

The Role of Family in Residential Treatment Patient Retention

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Abstract This study aims to examine the completion rate of individuals in a residential addiction center when the individual's family members or significant others participate in the therapeutic process, contrasted with those who have no family participation. Data was analyzed from 274 patients enrolled in a residential addiction treatment program. These patients were divided into two groups, one having had family participation during treatment, the other having no family participation. These groups were analyzed for successful program completion across various characteristics. Outcome analysis reported a 9.62 % increased program completion rate for those with a family member or significant other involved in a seven-day family program.

Keywords Family · Addiction · Treatment · Outcome · Completion

The integration of family members within the treatment of a substance use disorder “SUD” offers an added therapeutic mechanism for residential addiction treatment programs. This study aims to examine the completion rate of individuals in a residential addiction center when the individual's family members or significant others participate in the therapeutic process, contrasted with those who have no family participation.

Various practitioners and institutions will utilize family members in the treatment process often citing the dyadic relationship between the addicted individual and their familial environment (Siddall and Conway 1988; Knight and Simpson 1996; Costantini, Wermuth, Sorensen, and Lyons 1992). Understanding the familial role in both active addiction and an addict's path to recovery is a considerable asset to professionals in establishing an improved level of specificity in residential treatment planning. The SUD trajectory is oft defined by

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factors that initiate substance abuse, those which sustain it along with the intervention strategies that move one's SUD into remission. Researchers have frequently correlated the genetic factors as a direct predictor of an SUD (Agrawal, and Lynskey 2008; Verweij et al. 2010), providing valuable context to facilitate intervention strategies. Others have postulated the impact of enabling behaviours families often possess and the implications for active addiction (Orford 1994; Velleman et al. 1993). The context of this inquiry relates to the effectiveness of family support, education, and motivation as a predictor of residential treatment completion.

Overview

Addiction

Addiction is currently defined as a “primary, chronic disease of brain reward, motivation, memory and related circuitry” characterized by the inability to “consistently abstain, impairment in behavioural control, craving, diminished recognition of significant problems with one's behaviours and interpersonal relationships, and a dysfunctional emotional response” (American Society of Addiction Medicine 2011). In the DSM-V, addiction is reframed as a substance use disorder in order to include the range of severity (American Psychiatric Association 2013).

The etiology of SUDs is complex with many factors that interact to shape the likelihood of developing dependence. A neurobiological basis for substance use has previously been established, with deficiencies in the brain's reward system, stress systems, and orbitofrontal/prefrontal cortex (Koob 2006). Genetic variation in impulsivity, risk taking, and stress responsivity also affect vulnerability to SUD (Kreek et al. 2005). Environmentally, some established risk factors are cultural attitudes, availability of the substance, stress levels, unstable/abusive families, and peer influence (American Psychiatric Association 2013). Although there is a lack of a widely accepted definition of ‘recovery’ from SUD in the field, sobriety, personal health, and citizenship have emerged as crucial factors in the recovery process (Betty Ford Institute 2007).

Treatment Models

As there are both biological and environmental considerations with SUD, a combination of psychotherapeutic and psychopharmacological treatments are often used (Canadian Centre on Substance Abuse 2005). Psychotherapeutic approaches are diverse, with both individual and group therapies focused on insight and personal awareness (Miller and Wilbourne 2002). Of the psychotherapeutic approaches, Cognitive-Behavioural Treatment (CBT), Structured Relapse Prevention (SRP), Motivational Interviewing, Community Reinforcement Approach (CRA), Behavioural Marital Therapy (BMT), self-help, and Minnesota Model programs are primarily used for SUD treatment (Canadian Centre on Substance Abuse 2005).

Although these programs differ in their specific purpose, use amongst individual addiction treatment programs is not mutually exclusive. Many residential and non residential programs will incorporate multiple modalities and methods within the course of an individual's treatment stay. The critical differences between these approaches relate to the level of interpersonal interaction, familial integration, the duration of therapeutic intervention and the degree to which abstinence from substances is considered a requirement for healing.

Despite the distinctions in modalities of care, the vast majority of residential addiction treatment models rely on abstinence-based principles though varying levels of pharmacological intervention are often utilized during the treatment process, particularly detoxification (Davis and Rosenberg 2013; Lee et al. 2014). Of the psychopharmacological treatments, the opiate antagonists naltrexone and nalmefene, and GABA antagonist acamprosate have been proven to have efficacy (Miller and Wilbourne 2002).

Family Utilisation Models

Addiction is a disease that affects entire family systems (Lander, Howsare, and Byrne 2013). The role of the family in prolonging the negative effects can in part be contributed to the family's predictable self regulating nature, whereby members actively seek to maintain the status quo and thus resist change, despite the apparent costs (Szapocznik et al. 1988). Just as the addict is defined by the context of their choices, irrespective of negative consequences, so too can the family as an actor in this process. The motivation of an addicted individual is often attributed to his or her willingness to participate in remedial processes. However, in various instances, many addiction treatment professionals will opt to counsel family members prior to or during the care of the addicted individual (McCrary and Epstein 1999).

Family members and professionals alike are generally concerned with three distinct areas: the addicted individual committing to and engaging in the treatment process, the level and application of family member involvement with the addicted individual during their care continuum, and the treatment for the entire family system for the damage incurred during this addictive process (Copello, Velleman, and Templeton 2005). There are many approaches to family utilization that a practitioner may call upon, including but not limited to Behavioural Couple or Family Therapy, Interactional Couples Therapy, Community Reinforcement & Family Therapy, Family Detox Aftercare Planning, Helping Others Partners Excel, and Relationship counselling (Meis et al. 2013). Some of the most notable variations between these models relate to how the addiction treatment professional engages the family and to what extent the therapy is geared towards individual members, the group or couple, and the addicted individual along with the behaviours from all parties that aid in sustaining the SUD.

In Sisson and Azrin's (1986) study that examined the efficacy of family reinforcement training prior to attending treatment, the educational engagement of the family member was found to decrease the frequency of drinking in the alcoholic before direct engagement in counselling. After reviewing the success rates of treatment, the authors found that "the Reinforcement Training of the non-alcoholic client resulted in the initiation of treatment for the alcoholic in six of the seven cases, in contrast to none of the traditionally treated control clients." (Sisson and Azrin 1986, p. 20). Similarly, Nattala et al. (2010) found that family participation in an inpatient treatment facility utilizing relapse prevention therapy consistently outperformed individual based modalities at 6-month follow-up for consumption of alcohol and related social system problems.

Of the concerned significant others (CSO) participating in three educational programs prior to confronting their addicted partner, CSOs willing to intervene on the addicted person following their training had a 75 % success rate for the individual entering treatment (Miller, Meyers, and Tonigan 1999). Numerous instances of similar outcomes were found in alternate data sets (Meyers et al. 1998). The application of Multidimensional Family Therapy (MDFT) as a modality during inpatient treatment in one study saw a dramatic reduction in participant substance use at 6 and 12-month follow-up intervals, as well as improved social and family functioning (Liddle, Dakof, Parker, Diamond, Barrett, and Tejada 2001). Similarly, Stanton and Shadish's (1997) meta-analytic study

of 3,500 patients derived from 1,571 reviewed cases found that family couples' therapy had better outcomes in lowering drug use after treatment compared to clients in alternative non-family therapies. A more recent systematic review also found that behavioural couple or family therapy was more effective at reducing substance use with improved relationship adjustment than individual-based treatments (Meis et al. 2013). The involvement of family members as a success factor in the therapeutic process is substantially demonstrated in these studies.

Objective

This study aims to examine the completion rate of individuals in a residential addiction center when the individual's family members or significant others participate in the therapeutic process, contrasted with those who have no family participation. Therefore, our analysis will focus on determining the impact of family participation on completion rates.

This study was based on inpatients attending Cedars at Cobble Hill ("Cedars"), a primary addiction treatment centre in British Columbia, Canada. Cedars is a 49 bed facility utilizing abstinence based principles with multi-disciplinary treatment modalities. Cedars offers alcohol and drug programs, as well as process disorder treatment.

Cedars offers a family program for those family members directly associated with an inpatient enrolled at Cedars. There is no additional cost to this program so as to remove barriers. The Cedars treatment team developed its family program as a corresponding therapeutic opportunity offered to one family member per patient enrolled in the primary addiction program. This multidimensional family therapy program is residential based and delivered over a seven-day period. This experiential group program has been founded with a multi-faceted approach to involvement in a small group of up to 15 participants accompanied with two core clinical instructors. The program incorporates 12-Step based recovery practices, mindfulness exercises, individual and group therapies, as well as traditional delivery of biopsychosocial education informing parents, siblings or significant others how addiction has affected them and mechanisms to protect themselves and their loved one's following their treatment completion. The program also features somatic therapy, a holistic approach that incorporates an individual's mind, body, spirit, and emotions. Various presentations, workshops and counselling sessions are designed to engage program participants in how they can participate in their loved one's recovery.

The program is not a mandatory requirement for inpatient treatment stay. Further family members are offered the program at an additional expense. The program incorporates 12-Step based recovery practices, mindfulness exercises, individual and group therapies, as well as traditional delivery of biopsychosocial education. The family program at Cedars equally arranges the programming weights to allow for education, self care, individual therapy and group therapy throughout the duration of stay. The program design is unique in that not only is the program residential based in the same facility as their SUD affected inpatient, but contact between the family member and inpatient are prohibited. Although these individuals are sharing the same atmosphere, both parties are directed towards the need for their own care.

In this study, patients were designated into one of two groups: one having had family or a significant other participate in the Cedars family program, and the other with no family participation.

Methodology & Method

This qualitative study used correlational analysis as an analytical tool. Empirical analysis was conducted on 274 (102 female and 172 male) SUD patients who attended Cedars between

January 1, 2015 and December 31, 2015. Of this group, 161 patients participated with family members and 113 participated without family support. The study used a census sampling technique on a convenience sample; patient data was taken from Cedars’ patient record database. The study underwent an organisational ethics review. Consent for participation in such studies is part of the intake process (patients and family members are made aware of the use of anonymized data in such studies during their initial intake interview (a 2–3-h process).

These individuals were comprised of two groups, the first of which included inpatients with family program participants, $n = 161$ (average age of inpatient 35.55 years (S.D. = 11.77)). The other group was defined by inpatients with family program participants, $n = 113$ without (average age of inpatient 40.31 years (S.D. = 12.09)).

The primary data collected included patient age, gender, substance of choice, and source of entry as either private (self-admitted) or professional (referred either through a medical, workplace practitioner or source other than self). Though Cedars does not have predefined timeframes for length of stay, the average length of stay for all participants in the inpatient program was 46.72 days (S.D. = 13.61). The average length of stay for those with family program participation was 49.72 days in treatment (S.D. = 13.02), while those without a family member participating stayed in treatment an average of 43.40 days (S.D. = 13.80).

All patients in this timeframe discharged from treatment in under 10 days, irrespective of rationale, were excluded. As a result, five patients were excluded from the “family participant” group and 23 patients were removed from the “no family participant” group.

Analysis was performed on the data using IBM SPSS version 23. The resulting output tables are given below.

Results

Table I: PROGRAM COMPLETION

Completed Treatment	No family Program		Family Program	
	n	% of Completion	n	% of Completion
Yes	93	82.30%	91	93%
No	20	17.70%	8	8.07%

Table II: COMPLETION BY AGE

Age Category:	No family Program		Family Program		Completed Treatment?	
	n	% of Completion	n	% of Completion	Yes	No
<20	2	50.00%	2	100.00%	2	0
20-25	11	72.73%	36	86.11%	31	5
26-35	34	85.29%	51	92.16%	47	4
36-45	20	80.00%	36	91.67%	33	3
>46	46	84.78%	36	97.22%	35	1

Table III: COMPLETION BY GENDER

	No family Program		Family Program		Completed Treatment?	
	Total	% of Completion	n	% of Completion	Yes	No
Male	73	80.82%	99	91.92%	91	8
Female	40	85.00%	62	91.94%	57	5

Table IV: COMPLETION BY DRUG OF CHOICE

Drug of Choice:	No family Program		Family Program		Completed Treatment?	
	n	% of Completion	n	% of Completion	Yes	No
Alcohol	82	85.37%	108	94.44%	102	6
Amphetamine	4	75.00%	3	66.67%	2	1
Benzodiazepine	1	100.00%			0	
Cannabis	6	100.00%	4	100.00%	4	
Cocaine	3	100.00%	7	71.43%	5	2
Crack cocaine	2	50.00%	3	100.00%	3	
Crystal Meth	2	50.00%	1	100.00%	1	
Eating Disorder	0				0	
Gambling	1	100.00%			0	
Heroin	4	25.00%	11	81.82%	9	2
Opiate	7	71.43%	20	90.00%	18	2
Other	1	100.00%	4	100.00%	4	

Key Findings

From the results section, notable findings with these cohorts include:

- Family program participant group patients stayed in residential care 6.32 days longer than non-participants.
- Inpatient completion rates for family program participants were 9.62 % above the non-participant group.
- Completion rates for every age category were markedly improved with family participation. The following is the increased percentile of completion:
 - 20–25 13.38 %
 - 26–35 6.86 %
 - 36–45 11.67 %
 - >46 12.44 %
- The majority of patients in 2015 reported a primary drug use of alcohol, heroin, or opiates. The following is the increased percentile of completion:
 - Alcohol 9.08 %
 - Heroin 56.82 %
 - Opiate 18.57 %
- Males in the family participation cohort had an 11.10 % greater completion rate and females had a 6.94 % greater completion rate than their respective non-participant group.

Discussion

Studies have shown that the degree to which family members engage in their own understanding or treatment process will considerably enhance the likelihood of either long term abstinence or reduced substance abuse (McCrary, Stout, Noel, Abrams, and Nelson 1991; Meis et al. 2013; Sharma and Lal 2007). The degree to which significant others in an addict's life engage their efforts in support of therapeutic recovery should improve the probability of a successful outcome (Powers, Vedel, and Emmelkamp 2008). Those with a SUD, especially in the early stages of the recovery process, are mentally and physically vulnerable: the provision of an effective network of social support has previously to be of benefit (Dobkin, De Civita, Paraherakis, and Gill 2002).

One of the challenges for treatment practitioners is assisting the family members in understanding the beneficial nature of their involvement whether to acquire an appreciation for the complexities of an SUD and perhaps in addition to their own self care. There is insufficient literature to this affect, thus a need exists for addiction treatment programs to study the significance of this relationship and mobilize that knowledge as part of their continuum of care. Further understanding of the specific factors pertaining to family involvement that lead to greater completion rates will critically enhance the literature.

One of the chief concerns for an individual entering a residential treatment program is the concept of *graduating* or *completing*; a defective notion indeed. Sustained abstinence over

time is a process with many important factors and for many, residential treatment experiences is simply one of those factors. Despite their length of stay in such a controlled environment, their sustained success will be defined by the vigilance they display upon returning to their normal life.

One of the important findings of this study was the completion rate seen in individuals having both a professional referral source and family engagement ($n = 83$, 95.18 %). These individuals, referred to treatment by professional sources, had typically been mandated as part of a return to work program or had been influenced about the treatment experience by a physician or addiction practitioner. These additional support frameworks and return to work strategies have been documented in their effectiveness for sustainable abstinence, when post treatment care is followed, and provides insight into the added value of both family and non-family support (Bartlett et al. 2013; Walls, Moore, Batiste, and Loy 2009).

This study provides valuable support for academic and medical literature that recommends family engagement in the addiction recovery process and the value added- nature of family and significant others receiving at least some type of biopsychosocial education prior to the start of, during, or following the therapeutic process for an SUD affected individual.

Limitations

Individuals completing an addiction treatment program are not assured long term recovery on the premise of their completion and similarly, those who do not complete are not inevitably fated for continued substance abuse. These programs are an initial step, individually varying in importance, towards reprieve from substance abuse however; an individual's personal vigilance and support systems are critical in long term abstinence. Post treatment analysis of this population is an essential next step towards identifying the correlation between completion and abstinence from this particular program.

The analysis points to an intriguing connection between the integration of family members within the treatment experience of enrolled inpatients, one that indeed calls for further inquiry. The data analysis of this cohort was purposefully done to identify an indication of further research. Greater multivariate analysis of future cohorts, particularly with post treatment outcome data will greatly augment the study.

Conclusion

This academic and medical literature recommends family engagement in the addiction recovery process and the value-added nature of family and significant others receiving at least some type of biopsychosocial education prior to the start of the therapeutic process itself.

Though further analysis – macro and experiential - of this population is required for post-treatment follow-up, it is accepted in the field that completion of their residential treatment certainly supports long-term abstinence from mood altering substances. This study demonstrates the positive outcomes that can be realized when family and various significant others engage in the therapeutic journey. Family involvement is dynamic in nature, both supporting the addicted individual and opening the family system recovery process – all factors which positively augment this process.

Compliance with Ethical Standards

Conflict of Interest Carson McPherson, Holly Boyne, and Dr. Robert Willis declare that they have no conflict of interest.

Informed Consent All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000 (5). Informed consent was obtained from all patients for being included in the study.

Statement of Human Rights All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

References

- Agrawal, A., & Lynskey, M. T. (2008). Are there genetic influences on addiction: evidence from family, adoption and twin studies. *Addiction*, *103*(7), 1069–1081.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington: American Psychiatric Publishing.
- American Society of Addiction Medicine. (2011). *Definition of addiction*. Retrieved from <http://www.asam.org/quality-practice/definition-of-addiction>.
- Bartlett, R., Brown, L., Shattell, M., Wright, T., & Lewallen, L. (2013). Harm reduction: compassionate care of persons with addictions. *MEDSURG Nursing*, *22*(6), 349–358.
- Betty Ford Institute. (2007). What is recovery? A working definition from the Betty Ford Institute. *Journal of Substance Abuse Treatment*, *33*(3), 221–228.
- Canadian Centre on Substance Abuse. (2005). *Substance abuse in Canada: current challenges and choices*. Ottawa: Canadian Centre on Substance Abuse.
- Copello, A. G., Velleman, R. D., & Templeton, L. J. (2005). Family interventions in the treatment of alcohol and drug problems. *Drug and Alcohol Review*, *24*(4), 369–385.
- Costantini, M. F., Wermuth, L., Sorensen, J. L., & Lyons, J. S. (1992). Family functioning as a predictor of progress in substance abuse treatment. *Journal of Substance Abuse Treatment*, *9*(4), 331–335.
- Davis, A. K., & Rosenberg, H. (2013). Acceptance of non-abstinence goals by addiction professionals in the United States. *Psychology of Addictive Behaviors*, *27*(4), 1102–1109.
- Dobkin, P. L., De Civita, M., Paraherakis, A., & Gill, K. (2002). The role of functional social support in treatment retention and outcomes among outpatient adult substance abusers. *Addiction*, *97*(3), 347–356.
- Knight, D. K., & Simpson, D. D. (1996). Influences of family and friends on client progress during drug abuse treatment. *Journal of Substance Abuse*, *8*(4), 417–429.
- Koob, G. F. (2006). The neurobiology of addiction: a neuroadaptational view relevant for diagnosis. *Addiction*, *101*(s1), 23–30.
- Kreek, M. J., Nielsen, D. A., Butelman, E. R., & LaForge, K. S. (2005). Genetic influences on impulsivity, risk taking, stress responsivity and vulnerability to drug abuse and addiction. *Nature Neuroscience*, *8*, 1450–1457.
- Lander, L., Howsare, J., & Byrne, M. (2013). The impact of substance use disorders on families and children: from theory to practice. *Social Work in Public Health*, *28*(3–4), 194–205.
- Lee, M. T., Horgan, C. M., Garmick, D. W., Acevedo, A., Panas, L., Ritter, G. A.,... & Reynolds, M. (2014). A performance measure for continuity of care after detoxification: relationship with outcomes. *Journal of Substance Abuse Treatment*, *47*(2), 130–139.
- Liddle, H. A., Dakof, G. A., Parker, K., Diamond, G. S., Barrett, K., & Tejada, M. (2001). Multidimensional family therapy for adolescent drug abuse: results of a randomized clinical trial. *The American Journal of Drug and Alcohol Abuse*, *27*(4), 651–688.
- McCrary, B. S., Stout, R., Noel, N., Abrams, D., & Nelson, H. F. (1991). Effectiveness of three types of spouse-involved behavioural alcoholism treatment. *British Journal of Addiction*, *86*(11), 1415–1424.
- McCrary, B. S., & Epstein, E. E. (1999). *Addictions: a comprehensive guidebook: a comprehensive guidebook (illustrated ed.)*. GB: Oxford University Press.

- Meis, L. A., Griffin, J. M., Greer, N., Jensen, A. C., MacDonald, R., Carlyle, M., ... Wilt, T. J. (2013). Couple and family involvement in adult mental health treatment: a systematic review. *Clinical Psychology Review*, 33, 275–286.
- Miller, W. R., Meyers, R. J., & Tonigan, J. S. (1999). Engaging the unmotivated in treatment for alcohol problems: a comparison of three strategies for intervention through family members. *Journal of Consulting and Clinical Psychology*, 67(5), 688.
- Miller, W. R., & Wilbourne, P. L. (2002). Mesa Grande: a methodological analysis of clinical treatments for alcohol use disorders. *Addiction*, 97, 265–277.
- Meyers, R. J., Miller, W. R., Hill, D. E., & Tonigan, J. S. (1998). Community reinforcement and family training (CRAFT): engaging unmotivated drug users in treatment. *Journal of Substance Abuse*, 10(3), 291–308.
- Nattala, P., Leung, K. S., Nagarajaiah, & Murthy, P. (2010). Family member involvement in relapse prevention improves alcohol dependence outcomes: a prospective study at an addiction treatment facility in India. *Journal of Studies on Alcohol and Drugs*, 71(4), 581–587.
- Orford, J. (1994). Empowering family and friends: a new approach to the secondary prevention of addiction. *Drug and Alcohol Review*, 13(4), 417–429.
- Powers, M. B., Vedel, E., & Emmelkamp, P. M. G. (2008). Behavioral couples therapy (BCT) for alcohol and drug use disorders: a meta-analysis. *Clinical Psychology Review*, 28(6), 952–962.
- Sharma, M. K., & Lal, R. (2007). Treatment retention factors amongst substance users. *Indian Journal of Preventive & Social Medicine*, 38(1–2), 75–79.
- Stanton, M. D., & Shadish, W. R. (1997). Outcome, attrition, and family–couples treatment for drug abuse: a meta-analysis and review of the controlled, comparative studies. *Psychological Bulletin*, 122(2), 170.
- Szapocznik, J., Perez-Vidal, A., Brickman, A. L., Foote, F. H., Santisteban, D., Hervis, O., & Kurtines, W. M. (1988). Engaging adolescent drug abusers and their families in treatment: a strategic structural systems approach. *Journal of Consulting and Clinical Psychology*, 56(4), 552.
- Sisson, R. W., & Azrin, N. H. (1986). Family-member involvement to initiate and promote treatment of problem drinkers. *Journal of Behavior Therapy and Experimental Psychiatry*, 17(1), 15–21.
- Siddall, J. W., & Conway, G. L. (1988). Interactional variables associated with retention and success in residential drug treatment. *International Journal of the Addictions*, 23(12), 1241–1254.
- Velleman, R., Bennett, G., Miller, T., Orford, J. I. M., Rigby, K., & Tod, A. (1993). The families of problem drug users: a study of 50 close relatives. *Addiction*, 88(9), 1281–1289.
- Verweij, K. J., Zietsch, B. P., Lynskey, M. T., Medland, S. E., Neale, M. C., Martin, N. G., ... & Vink, J. M. (2010). Genetic and environmental influences on cannabis use initiation and problematic use: a meta-analysis of twin studies. *Addiction*, 105(3), 417–430.
- Walls, R. T., Moore, L. C., Batiste, L. C., & Loy, B. (2009). Vocational rehabilitation and job accommodations for individuals with substance abuse disorders. *Journal of Rehabilitation*, 75(4), 35–44.