

Disability and Abuse in Relation to Substance Abuse: A Descriptive Analysis

Michael Wolf-Branigin

ABSTRACT. This analysis reviewed five years of a state's substance abuse treatment admissions and discharges in order to identify specific patterns among persons who had a disability. Using a series of group comparisons, Chi-squares, and logistic regressions, specific patterns of violence and abuse to this population were identified. Results indicate that persons who had a disability and abused substances were more likely to be victimized by physical abuse and domestic violence when compared with their peers without a disability. A person with a disability had about one-half to one-third the odds of receiving long-term residential, short-term residential and intensive outpatient care when compared with persons without a disability. doi:10.1300/J198v06n03_04 [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2007 by The Haworth Press, Inc. All rights reserved.]

KEYWORDS. Disability, substance abuse, complex systems, domestic violence, sexual abuse

Continued efforts are needed to develop and implement social work interventions that address the complex interactions of disability, substance

Michael Wolf-Branigin, PhD, is affiliated with the Department of Social Work, George Mason University, MS 1F7, 3330 Washington Boulevard, Suite 150, Arlington, VA 22201 (E-mail: mwolfbra@gmu.edu).

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abuse, and domestic violence. The correlation of domestic violence and substance abuse is well documented (Bennett, 1995; Kantor & Straus, 1999). Of even greater concern is the presence of abuse and other victimization when the person has a disability (Tilley, 1996; Li & Ford, 1998), with females having an even greater likelihood of being abused (Li & Ford, 1996; Li, Ford, & Moore, 2000). The overall benefits of treatment far outweigh the costs of alcohol or drug abuse treatment (Harwood, Malhotra, Villarivera, Liu, Chong, & Gilani, 2002). Furthermore, research continues to demonstrate the efficacy of substance abuse treatment in reducing substance use, improving domestic relationships, criminal behavior, unemployment, and improving health (Gerstein, Datta, Ingels, Johnson, & Rasinski, 1997; Schildhaus, Gerstein, Brittingham, Gray, Dugoni, Rubin, & Williams, 1998), it remains unclear whether these benefits are present for persons with a disability.

Although funding remains limited, further compromising the treatment service capacity for these individuals, initiatives have identified promising practice when providing substance abuse treatment for people with disabilities (Moore & Ford, 1996). While co-occurring disorders are common, these individuals often experience barriers in accessing and receiving appropriate treatment. They are frequently excluded from disability or mental health services due to their substance abuse disorder, and vice versa. This problem is further compounded with substance abuse and mental health services systems often vying for the same limited funding resources (SAMHSA, 2002).

Social service planners and administrators now have the ability and resources to identify trends specific to their locales through analysis of their state data sets. These data sets, known as the Treatment Evaluation Data Sets (TEDS) are required by treatment services receiving federal funding. All states are required to report admissions data, with the individual states choosing whether to submit discharge data. Using data collected through one state's clinical administrative data over a five-year period, demographic characteristics, patterns of co-occurring substance abuse and disability, and patterns of presence of a disability and forms of abuse were identified.

Related to the continuum of care model in substance abuse treatment, is the notion that services within a treatment episode should be continuous. Successful outcomes will be more likely when few, if any, breaks occur between when an individual enters another level of treatment. In some states, a treatment episode is defined as consecutive admissions (and re-admissions) that occur within a brief period (e.g., 30 days). In addition to the short gap between service encounters, for the change in

service to be considered favorably, it must be an improvement along the continuum of care. For example, while returning to treatment following a detoxification period under the continuum of care model is considered an improvement, returning to detoxification after treatment would be a treatment failure (Brolin, Panas, Elliott, & Shwartz, 2002).

Calculating interim outcomes use data collected during treatment and at treatment exit. These data are extracted from client records and are often more feasible to collect than post-treatment or follow-up outcomes. Examples of interim outcomes include length-of-stay (LOS) and treatment completion. This use of interim outcomes produces useful indicators of post-treatment or follow-up outcomes (Fiedler, Screen, Greenfield, & Fountain, 2001).

This study used a complex systems approach. Within a complex systems or complexity view, there are iterative, dynamic and adaptive internal processes (Warren, Franklin, & Streeter, 1998). There exists the possibility to explore and learn more of how clients, represented as agents, possess the ability to learn in order to adapt to emerging structures that become more complex (Kauffman, 1995; Prigogine, 1996). The use of complexity theory, particularly the concept of self-organization, remains rare in human services (Hudson, 2000); however, using this paradigm presents a framework for viewing the various treatment paths that these clients chose as they moved through their respective treatment systems.

METHOD

This descriptive study used five years of data from a state admission and discharge database. This approach can identify patterns of substance abuse and presence of a disability. The operational definition for having a disability was that if the person received disability income (exclusive of substance abuse) in the form of either Supplemental Security Income (SSI) or Social Security Disability Income (SSDI).

Sample. The sample included persons with a disability (N = 2,150) and those without a disability (N = 25,836). All clients received substance abuse treatment within the statewide substance abuse treatment network between the years 1998 and 2003. All persons were at least 18 years old.

Data Analysis. Analysis included descriptive statistics, group comparisons between individuals with a disability and those without a disability, Chi-square analyses for association to determine levels of physical abuse

and domestic violence by presence of a disability, and finally logistic regressions for three analytic questions: Predicting types of services, factors predicting outcomes, and predicting readmission processes.

Group Comparisons, using Student t-tests, were computed to identify differences between persons with a disability and persons without a disability. Variables compared included age, grade level completed, age of primary substance use, age of secondary substance use, months sober or substance free, and LOS during their first admission. All tests were conducted at the $< .01$ level.

The second set of analyses used chi-squares to identify two different associations. The first tested the association between being victimized by physical abuse and having a disability. The second analysis tested victimization by domestic violence when having a disability. Both tests were conducted at the $< .01$ level.

The third set of analyses used multinomial logistic regressions to compare those with and without a disability. This included three questions. The first was whether persons with a disability were more or less likely to complete a treatment episode when compared to those without a disability. The analysis was designed to produce a unique set of predictors for each of the four possible levels of treatment; long-term residential (LTR), short-term-residential (STR), intensive outpatient (IOP), and outpatient (OP). Clients receiving detoxification services were included as a reference group for comparing each of the other service groups.

The second set of logistic regressions determined whether LOSs were longer for persons with a disability when compared to those without a disability. The next question was whether readmission LOSs were longer for those with a disability compared to those without. The primary focus was to understand the predictors useful in identifying clients with stays that exceed the 75th percentile for each of the respective services in the first treatment episode. In order to accomplish this, separate bivariate logistic regression analysis were completed for clients entering LTR, STR, IOP, and OP. Clients receiving detoxification were the reference group against which the remaining clients were compared. LOS for the total episode was assessed in addition to the LOS for individual encounters.

The third set of questions determined the treatment level the person would enter when needing a second treatment episode. The encounter and treatment analysis differed for clients with continuing care between successive services. In the encounter analysis, the LOS for the successive treatments were combined into a single measure called encounter LOS. The treatment LOS was defined as the number of days between

discharge and admission. For clients with a single treatment or encounter, and those returning for additional treatment after a break of more than 30 days following their first encounter, the LOS of the first treatment was also their encounter LOS. For clients returning to the second encounter within 30 days of the first one, the episode LOS was the sum of the LOS in both encounters.

RESULTS

Several factors present at time of admission were analyzed to compare persons with a disability to those without a disability. Individuals had frequently been victims of violence prior to treatment admission. Physical abuse was present in 28%, sexual abuse in 16%, and domestic violence in 30% of the individuals reporting. It is further noted that these rates were all significantly higher for females. While 46.5% of females reported physical abuse, only 19.7% of males reported similar abuse. The corresponding percentages for sexual abuse were 37.3% of females versus 6.6% of males. The figures for individuals reporting domestic violence were 50.9% of the female sample and 20.5% for the males.

Initial student's t-tests identified several significant differences between persons with a disability and persons without a disability at the .01 level (see Table 1). These differences included mean age for persons entering treatment with a disability 41.25 years (s.d. = 10.443) compared with 33.24 (s.d. = 10.861); mean age of primary substance use 19.00 years (s.d. = 8.684) with a disability versus 17.87 years without a disability (s.d. = 7.236); mean age of secondary substance use 20.11 years (s.d. = 9.407) with a disability versus 17.49 years without a disability (s.d. = 6.807); and months sober or substance free 3.45 months (s.d. = 11.728) with a disability versus 5.72 months without a disability (s.d. = 17.067). The variables highest grade completed and LOS on first admission were not significantly different.

Chi-square results demonstrate the increased likelihood of being victimized by violence when the person had a disability. Persons with a disability were more likely to be victims of physical abuse ($\chi^2 = 130.06$, $df = 1$, $p = 0.000$) when compared to their peers without a disability (see Table 2). Similarly, persons with a disability were more likely to have been involved in domestic violence, as shown in Table 3, when compared to persons without a disability ($\chi^2 = 33.15$, $df = 1$, $p = 0.000$).

TABLE 1. Group Differences-Persons with a Disability and Persons Without a Disability

Factors	N	Means	Standard Deviations	p-value (2-tailed)
Client Age				0.000*
Has disability	2,150	41.25	10.443	
No disability	23,681	33.24	10.861	
Highest Grade Completed				0.181
Has disability	2,148	11.78	2.835	
No disability	23,683	11.69	3.714	
Age of Primary Substance Use				0.000*
Has disability	2,150	19.00	8.684	
No disability	23,687	17.87	7.236	
Age of Secondary Substance Use				0.000*
Has disability	1,093	20.11	9.407	
No disability	11,227	17.49	6.807	
Months Sober/Substance Free				0.000*
Has disability	1,927	3.45	11.728	
No disability	20,906	5.72	17.067	
LOS-First admission				0.182
Has disability	1,939	101.32	188.035	
No disability	21,000	95.52	115.771	

*Significant at $p < 0.01$ level.

TABLE 2. Presence of a Disability and Victim of Physical Abuse

Presence of Disability	Physical Abuse		Total	Significance
	Yes	No		
Has a disability	770	1,380	2,150	0.000*
Does not have a disability	5,664	18,022	23,686	

$\chi^2 = 130.06$, $df = 1$

*Significant at $p < 0.01$ level.

The logistic regressions results for the first analytic question demonstrate that clients with a disability when compared to those with no disability had about a one-half to one-third the odds of receiving LTR, short-term residential (STR) and IOP, versus detoxification. Persons with a disability were less likely to complete LTR or STR when compared to people without a disability (OR = 0.5 each). Results for LOS indicated

TABLE 3. Presence of a Disability and Victim of Domestic Violence

Presence of Disability	Physical Abuse		Total	Significance
	Yes	No		
Has a disability	712	1,438	2,150	0.000*
Does not have a disability	6,468	17,218	25,836	

$\chi^2 = 35.15$, $df = 1$
 *Significant at $p < 0.01$ level.

that among STR and OP clients with a disability, the odds of a longer LOS were 4.7 times and 1.3 times greater, respectively, compared to those without a disability. For the third question, treatment on second admission, persons with a disability, and attended STR, had an odds ratio of completing treatment of 0.4 under the first approach. The comparable odds ratio under the second approach was 0.5. When a person had a disability, their odds ratio was 0.3, 0.4, and 0.6 at the time of admission into LTR, STR, and IOP respectively. At readmission, the odds ratio was 0.8 for LTR and 0.5 for STR, when compared with detoxification.

IMPLICATIONS FOR SOCIAL WORK

This analysis linked substance abuse treatment interventions that were consecutive and immediate to assess the outcomes resulting from individual substance abuse treatment. This further assumed that increasing the odds of having a long LOS and completing treatment were desirable outcomes. These findings are consistent with previous research that demonstrates the interactions when a person with a disability confronts complex systems such as substance abuse treatment.

Physical abuse and domestic violence is more likely when the person had a disability. Often these individuals begin their substance abusing behaviors at a later age and therefore enter treatment at a later age. The findings reflect this expectation and highlight life style patterns that need further discussion when designing and planning substance abuse treatment. Such issues may include why persons with disabilities choose to begin their substance abusing behavior at a later age and the antecedents that lead to this behavior. As would be expected, because these individuals

typically had shorter LOS, the number of months being sober or substance free was less if the person had a disability.

Persons with disabilities were less likely to receive an initial LTR, short-term and OP treatment episode. This may have resulted from the providers not actively recruiting this vulnerable population, or anecdotal information spread throughout the persons with disabilities network, that services were not accessible. While the logistic regressions indicate that persons with a disability were less likely to complete LTR or short-term residential treatment when compared to their peers without a disability, they tended to have longer LOS. This confusing finding may indicate a treatment bias that encouraged less intensive but longer treatment stays, typically found in OP treatment.

The interim outcomes of persons with disabilities demonstrated that these were more likely to have a longer LOS in STR and OP, but were less likely to complete treatment. Planning treatment services and interventions requires further attention. These persons were also less likely to receive a second admission into long-term or short-term residential, or IOP treatment. While persons with disabilities were less likely to enter and complete residential treatment, it appears that more intense treatment levels may provide the optimal service level when the person has been either sexually abused of or been victimized by domestic violence.

Recommendations for providers. Self-advocacy and other advocacy supports for persons with a disability need to be increased. Other considerations that need addressing include whether treatment providers take the appropriate measures when designing services that engage persons with disabilities and assure that these individuals have the same access to services as do their peers without a disability. Besides the elimination of the obvious physical and architectural barriers, providers must assure the elimination of communication barriers by providing the appropriate communication devices and program materials that are available in alternative formats.

Because persons with disabilities typically have lower incomes, providers must further assure that financial barriers are not restricting program access. Finally, program administrators and staff need to eliminate potential attitudinal barriers when deciding admissions, LOS, and discharges.

Educational implications. In addition to informing BSW and MSW students of these patterns, it is essential to introduce these students to the complexities that occur when multiple issues arise within consumers. The interaction of having a disability, while abusing alcohol and other drugs, increased a person's likelihood of being in abusive and violent relationships.

The increased prevalence of both sexual abuse and domestic violence when the person has a disability demonstrates further need for the academic community to support substance abuse providers as they design and refine their systems. This will improve the likelihood that persons with and without a disability receive the appropriate support services when they have been abused or live in a violent relationship.

Limitations of the study. Because the data came from a state substance data set, information on specific disabilities were not available. Further studies should attempt to rectify this problem. A second limitation concerns accessing and entering substance abuse treatment. While a person may have made an initial provider contact to receive treatment, they would only be included in the data set if admitted into a program. Because several forms of barriers may restrict a person with disabilities access, therefore the data set may have this bias.

Substance abuse providers increasingly receive pressure from their funding sources to reduce LOS. This is especially true with more costly residential services. Because of this, some additional bias related to LOS may occur. Within a complexity approach, further research should investigate how persons with disabilities navigate these provider systems and share this information with others. This will be especially true for females, as this study was limited on the issues of gender-specific treatment as it relates to access and utilization of substance abuse treatment.

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