misuse disabilities and supports the concept of a hierarchy of harm reduction outcome goals including abstinence related goals.

Consideration #2

The Biopsychosocial Theory is amenable to empirical scrutiny.

The hypotheses generated by the theory can be tested scientifically. Moreover, the intuitive appeal of these hypotheses creates a sense of optimism that scientific support is attainable. At present, this theory is still primarily a set of working hypotheses requiring further testing and verification. It is important to understand that the purpose of scientific investigation is not to verify the theory absolutely. Contemporary philosophers of science have argued persuasively that no theory can be proven absolutely right or wrong (Kuhn,

1970). No amount of empirical evidence can remove all scepticism nor does a single falsification necessarily result in negation. However, the level of confidence in the correctness of the theory heightens as increasing empirical support is gathered. Support for this theory should accumulate as more studies are developed and scientific trials are performed. Already, research exists supporting the notion that there is no one superior treatment for all substance misuse, and at least one large multicentre trial is underway testing the matching hypothesis.

Historical empirical support for the older theories of addiction ranges from none for most to substantial for a few. For example, there is virtually no scientific support for the Moral Theory. The hypothesis that low moral standards or bad character cause substance misuse has not been substantiated by research. In fact, studies show that antisocial behaviour is normally a consequence of addiction rather than a cause.

Sometimes misrepresented as a Disease and/or Moral Model (Miller and Kuntz, 1994), the Twelve Step Spiritual Theory pioneered by Alcoholics Anonymous has also been studied. However, most outcome research pertaining to AA is correlational and frequently confounded by other treatment variables. Therefore, the relationship between AA involvement and reduction or cessation of drinking is uncertain. There is a paucity of prospective and longitudinal studies, and both female and young AA members are underrepresented in existing research, especially considering nearly a third of AA members in North America are female (Emrick et al., 1993). Future prospective, as opposed to retrospective, research is needed in order to better understand AA; hopefully some of the traditional barriers to researching this very popular and important organization will be removed.

Although the Symptomatic Model predicts remission of substance misuse if the underlying mental disorder is treated, the scientific literature shows poor outcome results with insight oriented psychotherapy along with high drop out rates during treatment. Most would now agree that, although substance misuse and psychiatric illnesses co-exist and interact, these conditions are distinct. With respect to the Social Theory, there is little evidence to support a direct causal relationship between social problems alone and the development of substance misuse.

Chemical Dependency Theory has been intensely debated over the past decade. Some researchers have interpreted the scientific evidence as suggesting that chemical dependency syndrome does not exist (Fingarette, 1988; Peele and Brodsky, 1991). However, recent reviews of the literature present a convincing argument that this syndrome is a real phenomenon (Lindstrom, 1992; Maltzman, 1994). The concept of chemical dependency has important clinical applications and helps to guide research into the biological determinants of addiction.

The Learning Model has also accumulated abundant empirical support although this theory tends to ignore the biological processes that are triggered and accelerated by excessive substance misuse. This model has led to the application of many effective non-pharmacological treatments that focus on creating and maintaining behavioural change (i.e. reduction or cessation of substance misuse).

In the spirit of preserving empirically sound elements of older theories, the Biopsychosocial Theory incorporates both the concept of chemical dependency as well as certain principles of learning theory. The Biopsychosocial Theory hypothesizes that substance misuse lies upon a continuum of severity and embraces a variety of syndromes and substance misuse related disabilities including dependency syndrome. Therefore, prior research related to chemical dependency syndrome is acknowledged; dependency syndrome is accepted as a real condition; clinical application and future research pertaining to this syndrome is encouraged. As biotechnology improves (e.g. medical imaging, genetic screening) the role of biology in the development and maintenance of addiction should become clearer. Furthermore, the Biopsychosocial Theory hypothesizes that successful treatment is contingent upon thorough assessment and proper matching of clients to appropriate treatment options. By incorporating important principles of learning theory, the new theory preserves many valid concepts that have led to the development of effective behavioural therapies successfully applied in the treatment of substance misuse.

Consideration #3

The Biopsychosocial Theory preserves appealing intuitive concepts of older theories that have either not been previously tested or, in some instances, not

tested properly.

This theory postulates a role for social and spiritual factors in the development of and recovery from substance misuse and allows for future analysis of these elements.

Consideration #4

The Biopsychosocial Theory unifies prior biological, psychological, and social theories of addiction.

The net result is the synthesis of a unique conceptual framework comprised of a unique set of hypotheses. The new theory is not simply a bolted-together version of the older theories, each of which: prioritizes problems differently; has its own distinct relationships between terms and concepts; and essentially locks practitioners of different theories into separate worlds isolated from one another. The Biopsychosocial Theory appears to be a supreme candidate beckoning a diverse population of addiction professionals to work together towards solutions to a wide variety of serious problems under the umbrella of common terminology and concepts.

Consideration #5

The Biopsychosocial Theory of substance misuse is congruent with other modern theories of health and education.

To cite two examples, both women's and older adults' health issues are beginning to be framed within models that: acknowledge population diversity on all dimensions of health; promote the matching of individuals with certain characteristics to specific treatments; and measure treatment success along more than one dimension. Within the context of these models, assessment is crucial to understanding the needs of the client and emphasis is directed towards achieving outcomes that are in the client's best interest. Similarly, in education, modern constructivist learning theories accent the importance of understanding the individual learner's capabilities and potential. Comprehensive assessment is followed by the selection of an educational experience most suited to specific needs and abilities.

By adopting a substance misuse theory that is consistent with other helping disciplines, linkages to prevention and treatment components within and outside of the health care domain are facilitated. True case management becomes possible through the medium of common terminology and concepts. Smoother, less traumatic, movement of clients through the broad system of care eases the stress to both providers and beneficiaries of services. Because most substance misuse prevention efforts are through the application of education strategies, consistency between substance misuse and education theory is essential in order to maximize success in the area of prevention.

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