Substance-Related and Addictive Disorders Use

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Introduction

There are many mental illnesses in our world today. Every few years, the DSM grows in its categorization of illnesses, with the latest version published in 2013, and more people become diagnosed and medicated (Kawa, 2012). In Canada alone, 2.8 million Canadians stated they had symptoms of substance dependence, while 6 million met the criteria for substance use disorder (Statcan, 2012). While pharmaceuticals have been able to help many, individuals can become dependent on them and they may also cause numerous detrimental side effects. The aim of this paper is to explore an alternative therapy which may provide deeper therapeutic effects than the more popular methods of pharmaceutical and psychological forms of therapy can achieve alone.

Discussion

According to the latest report on the costs of substance abuse in Canada, it has been estimated that the total expenditure per year is $39.8 billion (Thomas et al., 2006). Based on all the aforementioned statistics it can be established that substance related addictions are a very serious problem. Some of the nursing interventions for substance abuse include the use of pharmaceutical substitution therapy such as benzodiazepines for alcohol withdrawal, methadone for narcotics, phenobarbital for depressants, desipramine for stimulants like cocaine and benzodiazepines once again for hallucinogens and cannabinoids (Townsend, 2015, pg. 92). While some of these substances, such as methadone, have been used successfully to treat opiate dependence and affiliated problems such as reduction of criminal acts and drug related contraction of illnesses like HIV, they are strategies which are used to control rather than prevent drug use, in a harm reduction model (Dennis et al., 2014). Since the mid 2000’s there has been a resurgence in research involving the use of plants containing psychotropic agents which first took place from the 1950’s to the 1970’s but stopped due to governmental and social stigmas.
involved in the use of such substances (Tupper et al., 2015). It is important for nurses to be
acquainted with as well as to assess the appropriateness of complimentary therapies such as
herbal modalities and others, which are gaining more popularity and which some clients may feel
interested in (CNO, 2014).

While there are several psychotropic plant preparations utilized in alternative and
experimental substance addiction therapies, I wish to focus on one in particular that goes by the
name of Ayahuasca. This is a brew made by several indigenous groups in the Amazon Basin as
well as later mestizo groups (Domínguez-Clavé et al., 2016). It is made from two different
plants, namely the vine Banisteriopsis caapi and leaves from the shrub Psychotria viridis. The
former plant contains β-carboline alkaloids possessing monoamine-oxidase inhibitors and the
latter plant contains N, N-dimethyltryptamine, a powerful psychedelic compound in the
tryptamine family (Domínguez-Clavé et al., 2016). This combination of chemicals allows the N,
N-dimethyltryptamine to be orally active and therefore able to cross the blood-brain barrier where
it would otherwise be broken down by the oxidation process of monoamine oxidase (Brierly &
Davidson, 2012). This fascinating plant brew has gained interest from health professionals
around the world for its ability to produce reflections on personal issues in the mind of its
drinkers consisting of an interplay involving emotions, memories and thoughts that is oftentimes
compared to an intervention of a psychotherapeutic manner (Clavé et al., 2016).

One of the numerous researchers exploring this plant’s healing properties is Canadian
doctor Gabor Maté, who has been working with Ayahuasca since at least 2008 within
Vancouver’s Downtown Eastside, labeled as the most concentrated area of drug abuse in North
America (Labate & Cavnar (eds.), 2014, pg. 217). The work of Dr. Maté includes working with
individuals suffering from ailments such as drug abuse and addiction, sexual addiction, cancer,
anxiety, post-traumatic stress disorder, as well as individuals seeking more wholesome and healthy lives; while not everyone finds what they are looking for in the plant, some individuals do indeed shed their addictions and change their lives for the better (Labate & Cavnar (eds.), 2014, pg. 218). Another Canadian doctor by the name of Gerald Thomas conducted a study of 12 individuals suffering from substance related addictions and found statistically significant positive changes in their lives as well as a decline in the use of substances such as cocaine, tobacco, and alcohol (Thomas et al., 2013).

There are several neurochemical mechanisms which have been proposed as explanations of how Ayahuasca can help with the treatment of substance related and addictive disorders use. One of these mechanisms involves changes in neuroplasticity from chemical components in Ayahuasca which may affect the glutamatergic and GABAergic systems which change gene expressions involved in the communication between neurons and this in turn facilitates a rewiring of the brain’s reward pathways, thus inhibiting addictive habits (Frecska et al., 2016). The pharmacological basis for the therapeutic effects regarding depression and anxiety when treating addicts has to do with the β-carbolines in the Banisteriopsis caapi vine which contain MAO-inhibiting abilities, a property of several antidepressants utilized in modern medicine (Domínguez-Clavé et al., 2016).

**Conclusion**

From the aforementioned effects of the plant brew, it is apparent that much more research is to be done in the consideration of utilizing Ayahuasca as an adjunct to modern substance abuse and addictions therapies. It is important to note that researchers like Dr. Maté and others have repeatedly stated that Ayahuasca is not a panacea (Labate & Cavnar (eds.), 2014, pg. 223), but a valuable tool that merits further exploration due to its healing properties. One of the major
hurdles that the modern medicinal use of Ayahuasca faces is the lack of financial incentive for the research of such a brew, since prescription pharmaceuticals are effective in the long term while Ayahuasca has been shown to be effective at times in a single or a double dose (Skocylas, 2016). It will be interesting to see what the future holds in store concerning alternative therapies like Ayahuasca and other ancient plant based mixtures for substance-related and addictive disorders.
References


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