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Traumatic Brain Injuries and Substance Abuse: Implications for Rehabilitation Professionals


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Roughly 1.9 million individuals per year incur traumatic brain injury (Chandras & Eddy, 2008; Schmidt & Heinemann, 1999). As many as three quarters of these injuries involved alcohol and drugs at time of onset (Chandras & Eddy, 2008; Corrigan, 1995; Corrigan, Bogner, Mysiw, Clinchot & Fugate, 2001). A sizeable number of traumatic brain injury (TBI) survivors continue to use drugs and alcohol despite the many grave consequences (Chandras & Eddy, 2008; Taylor, Kreutzer, Demm, & Meade, 2003) such as risk of re-injury, seizure, aggressiveness, decreased life satisfaction (Corrigan, 2005); role change, family stress, sense of loss, boredom, and frustration. Substance use also exacerbates the residual effects of TBI, such as deficits in coping, memory, problem solving, social skills, fatigue, and sensitivity to stimulation (Schmidt & Heinemann, 1999). For these reasons, any substance use is strongly discouraged (Corrigan & Lamb-Hart, 2004). For example, during early recovery, when the brain is attempting to heal, alcohol can negate this natural healing process. Individuals with a TBI and a coexisting disability of addiction/substance abuse (i.e., dual-diagnosis) typically have higher rates of relapse, re-injury, and medical complications that lead to negative treatment outcomes.
and less functional stability. They are more likely to have lowered inhibition and difficulty with social relationships. In addition, they are at greater risk of mental health problems, especially depression and suicide (Benshoff & Janikowski, 2000; Corrigan, 2005; DeLambo, Chandras & Eddy, 2005; Schmidt & Heinemann, 1999; Taylor et al., 2003). From a rehabilitation perspective, a vital concern is the dramatic unemployment rates for persons with TBI. Rehabilitation Professionals (RPs) are likely to encounter unique barriers and challenges when working with this population (Benshoff & Janikowski, 2000). Consequently, awareness of these coexisting disabilities and the array of treatment modalities and related issues are necessary for successful rehabilitation.

**Symptom Recognition**

When working with this population, the RP must distinguish between the disability symptoms of TBI vs. substance abuse (SA; Benshoff & Janikowski, 2000). For example, a client with TBI may display memory, concentration, and processing speed deficits which could be attributed to the brain injury. However, Iverson, Lange, and Franzen (2005) determined that symptoms of mild TBI (i.e., concentration, memory, and processing speed) were undistinguishable from those of substance abuse. Hence, client symptoms may be due to drug use (e.g., marijuana) and its impact on the neurotransmitter process (Doweiko, 2006), rather than from the TBI disorder itself. Without recognizing drug use, the RP would address only the TBI (Benshoff & Janikowski, 2000), making successful outcomes unlikely (Doweiko, 2006). Common characteristics of dual-diagnosed clients must also be recognized. For example, limited self-awareness and motivation can influence employment and treatment outcomes for individuals with TBI (Shames, Treger, Ring & Giaquinto, 2007). The RP must recognize these limitations, coupled with the ability to recognize SA problems. For example, client resistance due to lack of self-awareness could be viewed as a “poor attitude.” The RP must be knowledgeable of these characteristics and address them in the planning/treatment phase (Shames et al., 2007). TBI self-awareness skills can be enhanced using a group counseling model in which TBI clients attend group counseling sessions with other TBI members. Social skills are practiced within group. Self-awareness, social skills, and quality of life are improved and social isolation is decreased while using the group counseling process (Chandrashekar & Benshoff, 2007). Social dislocation for clients with TBI is of utmost concern. The long rehabilitation process intensifies the loneliness of isolation (Schmidt & Heinemann, 1999); furthermore, boredom and loneliness are risk factors for SA (DeLambo et al., 2005; Doweiko, 2006). Enhanced self-awareness can support both SA treatment and employment outcomes (Chandras & Eddy, 2008).

Once coexisting disabilities are identified, the next step is choosing an appropriate rehabilitation program (Inaba & Cohen, 2004). Some SA programs do not recognize the unique characteristics of persons with TBI and SA. For example, the traditional 12 Steps to Serenity may be too abstract for this population (Benshoff & Janikowski, 2000). Therefore, the steps have been rewritten in a concrete manner to facilitate understanding. For example, Step 1, “We admitted we were powerless over addiction--that our lives had become unmanageable” (Chandras & Eddy, 2008) was changed to the more concrete “admit that if you use drugs and/or drink, your life will go out of control. You must admit
that the use of alcohol and drugs after having your traumatic brain injury will make your life unmanageable” (Benshoff & Janikowski, 2000).

This population has an array of unmet needs that must be addressed in both vocational as well as substance abuse treatment venues: a) improving memory and problem solving; b) learning techniques to manage stress, emotional upsets, and anger; and c) improving job skills (Corrigan, Whiteneck & Mellick, 2004). These needs are SA risk factors (Doweiko, 2006; Inaba & Cohen, 2004) as well as barriers to employment outcomes. Rehabilitation plans that address these needs tend to promote successful outcomes (Rubin & Roessler, 2008).

**Treatment and Traumatic Brain Injury**

For individuals with SA, having TBI greatly lessens the chance for successful SA treatment, as well as positive medical and employment outcomes. A holistic approach is imperative for successful treatment (Chandras & Eddy, 2008). TBI clients can be reluctant to participate in SA treatment due to lack of awareness of SA and disability issues. Treatment professionals who lack training in dual diagnosis may misperceive treatment session absenteeism as symptomatic of “denial” (Chandras & Eddy, 2008; Taylor et al., 2003) or lack of motivation (Corrigan & Lamb-Hart, 2004).

Some traditional Alcoholics Anonymous (AA) groups (Benshoff & Janikowski, 2000) adhere to a “no psychoactive medication” policy. Consequently, TBI patients may be “barred” from using medications that relieve depression (antidepressants), spasticity (Valium), and fatigue (methylphenidate; Chandras & Eddy, 2008). Furthermore, these programs may fail to recognize that what appears to be the client’s SA “denial” is actually due to lack of awareness associated with the TBI (Chandras & Eddy, 2008). During treatment program selection, the RP should thoroughly understand both the client’s unique situation and the treatment program’s philosophy; otherwise, relapse may occur.

SA treatment programs should address the following points when working with coexisting disabilities (Chandras & Eddy, 2008; Corrigan & Lamb-Hart, 2004):

1. **Modify admission criteria:** Remove abstinence from prescription medications (e.g., Valium) as a program requirement.
2. **Determine unique learning strategies:** Avoid jargon; use concrete written materials and allow tape recording. Give extra time for work, paraphrase and repeat.
3. **Determine unique communication styles:** Ask how client reads and writes, or evaluate samples.
4. **Avoid many environmental stimuli:** Minimize distractions.
5. **Be aware of attention span deficits.**
6. **Give breaks to combat fatigue.**
7. **Address inappropriate social behaviors in a gentle manner:** Don’t assume the individual knows right from wrong.
8. **Redirect excessive speech.**
9. **Be cautious when inferring client motivation levels**: Do not assume that non-compliance arises from lack of motivation or resistance.

10. **Don’t assume a missed appointment is intentional or due to resistance**: Punctuality can be due to time management, poor memory, and transportation issues.

11. **The single most important factor for successful treatment is the therapeutic alliance between counselor and client**: Utilize a proven approach (e.g., Rogerian) that builds this partnership.

12. **Enlist the client’s social circle (family, friends and service providers) to reinforce goals**.

13. **Don’t assume that learning will be generalized to other environments**.

14. **Be delicate and caring during confrontation**.

15. **Repeat instructions and strategies**: Repeat, review, rehearse.

16. **Attend to transportation issues**: These are often a major treatment barrier.

17. **Increase treatment compliance/attendance through incentives**: These can be financial, as well as reminder phone calls and related strategies.

**Work and Sobriety**

Work can be instrumental in supporting sobriety. Positive employment outcomes include self-efficacy, self-esteem, social status, social interaction, skill acquisition, and a structured setting devoid of substance abuse (Blankertz, McKay & Robinson, 1998). Employment outcomes are driven by the RP’s philosophy and actions (Rubin & Roessler, 2008) and the development of a “working relationship” (Raskin & Rogers, 1995). In an effective working relationship, the client and counselor work in partnership to locate an appropriate job that will promote sobriety/relapse prevention.

**Work Environment**

Recovery is contingent upon locating a work environment that both discourages SA and promotes abstinence. “Wet” environments (i.e., open drug use) can sabotage recovery (Blankertz et al, 1998). Environmental stimuli such as people (coworkers) or places (e.g., work break-room), and things (e.g., a smell or song) can all affect SA behaviors via Classical Conditioning (DeLambo et al., 2005). For example, the client enters a break room where prior SA has occurred. These environmental stimuli (break room) produce a craving (i.e., physiological response), thus setting SA into action. The employee then utilizes drugs in the room. Hence, an employment setting can “trigger” the SA process (Inaba and Cohen, 2004). The RP, using knowledge and experience, must decide if the employment setting will support recovery.

**Job Accommodation Network and Dual Diagnosis**

A thorough intake interview will provide the RP with a client profile that outlines major assets (e.g., support system), limitations (e.g., drug use) and preferences (e.g., work outdoors; Rubin & Roessler, 2008). From this, the client is matched to a job setting conducive to sobriety. The Job Accommodation Network (JAN) is a vital tool to identify appropriate job accommodations for persons with disabilities (Rubin & Roessler, 2008).
JAN may be contacted via telephone or by interactive web site (JAN, 2008a; JAN, 2008b).

JAN brain injury accommodation categories include:
1. Maintaining Stamina (e.g., part-time work schedule);
2. Meeting Deadlines/Organization skills (e.g., electronic organizer);
3. Working Effectively with Supervisors (e.g., written job descriptions);
4. Memory Deficits (e.g., sticky notes);
5. Attendance (e.g., flexible work hours);
6. Difficulty with Stress (e.g., counseling);
7. Problem solving deficits (e.g., restructure job to include only essential functions);
8. Concentration (e.g., reduce workplace distractions);
9. Fatigue (e.g., eliminate physical exertion)

The following are job accommodations categories for drug abuse issues (JAN, 2008b):
1. Fatigue (e.g., flexible work schedule);
2. Treatment Needs (e.g., provide leave for inpatient medical treatment);
3. Drugs in the Workplace (e.g., extra supervision);
4. Concentration (e.g., reduce workplace distractions); and
5. Difficulty Handling Stress (e.g., reassign to less stressful job)

The RP, with the use of JAN, can modify the work environment in a manner that will promote successful employment outcomes and decrease the probability of client drug use. The aforementioned accommodations will facilitate client adjustment to the work environment (Rubin & Roessler, 2008) and help curb substance abuse behaviors (Doweiko, 2006).

Supported Employment

Work is viewed as both a treatment protocol as well as final outcome for persons with TBI and SA (Chandras & Eddy, 2008). Supported employment is an effective placement strategy used for clients with these coexisting disabilities. Characteristics of supported employment include: Vocational intervention takes place in “real life”; competitive employment is the outcome; and employment capitalizes on existing skills, abilities, and follow-up supports. In a supported employment model for clients with dual diagnosis, the RP (e.g., employment specialist or job coach) helps the client identify vocational strengths and support needs (e.g., memory, substance abuse triggers/personality); the RP also helps the client find a job and learn the skills needed to maintain employment (Wehman, Targett, Yasuda, & Brown, 2000). Employment specialists ask targeted questions to determine a behavior’s function (e.g., drug use from boredom, fitting in with friends, or reducing pain) and to identify possible drug “triggers” and positive ways to deal with these impulses (Wehman et al., 2000). The specialist needs to be aware that memory, lack of initiation, and poor organization can all be related to either disability (i.e., TBI or SA). An array of adaptive devices and techniques can promote success in the workplace. For example, a memory notebook or hand-held voice
recorder may help remind individuals of an AA meeting or important duties at work. In addition, training strategies developed specifically for persons with TBI have successfully placed individuals with TBI and SA into employment positions. The psychological benefits of work accomplishments include enhanced self-concept and self-esteem and a sense of connection with society, which help foster continued sobriety.

The RP can form an interdisciplinary team (IDT) of professionals to assist with job placement. The team members can include: supported employment specialist, RP, social worker, family, and SA counselor members. The IDT must view addiction and disability as barriers to employment (Becker, Drake, & Naughton, 2005) and must address both TBI and SA in the planning phase. A vocational profile delineating client skills, strengths, and specific substance abuse issues (e.g., triggers, coping strategies) is developed and implemented. This profile can be used to locate job/work settings, and recovery supports (Becker et al., 2005; Doweiko, 2006). The IDT should be cognizant that some job positions are “breeding grounds” for SA, while others are therapeutic to recovery.

**Conclusion**

Individuals with TBI have a significantly high rate of substance abuse. Rehabilitation professionals (RP) are in vital positions to address the specific needs of this population. This can be accomplished by matching the client with appropriate treatment modalities and by identifying employment positions/settings consistent with the client’s SA and vocational profile. Work can be a powerful tool within the treatment process. RPs who are aware of the implications of dual diagnosis and the various vocational issues have an increased likelihood of producing successful outcomes (i.e., abstinence and employment).
References


