Cultural Norms & Values Do Influence the Use, Misuse & Abuse of Drugs

5 of 64 Peer Review Publications Addiction & Recovery CAP Program

Addictive disorders vary widely across nations and cultural groups. For example, unusually high rates of alcohol abuse and dependence occur among some countries of Eastern Europe and North America where some ethnic groups in Asia have high rates of opium abuse. Why is this and what factors might be to blame? Are Cultural Norms to Blame?

In my case specifically, sociocultural interventions had a profound effect on me while in treatment and to a large degree are responsible for me becoming culturally competent again. In on of my many given cases, the entrance into a new sober environment occur had widespread affects on me spiritually and psychologically. One area was in my religious orientations. In residential facilities as well as my halfway houses their was a centralized theme, purpose and belief to which I was aware and competent. This type of similar knowledge, skills set and belief system was most reinforcing and comfortable to me. My background and belief set worked well in the similar environment I have always felt most accustomed to from childhood through adulthood. I found this assimilation and continued enculturation to be helpful in my recovery in more ways than not. The philosophies of habitation fit well into my belief system wheelhouse and presented a common thread and protective blank for me to focus on my rehabilitation and individualized treatment plan. This environment emphasized similar thematics in the modalities to which I adhered and which sped up my process of recovery. It connected me in the active participations found in ethnic-specific religious groups, meetings and sessions where I felt most comfortable and most productive.

I do believe the culturally sensitive and competent environment has benefited me like other numerous people afflicted with addictive disorders. In the case of religion and the higher power belief, this ideology is more often seen and heard of in recovery institutions when talking about twelve step programs. This worked form me, but what about those without this spiritually founded ideology wher a higher power theme that underlines its purpose. Some people may dislike the concept of a “higher power” emphasized in Alcoholic Anonymous. For some it may work but for other it may prove counterproductive and counterintuitive. Shouldnt the person in recovery have a choice? Shouldnt they decide for themselves? I am happy to report that this is in fact the case and there are choices from all lines of spiritual and nonspiritual identities alike. *In one such case, clinicians might refer the patient to Rational Recovery. Some culture-related groups may not specifically address addiction, but can nonetheless support recovery. For example, some Buddhist communal experiences can be extremely useful in these selected cases (49).* Why is this? It is logical for us as humans to want, need and seek those environment we are most accustomed to and familiar in our historical frameworks.

As in my case and millions of other cases, it is important to have the frameworks in place for culture specific treatments. Therapies specific to particular cultures, ethnic groups, nationalities, and religions can contribute to recovery from substance use disorders. Participation in these programs can and will aid the recovering person in several ways: provision of a stable and sober environment, engagement in meaningful and productive work, availability of emotional support from other members, and establishing a new social identity as a recovering person. There are a few ways in which to provide

culture specific treatment. In one such way, a social interventions may be used and in another pharmacotherapy may play crucial roles in the recovery process.

Pharmacotherapies also played pharmacocultural roles during my rehabilitation. My associated clinicians provided me with the proper medicines to stabilize my situation immediately and in the short term duration of my inpatient treatment. Certain drugs were used and had profound effects on me and the speed in which I was able to stabilize and ultimately integrating into my long term recovery. Another cultural specific treatment arm as was in the referral process of my treatment plan. A referral to outside treatment physician was helpful in combining my cultural or ethnic values within my expectation of long term recovery. I found it introduced introduces a healthier beliefs in addiction medicine and was most productive. It was never counterproductive or counterintuitive.

I think it is important to have the proper training as well as concomitant cross training when faced with conflicting issues such as behavioral and medical recommendations in substance use treatment. In our class readings one paper provided a teaching model I found to be most useful, The Self and Other Awareness Project (SOAP) model of instruction. It has also been developed as an instrument for training in cultural competence (Colvin-Burque et al.,2007). Recognizing self-awareness as a vital component of cultural competence, the SOAP model goes into more depth to identify various teaching strategies in fostering self-exploration. Through the use of large and small group activities, journal assignments, videos, guest speakers, and self-evaluations, this model has demonstrated potential to enhance student self-awareness (Colvin-Burque et al., 2007). Each of these models contributes greatly towards the development of pedagogical frameworks that allow for the selection of teaching materials that will instigate student self-awareness. However, there is a gap in literature that outlines specific teaching exercises to build cultural self-awareness and continued cultural self assessment within these frameworks.

I found some recommendations a therapist or program might want to reflect on this framework on maybe what one should do and maybe why. This might play an important role in the outcomes of patients deep within the therapeutic model. Specifically, when cultural norms conflict with behavioral and medical recommendations for addressing substance use disorders it can be counterproductive if not taken into account as well as properly approached. Some recommendations might be, to support the concept of self awareness so that cultural competence is developed. It is shown this is in fact a developmental process which evolves over an extended period. When individuals are at various levels of awareness and cultural knowledge along the cultural competence continuum, the probability of successful treatment is much lower. Cultural competency in more important to the successful recovery process than previous thought years ago and any deflated and unincorporated capacity to engage in a continued self-assessment will prove to be futile.

In practice, a self-assessment may help to:

- gauge the degree to which you are effectively addressing the needs and preferences of culturally and linguistically diverse groups
- establish relationships and diverse partnerships that will meaningfully involve patients their families and key community influences
- improve family-patient access to and utilization of services when enabling support groups
- increase family-patient satisfaction with all services received from intake to follow up
- strategically plan for the systematic incorporation of ALL culturally and linguistically

competent policies, structures and practices
- allocate personnel, training programs and fiscal resources to enhance the delivery of services
- enabling supports that are culturally and linguistically competent at all times personally and professionally to provide continuity
- determine each and ever individual for collective strengths and areas for growth

There are numerous benefits to self-assessment. Such processes can lead to the development of a strategic successful organizational plan with clearly defined short-term and long-term goals where there will be more measurable objectives, identified fiscal resources as well as enhanced consumer and community partnerships. Self-assessment can also provide a vehicle to measure outcomes for personnel, organizations, population groups and the community at large as presented by the NCCC viewpoint and perspectives. I to believe that self-assessment as an ongoing process, not a one-time occurrence where it offers us the opportunity to assess individual and collective progress over time. Disparity between ideal and behavioral norms results in substance abuse that is costly to many individuals as well as the society or culture at large. Substance use is much too important in most cultures to be left to individual judgments and decisions especially across history of the cultural group norms which have fostered culturally specific norms with regard to substance use. These self awareness assessments will have a most profound effect and affect on us as future providers.

Healthcare providers and other addiction specialists will need to appreciate the interaction of cultural entities with addiction in hopes of enhancing their clinical effectiveness. Additionally, cultural factors can and will increase the risk of high failure rates in addiction therapies not to mention undermining their patients' beliefs and backgrounds. Similarly, an appreciation of cultural factors in a patients history may influence the physicians power to help their patients and while increasing their social networks which have been found to enhance treatment outcomes. Additionally, while assessing cultural factors is in a patients culture-ethnicity history will elucidate the patient's current cultural and ethnic affiliations which is paramount in developing proper clinician patient relationship and successful individualized treatment plan.

As presented, clinicians and counselors can increase their effectiveness by understanding the cultural elements that the patient brings to the clinic. This task begins immediately on intake when doing the work up and history which will include information do gain a better understanding of the patient's enculturation from childhood to young adulthood and any possible subsequent acculturation experiences. Additionally, any current and past cultural affiliations might prove to be helpful in devising a successful recovery plan as well. This assessment in the patient's intimate social network is a critical first step in this plan as presented in many papers. It is important to remember that cultural factors contributed to the onset of a persons' substance abuse in all substance-abusing patients and subsequently, these same cultural influences provide effective resources to serve clinicians and patients in the challenging process of recovery.

We have an obligation and oath to take when taking on the responsibility of helping those with addiction. I to take their recommended motto for future counselors and trainees with regard to the developmental tasks of self exploration and awareness about one’s own cultural heritage and understanding the valuing differences of others. Trainees are affected personally and professionally through a self reflexive orientation with the interactions of their clients who all of which will be multiculturally different. I find we as providers and future therapists will in fact relate better when they

are introspective about our own and their own culture-based backgrounds and cultural differences.

The Negi and Bender Paper on Self Awareness is quoted in saying, “Therapist, Know Thy Cultural Self” which resonates to me the same to me as, “To Thine Own Self Be True” which I learned in recovery. How fitting and how true!

References:

Principles of Addiction Medicine, Chapter 14
Principles of Addiction Medicine, Chapter 24
Negi and Bower, Enhancing Self Awareness Study
Instrument for training in cultural competence (Colvin-Burque et al.,2007)

Part 2: Cultural Competency:

A Guideline for Cultural Competence and

Self-Awareness Training:

Adapted from Associated Research Articles

Beliefs and Attitudes

Culturally skilled counselors have moved from being culturally unaware to being aware and sensitive to their own cultural heritage and to valuing and respecting differences.

- Culturally skilled counselors are aware of how their own cultural background and experiences, attitudes, and values and biases influence psychological processes.

- Culturally skilled counselors are able to recognize the limits of their competencies and expertise.

- Culturally skilled counselors are comfortable with differences that exist between themselves and clients in terms of race, ethnicity, culture, and beliefs.
- Culturally skilled counselors are aware of their negative emotional reactions toward other racial and ethnic groups that may prove detrimental to their clients in counseling. They are willing to contrast their own beliefs and attitudes with those of their culturally different clients in a nonjudgmental fashion.
- Culturally skilled counselors are aware of their stereotypes and preconceived notions that they may hold toward other racial and ethnic minority groups.
- Culturally skilled counselors respect clients' religious and/ or spiritual beliefs and values about physical and mental functioning.
- Culturally skilled counselors respect indigenous helping practices and respect minority community intrinsic help-giving networks.

- Culturally skilled counselors value bilingualism and do not view another language as an impediment to counseling (monolingualism may be the culprit).

Knowledge

Culturally skilled counselors have specific knowledge about their own racial and cultural heritage and how it personally and professionally affects their definitions and biases of normality or abnormality and the process of counseling.

- Culturally skilled counselors possess knowledge and understanding about how oppression, racism, discrimination, and stereotyping affect them personally and in their work. This allows them to acknowledge their own racist attitudes, beliefs, and feelings. Although this standard applies to all groups, for White counselors it may mean that they understand how they may have directly or indirectly benefited from individual, institutional, and cultural racism (White identity development models).

- Culturally skilled counselors possess knowledge about their social impact upon others. They are knowledgeable about communication style differences, how their style may clash or facilitate the counseling process with minority clients, and how to anticipate the impact it may have on others.
- Culturally skilled counselors possess specific knowledge and information about the particular group that they are working with. They are aware of the life experiences, cultural heritage, and historical background of their culturally different clients. This particular competency is strongly linked to the "minority identity development models" available in the literature.
- Culturally skilled counselors understand how race, culture, ethnicity, and so forth may affect personality formation, vocational choices, manifestation of psychological disorders, helpseeking behavior, and the appropriateness or inappropriateness of counseling approaches.

- Culturally skilled counselors understand and have knowledge about sociopolitical influences that impinge upon the life of racial and ethnic minorities. Immigration issues, poverty, racism, stereotyping, and powerlessness all leave major scars that may influence the counseling process.
- Culturally skilled counselors have a clear and explicit knowledge and understanding of the generic characteristics of counseling and therapy (culture bound, class bound, and monolingual) and how they may clash with the cultural values of various minority groups.
- Culturally skilled counselors are aware of institutional barriers that prevent minorities from using mental health services.

- Culturally skilled counselors have knowledge of the potential bias in assessment instruments and use procedures and interpret findings keeping in mind the cultural and linguistic characteristics of the clients.

- Culturally skilled counselors have knowledge of minority family structures, hierarchies, values, and beliefs. They are knowledgeable about the community characteristics and the resources in the community as well as the family.

- Culturally skilled counselors should be aware of relevant discriminatory practices at the social

and community level that may be affecting the psychological welfare of the population being served

Skills

Culturally skilled counselors seek out educational, consultative, and training experiences to enrich their understanding and effectiveness in working with culturally different populations. Being able to recognize the limits of their competencies, they (a) seek consultation, (b) seek further training or education, (c) refer out to more qualified individuals or resources, or (d) engage in a combination of these.

- Culturally skilled counselors are constantly seeking to understand themselves as racial and cultural beings and are actively seeking a nonracist identity.
- Culturally skilled counselors should familiarize themselves with relevant research and the latest findings regarding mental health and mental disorders of various ethnic and racial groups. They should actively seek out educational experiences that enrich their knowledge, understanding, and cross-cultural skills.
- Culturally skilled counselors become actively involved with minority individuals outside the counseling setting (community events, social and political functions, celebrations, friendships, neighborhood groups, and so forth) so that their perspective of minorities is more than an academic or helping exercise.
- Culturally skilled counselors are able to engage in a variety of verbal and nonverbal helping responses. They are able to send and receive both verbal and nonverbal messages accurately and appropriately. They are not tied down to only one method or approach to helping but recognize that helping styles and approaches may be culture bound. When they sense that their helping style is limited and potentially inappropriate, they can anticipate and ameliorate its negative impact.
- Culturally skilled counselors are able to exercise institutional intervention skills on behalf of their clients. They can help clients determine whether a "problem" stems from racism or bias in others (the concept of healthy paranoia) so that clients do not inappropriately blame themselves.
- Culturally skilled counselors are not averse to seeking consultation with traditional healers or religious and spiritual leaders and practitioners in the treatment of culturally different clients when appropriate.
- Culturally skilled counselors take responsibility for interacting in the language requested by the client; this may mean appropriate referral to outside resources. A serious problem arises when the linguistic skills of the counselor do not match the language of the client. This being the case, counselors should (a) seek a translator with cultural knowledge and appropriate professional background or (b) refer to a knowledgeable and competent bilingual counselor.
- Culturally skilled counselors have training and expertise in the use of traditional assessment and testing instruments. They not only understand the technical aspects of the instruments but are also aware of the cultural limitations. This allows them to use test instruments for the welfare of the diverse clients.
- Culturally skilled counselors should attend to as well as work to eliminate biases, prejudices,

and discriminatory practices. They should be cognizant of sociopolitical contexts in conducting evaluations and providing interventions, and should develop sensitivity to issues of oppression, sexism, and racism.

- Culturally skilled counselors take responsibility in educating their clients to the processes of psychological intervention, such as goals, expectations, legal rights, and the counselor's orientation.

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Combining Therapies are Proving More Effective in SUD Treatment

After reviewing and discussing the ground rounds, presentations, lectures, assigned readings and other course materials, I believe it is a valid and accurate assessment to say addiction is a most complex disease with many variables and components which require many different therapeutic modalities in which to treat. The combined therapy philosophy has markedly shown to improve outcomes compared to the one-dimensional, single-treatment option program ideology. There is a foundation within this argument for a variety of reasons.

As mentioned in earlier discussions, the biopsychosoical model we have studied provides a broadly encompassing modality in which to begin a specifically tailored treatment plan for patients in addiction programs. When this modality is coupled with pharmacotherapy and Cognitive Behavioral Therapy, recovery statistics provide us with a accurate and valid proof for a combined therapeutic approach in the treatment model of addiction. Although, there is no quick and easy algorithm for providers to follow, the combined therapies available provide us with statistically significant results as being being most successful.

As presented in earlier modules, the five pillars of addiction treatment provides further foundation for the combining therapies system being utilized presently within Addiction and Recovery Medicine. Currently, it is this foundation which now appears to be the providing the long term successes in recovery programs. Additionally, it is providing a valid starting point in which this multidisciplinary approach begins. The results are most beneficial and positive, when this systematic approach is properly outlined and followed. With these principles in mind, the resultant creation of a tailored, individualized treatment plan has its most efficacy where it is proven to exponentially increased a patients probability of being both effective and successful in their recoveries. The 5 essential pillars of addiction discussed in lecture are as follows:

1. **A comprehensive assessment** of the stage, scale and severity of the disease as well as testing for co-occurring disorders and a tailored treatment plan.
2. **Stabilizati**on **of the patient's** condition through complete cessation of substance use and medically-supervised detoxification for those who are dependent.
3. **Access to** acute care such as evidence-based pharmacotherapy as well as psychosocial treatment.
4. **Chronic disease management** to help in relapse prevention and maintain positive milestones in recovery
5. **Mutual** support services such as self-help programs which provide social and emotional support.

In practice, effective addiction treatment programs take a multidisciplinary, multifaceted approach, Typically the treatment team includes addiction medicine specialists, psychiatrists, counselors, and therapists. Initially, the patient is typically admitted to a drug detoxification facility for medically supervised drug detoxification which is not considered as therapeutic from an addiction standpoint. According to the National Institutes of Drug Addiction, detox is not a treatment and proves to do virtually nothing in successful long-term outcomes. Although not a stand alone therapy, this facet to the initial patient stabilization is essential to the recovery process especially in cases with alcohol, benzodiazepine, and barbiturate detoxification as the withdrawal symptoms from these substance classes can be life-threatening. On stabilization, the specific work up process begins with a complete

medical evaluation with comprehensive mental status examinations added to the complete history and physical examination. Multidisciplinary healthcare specialists are many times called in to help with other internal pathological processes such as; Gastrointestinal liver and pancreatic problems, Neurological presentations, Hematological Derangements, Nutritional Consults for severe nutritional deficiencies, and other coexisting individual medical issues. There are many examples of combined treatments and combined therapeutics for patients being treated with addiction.

One treatment example type which has proven quite successful is in pharmacotherapy. This therapy has show significant efficacy with patient compliance in recovery from the detox phase well into the cognitive phases of recovery. This example uses crucial, specific pharmaceutical approaches to reduce unpleasant withdrawal symptoms that otherwise might cause a patient to drop out of psychosocial therapy.

A second combined therapy example, details different treatment modalities for each substance found in a patients history. This is thought to target different addiction mechanisms within the brain centers found to be responsible in the biological reward mechanisms in the primitive midbrain structures. For example, nicotine cessation pharmacotherapy can address physical dependency, while psychosocial treatment to the physical habitual factors can help the recovering addict develop skills and coping mechanisms to achieve long term cessation as well as avoid relapse.

A third example of combined therapeutics is found in patients with a comprehensive treatment plan put in place for in patient treatment. Usually the patients do best in a long-term specialized residential facility with a multidisciplinary treatment arms. It was in my personal experience that I submit this valid case. From the outset, I was given an individual and comprehensive combined treatment plan. First I was properly assessed medically both physically and mentally. Then I was stabilized with pharmacology for three weeks in the short term plan and for 6 months within the long term plan. Included in the short term assessment plan a schedule of 8 hours of daily, mandatory groups and class curriculum was implemented all of which occurred in a strictly, monitored therapeutic environment were daily and nightly readings, homework and evening group discussions. Individual and Group Cognitive Behavioral Therapy was provided from day 0 with a strong emphasis placed on behaviors within my presenting addiction to alcohol, my drug of choice. Within days, more support groups were added to my regime where the a daily 12 step AA mutual support groups were attended in addition to my recovery case plan. My individualized treatment plan added a psychologist, a psychiatrist, an internist, licensed counselors which was added to awareness programs with others in recovery. Lastly, my exit plan included Intensive Outpatient Therapy 3 times per week for 9 hours with mandatory urinalysis and nightly exercises for 6 months after my release from in the in patient center. My recover was not limited there however as I was offered spiritual guidance sessions in pray and meditation which fit into the choice of my belief system. The healthcare environment where my spiritual malady as treated its core in truing my life over to the care of God, my higher power, in which to start and end each day in this new life long journey in sobriety.

It is well known in the recovery community and to me personally, the best treatment programs provide individualized evidence-based treatment plans. *"These plans more times than not, offer detailed addiction education, group, individual and family therapy, treatment of coexisting psychiatric and medical conditions, stress management, relapse prevention strategies, 12-step recovery, reentrance exit planning, neuropsychiatric testing, and, as needed, ongoing medication therapies with drugs" (Principles of Addiction).* It has also been shown that treatment duration of 90 days or more yields the best outcomes. With long-term post-treatment drug testing improves outcome dramatically, and can be

viewed as a part of treatment. I testify to this treatment modality as my DUI Court Program offers long term CBT and requires two random Urinalysis Tests per week for 9 months. The bottom line or end point is, this program works! The DUI Court diversion program boasts a 80% success rate for those remaining in recovery but more importantly is providing the means for people to change their lives. Personally, this program has been a crucial and instrumental part to my long term recovery success thus far in my new found life in recovery and in part responsible for my new found life in recovery as well as my new found career endeavors in the field Addiction and Recovery Medicine.

It is proven in research and in practice that no single treatment is optimal for all patients. Combining treatment programs increase the chance for long term success in recovery. No one part of therapy or therapies has been proven to be effective standing Prospectively speaking, the probability of success stands to be exponentially higher with more tailored facets added into the treatment plan. Although not absolute, the laws of averages are proven in this case. As with any therapeutic protocols the will be limitations as it is my belief that no science is a perfect science. It is, in fact, true many such centers lack properly trained professionals who administer evidence-based treatment strategies safely and effectively but the field of addiction and recovery is shown to be most effective in combining therapies.

I have observed first hand the safety and efficacy with a diverse, specific treatment plan. One day like myself, many of the treatment providers are themselves in recovery where I hope to provide an excellent level of career coupled with the proper theory and clinical training as well as personal experience in addiction. With proper therapeutic exposure experiences in my training, I am hopes to continue the combining therapeutic model to other addicts in need. Some may offer a “one size fits all” or “my way or the highway” type program based on whatever method they used to achieve sobriety but I find this therapeutic approach be deleterious to the science of addiction medicine as well as to the life blood of the therapeutic model of recovery. It is my firm belief when an individual is ready and willing for a lifelong commitment to recovery as the combined therapeutic model in practice is the most effective and successful for long term sobriety.

Referrence:Principles of Addiction
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Mutual Support Groups in Recovery

Mutual Support Groups are and essential part of working a successful recovery program. One such support group is the the AA Twelve Step Programs. These programs have more than 70 years of experience in helping alcoholics, addicts, and their family members recover from addiction. I have seen first hand that most alcoholics and addicts do in fact have a more rewarding and successful recovery if they actively participate in a Twelve Step program. Healthcare providers especially physicians can and will play an important role by helping the struggling addict or alcoholic. Being a fiduciary, providers must understand these programs, be willing to share these programs and encourage their patients to participate these support group meetings. Statistics show that by integrating the 12 Steps into a patients treatment plan, the program will prove more efficacious and long after the patient is discharged. *"In the 1996 triennial AA member survey, only 8% of newcomers reported coming to meetings through a physician's referral."(PoA, pg 918).* However unfortunate this finding is, it is still quite common that providers fail to properly refer patients or provide oversight for effective treatment utilization. It is proven and supported with short term and long term data that AA and other self help support groups are a valuable resource for physicians in helping their patients suffering from addiction. Physicians and other providers must do a better job integrating these programs into their treatment programs when referring their patients.

There are several ways to refer patients as provided by our literature. In the example of Alcoholics Anonymous there a few ways a provider may refer a patient to AA. *One is to provide a listed phone number in most cities and will provide volunteers to contact the patient and explain AA. Two, After obtaining the patient's permission, the physician should initiate contact with the self-help group in the patient's presence. Three, Giving the patient the telephone number with a recommendation to call usually is not successful. (PoA, pg 919)* In the case of proof, allowing a patient to make contact has shown futile. This was shown in cohort by Sisson and Mallams who randomly assigned newly diagnosed alcoholics to two types of referral. *The first group was told to call AA and go to a meeting and the second group was put in direct contact with an AA member while in the physician's office. Not shockingly, none of the first group attended a meeting; the entire second group attended a meeting. (PoA P.919)* There are other effective methods proven successful. The counselor or other healthcare provider may find it helpful to keep a list of AA members willing to do step work with their new patients and some physicians may even accompany patients to AA meetings. Though such attendance is a time consuming and expensive for the counselor or provider, it does demonstrate to a provider's sincere and genuine belief in the importance of mutual support groups such as AA to the overall recovery process. Additionally, providers might obtain a current list of nearby AA meetings from the local intergroup or central office where these lists include a brief description of the type of meeting its location and most importantly, whether it is a special interest group.

A knowledgeable, empathetic addiction provider can and will prepare and support their patient in overcoming the initial fear and apprehension about attending a support group like the Twelve Step meeting. It is of the up most importance the healthcare addiction specialist should acknowledge the patient's ambivalence to ceasing use of their DOC or Drug of Choice. Additionally, the listing and review of the referral guidance it imperative the process and ultimate success in a program. I can and will attest to the truth and effectiveness to these very suggestions given to me when entering my Twelve Step Program. The following suggestions will help the referral work, they are as I remember: *(PoA, 918)*

- *Know the meetings in your area and refer each patient to a meeting that will meet his or her needs and If they are unhappy with a meeting do you best to help them find another.*
- *Help patients make direct contact with members of the group.*

- *Give patients a prescription to attend a meeting.*
- *Tell them what is going to happen at the meeting and how meetings are structured.*
- *Encourage them to socialize by arriving early and staying late after the meeting.*
- *Encourage them to attend frequent meetings, but initially do not push or coerce them.*
- *Encourage patients to pick a temporary sponsor early to increase their chances of staying clean and sober and tell them to pick someone of the same gender with at least 1 year of sobriety.*
- *Tell them its ok to not like a sponsor and that it is okay to change if necessary.*
- *Talk about any fears and apprehensions about attending a meeting and dispel any inaccurate myths or beliefs they may have about Twelve Step support groups.*
- *Schedule them for a follow-up visit to discuss their experience at meetings. If they have been attending regularly, encourage them to pick a "home" group and become more active. Being actively involved in the program is a better predictor of a successful outcome than the number of meetings attended.*

In my opinion, professionals need to be familiar with recovery support groups, especially the Twelve Step programs to be able to help patients with addiction. The addiction provider can and should work as a facilitator to help patients attend meetings. The statistics prove the long term success rates for recovery program treatment plans. In one case, *"Project Match showed that trained professionals who support meeting attendance in a positive noncoercive way could improve their patient's acceptance of Twelve Step programs." (PoA,pg 918)* In so doing there are proven advantages to referring patients to Twelve Step programs:

- Meetings are free of cost and accessible
- They are autonomous and no records are kept
- Participants do not have to be sober to attend a meeting.
- Persons from all racial and ethnic backgrounds and socioeconomic groups are always welcome
- Attending group meetings helps overcome the patient's feelings of identity and isolation.
- Groups will educate patients about the disease process of addiction and the hope of recovery
- Groups help members learn basic social skills and can become less self-obsessed
- Groups provide a reality based CBT type approach for addicts in recovery, overcoming behaviors
- Groups may offer new support to help members with setbacks experienced in early recovery
- Groups may help members constructively use their time better than in their addiction

Clearly and especially in my case, the attitudes and behavioral norms are much more in conformity with the values of the larger. The expectation of avoiding drunkenness in AA is paramount but more importantly and , normative in our culture we as people are highly distressed over the consequences of addiction, This is precisely whey candidates to respond to the strong ideologic and philosophic orientations of AA and toward recovery as a whole where the conditioning is not only reinforced by the group's ideology but the changing of behaviors are observed as well. The norms are restored especially those related to the abstinence of the DOD, drug of choice. Most importantly the restoration of a spiritually grounded self and life is an actual result. I am living proof.

References: Principles of Addiction

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Functional Definitions for Addiction, Tolerance & Withdrawal

Addiction is defined in literature as a brain disorder characterized by prolonged and compulsive use of a drug or substance despite adverse consequences. Individuals with substance use disorders may experience intense cravings, have impaired control of their substance use as well as develop physical dependence on their substance of abuse. It is shown that continual, consistent substance abuse has often been seen as a "*bad choice,"* but repeated and long-term drug use both cause physiological adaptations deep in the primitive brain where it destabilizes voluntary control. It is now generally understood by the addiction community that addiction is a disease of the brain. Substance use, misuse and abuse by drug using individuals is being described as a result of abnormal brain functioning. Globally neuroscientists are continually conducting and reproducing extensive brain imaging studies of individuals with addiction to understand the underlying biological and physiological processes of addiction. Additionally, several specific and complex midbrain regions are affected in addiction which include but not limited to those that regulate pleasure, reward, motivation, and control.

Another important component of drug addiction is tolerance which is scientifically defined as cellular neuroadaptation following drug exposure. Both illicit and nonillicit drugs are being proven to increase dopamine levels in various ways. First, they can prevent reuptake or cause release of dopamine by the vesicles further leading to higher dopamine levels in the dopaminergic synapse. "*This increased amount of dopamine provides an over stimulation of the dopamine receptors leading to desensitization. Desensitization is also known as tolerance*."(Principles of Addiction). This over stimulation is best described by receptors becoming less responsive to a neurotransmitter. Case in point, when an individual continually uses the same amount of a drug, eventually tolerance will occur and larger amounts of the drug will be needed over time to produce the *"high effect"* the drug user has initially experienced. It is also found that this over stimulation of dopamine receptors can also decrease the number of available receptors by the down regulation of internal cellular mechanism like G coupled proteins signaling the production of the receptor at the transcription and translation level of a cell.

Withdrawal is defined as the discontinuation of drug use after chronic use leading to withdrawal symptoms. This physiological response can range from mood disturbances such as anxiety and depression to life-threatening seizures. Of course this sequela depends largely on the drug of use as well as the drug users duration of use. Withdrawal symptoms are caused by a wide range of biochemical and physiological cellular adaptations found in chronic drug use. Animal studies as well as human PET Scan Metabolic Studies provide data that withdrawal shows a prominent decrease in the concentration of extracellular dopamine in the nucleus accumbens as well as reduced firing of neurons in the mesolimbic dopaminergic system. These changes can be stopped and symptoms may be alleviated when the drug of abuse is administered. Further animal studies show that drug dependent animals have increased thresholds for reward during withdrawal where drug users often seek to alleviate withdrawal symptoms by the administration of the same or other substances.

Describe the main neurotransmitter and brain regions involved in the process of addiction, and discuss how they are involved.

A Substance Use Disorder is a complex condition that involves multiple brain rgions. Chronic drug use and intermittent drug abuse induces both positive and negative reinforcing effects in the brain. Recent studies of drug abuse are testing the biological causes of addiction focused on the sites of action of the chemical substance structure in relation to the response within the brain, The research further provides

evidence of a many physiological changes throughout the central nervous system. *The site of action is defined as the "access point by which a drug produces a specific response" (Dobrin and Roberts).* This biochemical approach refers to both the CNS neurotransmitter systems as well as CNS regions that facilitate a particular response. Sites of action are being studied to determine where in the brain and how in the these regions they exert their mass effect. This has been reinforced in and throughout the course literature found in many animal in vitro studies to determine binding sites of specific chemical substances within midbrain structures such as the mesolimbic system.

The limbic system is the primary brain system implicated in drug addiction. The limbic system is a *phylogenetically* older brain system which is sometimes called the primitive brain. Today this concept is being used used to describe brain function at its core structures. These primitive regions are primarily responsible for emotional responses as well as the automatic or involuntary primitive *"fight or flight"* response. This region is found to involve the facilitation and control of human learning, memory, concrete associations, and emotions. Scientists sometimes do not universally agree on what brain regions constitute the limbic or mesolimbic system, but it is thought to include *"the orbital frontal cortex, cingulate gyrus, subcallosal area and hippocampus, as well as subcortical structures such as the hypothalamus and amygdala." (Principles of Addiction)* These gross anatomic areas comprise many interconnected brain regions and it is on of the main sources of information transmission between the neocortex and hypothalamus which control all of the bodies metabolism and function within its many organ systems. Many drugs of abuse have their sites of action within the limbic or mesolimbic system and there is found histologically to be a very detailed and sensitive area within these regions where unlimited neurochemical and biological reactions are occurring simultaneously. It is no wonder and quite logical to associate and deduce that any changes whether larger or small occurring in the limbic system in fact occurs during drug abuse and addiction.

The basal ganglia are also associated with substance abuse, especially at the interface with the limbic system where the regions are involved in cognitive tasks as well as memory formation. Together with the limbic system the basal ganglia is responsible for creating motivated behaviors. Importantly, "*the basal ganglia includes the striatum, which includes the nucleus accumbens (nucleus accumbens and ventral striatum are used synonymously). The nucleus accumbens is where motivations start to become actions and it is an important site in terms of behavioral as well as physiological responses to drug use and drug reinforcement. The nucleus accumbens is believed to be the site of the acute reinforcement effect. The interconnected prefrontal cortex (PFC), which is involved in controlling behavior and decision making in its communiction with the nucleus accumbens and is found to be most relevant in addiction. The PFC contains the orbitofrontal cortex as well as the ventromedial areas which are the hubs of reward processing as seen reproduced in many studies. Animal model studies have been a valuable tool in the study of the neuroanatomy of addiction where"Addiction-like drug use has been induced and observed in primates, dogs, cats, rabbits, rats, and other mammals. Self administration as well as continued use of substances has been observed in these animal models as well"(Principles of Addiction)*

Neurotransmitters are endogenous chemicals that transmit signals from one nerve cell to another. Many neurotransmitters are involved in drug abuse and addiction, but dopamine is the most prominent. All drugs of abuse have effects on dopamine and all affect dopaminergic signaling. "T*he neurotransmitters GABA, glutamate, acetylcholine, and noradrenaline are also involved in drug reinforcement and the subsequent association made within substance use disorders.Dopamine, epinephrine and norepinephrine, are catecholamine neurotransmitters. Most dopamine in the brain is produced by neurons in the midbrain withing the substantia nigra and ventral tegmental area. They send projections to the striatum which includes the nucleus accumbens, amygdala, and PFC where Dopamine acts directly on dopamine receptors. Dopaminergic Receptors are grouped into two classes, D1 or D2 receptors and all dopamine receptors are found to have G-protein signaling."* The Neurotransmitter dopamine is important for a wide arrangement of functions, including but not limited to movement, motivation, reward-seeking, learning, memory, and attention. It is also the primary neurotransmitter

believed to produce the neurobiological adaptations associated with addiction. Studies are reproducing with accuracy that drug exposure affects the dopaminergic pathways and subsequently modulates end point dopamine release in both humans and animals.

As discussed, all drugs of abuse act to stimulate and most times overstimulate dopamine release. Some drugs even act directly on the dopamine pathways deep within the brain by blocking dopamine transporters as well as preventing the reuptake of dopamine producing a major accumulation of dopamine. While most drugs affect dopamine pathways directly other act indirectly through the GABAergic, glutamatergic, nicotinic and opioid receptors found on neurons which control their dopamine release.

Discuss the mechanisms (naming the receptors involved) by which tolerance and withdrawal occur in abuse of marijuana, cocaine, and heroin.

Marijuana:
The CB1 cannabinoid receptor is necessary for development of tolerance and dependence on THC. THC tolerance increases amounts of the drug required to produce the initial effect and dependence occurs when an organism only responds "normally" in the presence of the drug. This has been observed in several species besides humans, including rats, mice, rabbits, and monkeys. "*Chronic cannabinoid exposure leads to neuronal desensitization and downstream deregulation of CB1 receptors most prominently in the cerebellum and hippocampus. Additionally, decreases in CB1 receptor binding affinity has also been observed. Decreases in cannabinoid sensitivity in GABA and glutamatergic synapses in the nucleus accumbens demonstrate that CB1 receptors are functionally tolerant to cannabinoids."* Such decreases in CB1 receptor number and efficacy are the brain's way of adapting to and compensating for the high levels of THC activity at these receptors. When THC is removed a lower than normal level of receptor activity may be responsible for many of the withdrawal symptoms. This has shown to occur until the brain readapts to normal levels of CB1 receptor activation. "*Cannabinoid tolerance and dependence may also prove to be quite disruptive in the G-protein signaling which is evidenced by a decrease in G-protein mRNA and subsequent new receptor formation." Principles of Addiction)*

Many studies have been conducted on the long term neurological and cognitive effects of chronic and heavy marijuana use. Brain scans of chronic users of marijuana show smaller amygdala and hippocampal volumes as well. "*These effects can be evident even decades after use has stopped and it is unclear whether these changes in amygdala and hippocampal volumes reflect preexisting conditions or from direct consequence of heavy marijuana use. Heavy and prolonged use of marijuana can also induce physical and psychological symptoms of withdrawal, including sleep and mood disturbances, anxiety, depression, anger, agitation, tremors and sweating. Withdrawal from THC is dependent on the presence and activation of the CB1 receptors as seen in laboratory studies where rodents lacking CB1 receptors failed to exhibit any withdrawal response from THC." (Principles of Addiction)* Results of these studies show dopamine levels to be significantly lower during withdrawal from marijuana where the dopamine activity is reduced in the ventral tegmental area as well as in the nucleus accumbens. There is also evidence of increased extracellular levels of CRF in central nucleus of amygdala during withdrawal, which likely mediates increased anxiety in THC addiction. It is a valid resultant effect that withdrawal actually ceases when THC is administered again in laboratory animals in quite a few studies to date.

Cocaine:
Tolerance to stimulants occurs following high doses as well as frequent administration and it has been observed in both humans. In simple terms, tolerance is said to be most noted in the reinforcing effects of the brain causing the need for for more of the drug to obtain an initial high. Animal studies have shown and are showing that acute phase tolerance to cocaine or amphetamines develops whether the substance is taken chronically or intermittently. This reaction develops as a result of the desensitization of

dopaminergic receptors to the stimulant as well as changes in signal transduction pathways. In lieu of these reactions, tolerance is shown to play a major role in the dose escalation and subsequent development of dependence.

Withdrawal from stimulants such as cocaine and amphetamines are biphasic processes that involve many neurological changes. "*During withdrawal from cocaine or methamphetamine the initial increases in dopamine and expression of dopamine receptors are followed by a significant decrease in dopamine concentration, dopamine receptors, and mu and kappa opioid receptors." (Principles of Addiction)* Due to this, there are increases in dopamine receptor binding sites during the withdrawal phase in cocaine users which may contribute to the powerful force of relapse. Conversely, during early abstinence and withdrawal phases from methamphetamine there are deficiencies in the anterior cingulate cortex and amygdala.

Heroin:
Opioid tolerance is defined as the reduction in responsiveness to opioid use. This chronic use of opioids result in the need for increasing amounts of dosing to achieve the initial effect the user once had. Opioid tolerance is one of the main factors implicated in compulsive opioid use and recurrent relapse behaviors. *Tolerance is shown to be caused by homeostatic adaptations at multiple levels of the nervous system that counteract the high level of opioid receptor stimulation induced by exogenous opioid administration.(Principles of Addiction)* This receptor tolerance provides a major loss of function of opioid receptors over time which result in the decreased sensitivity and signaling responses to opioid binding sites. *The mechanism is not fully understood, but is thought involve decreased receptor expression and decreased affinity for G protein effectors.(Principles of Addiction)* Changes in intracellular signaling pathways downstream from opioid receptors account for some aspects of tolerance at the cellular and systemic level. Learning behaviors also play significant roles in some aspects of tolerance. In individuals who are tolerant to high doses of opioids in fact are shown to cause much greater effect that a times may even be lethal.

Opiate withdrawal involves the physiological and psychological effects associated with the discontinuance of use. Many effects such as hypersensitivity to pain and depressed are the opposite of those that result from opioid administration. This is thought to occur because the nervous system has adapted to high levels of opioids at the receptor site in order to maintain a relatively normal function. In one example, "*anxiety is reduced when opioids inhibit the activity of noradrenergic neurons by inhibiting an enzyme involved in the synthesis of the neurotransmitter norepinephrine*." Chronic opioid use leads to an increase in the activity of the enzyme processes in the fromation of these catacholamines and it is shown biochemically that during abstinence from opioids this enzyme activity will be abnormally high leading to massive releases of norepinephrine which subsequently may cause the increased anxiety.

Dopamine signaling whether upstream or downstream are reduced upon cessation of chronic opioid administration. This behavior plays a role in withdrawal symptoms. Ultimately, the educed dopamine release from the GABA inhibitions is most likely responsible for symptoms such as dysphoria or depressed mood). Additionally, it is outlined that CRF levels are also increased during withdrawal which may at times account for the symptomology of the anxiety symptoms,

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