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## ABSTRACT

The idea of specialized treatment for chemically dependent women is a relatively new notion, and professionals charged with the responsibility of treating these individuals will find little in the way of empirical guidance. In this study a number of personal variables were assessed for their potential effect on the length of sobriety for women addicts in long-term, intensive, residential treatment. It was questioned how treatment programs can address the special needs of women in treatment in order to increase the likelihood of long-term sobriety. Participants consisted of 95 clients who received chemical dependency treatment in a long-term treatment program over a 4-year period. Clients were classified into three groups based on length of sobriety. Categorical data were accumulated for 16 personal-predictor variables and then analyzed for their association with length of sobriety. Two single predictor variables, support group experience and income source, were positively associated with long-term sobriety. A third variable, abuse history, was negatively associated with sobriety. The conclusion is made that the ultimate goal of all agencies is to provide the most appropriate treatment to each client. (Contains 1 table; 1 appendix; and 35 references.) (JDM)

**The Association of Personal-Related Variables  
to Length of Sobriety: A Study of  
Prognostic Indicators of Successful Treatment  
for Chemically Dependent Women**

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INTRODUCTION

The idea of specialized treatment for chemically dependent women is a relatively new notion. In the 1980's, the government mandated set-aside funds for women's drug addiction treatment. However, there is relatively no research on these programs established for women. As a result, many of these programs lacked accountability and have closed their doors. The literature which does address predictor variables and treatment outcome is male-dominated (Wilke, 1994). Empirical support regarding treatment and prevention issues related specifically to females is not as voluminous as it could or should be, and empirically-supported evidence of factors which influence treatment outcomes for chemically dependent females is inconsistent (Beckman & Amaro, 1984; Blume, 1986, 1988, 1994; Duckert, 1987; Finkelstein, 1994; Gomberg, 1991; Jarvis, 1993; Kelly, Kropp, & Manhal-Baugus, 1995; Kropp, Manhal-Baugus, & Kelly, 1996; Vannicelli, 1984a, 1984b).

The value of attempting to identify possible predisposing characteristics, as well as treatment modalities which can assist in the accurate prediction of outcome, remains a worthwhile research endeavor. Perhaps, the empirical study of such specific factors would lend itself to the identification of a more reliable method of choosing treatment modalities and subsequently

improve the percentage of successful treatment outcome. Also, with the illustration of accountability, funding may again increase and these programs may increase in number.

The purpose of this study is to assess a variety of personal variables for their potential effect on length of sobriety for women addicts in long-term, intensive, residential treatment. Data on many variables that may or may not affect length of sobriety were available within the clients' records, and these data were accessed for the purpose of obtaining an assessment of potential predictors of effective treatment for chemically dependent women. Specifically, the following research question was addressed in this study: Which personal characteristics are associated with length of sobriety of women in female-specific, long-term, residential treatment? Also, as a result of these findings, how can treatment-programming address the special needs of women in treatment in order to increase the likelihood of long-term sobriety? One such long-term, residential treatment program exists in Covington, Kentucky, and is a component of Transitions, Incorporated. This program served as the focus of the study.

There were two pilot studies conducted of this proposed research (Kelly et al., 1995; Kropp et al., 1996). The current study is an extension of the previous studies, and it is more comprehensive and refined than the other two. The first study, The Association of Program-Related Variables to Length of Sobriety: A Pilot Study of Chemically Dependent Women (Kelly et al., 1995), was a preliminary investigation to determine which

program variables were significant in relapse prevention or success in the program and length of sobriety for women in long-term, residential treatment. Participation in aftercare and in the vocational and educational program components were found to be associated with a longer period of sobriety. In addition, treatment for abuse issues and participation in family therapy were related to successful treatment outcome.

The second study, The Association of Personal-Related Variables to Length of Sobriety: A Pilot Study of Chemically Dependent Women (Kropp et al., 1996), was a preliminary investigation to determine which personal variables were significant in relapse prevention or success in the program and length of sobriety. Significant differences among the groups (relapsers, completers but relapsed within 6 months of treatment, and completers and sober after 6 months) were shown to exist for A.A. and/or N.A. participation, medical status, and income.

Every woman who was in the most successful group (sober 6 or more months posttreatment) had some A.A. or N.A. experience in the past. In other words, A.A. and N.A. experience was associated with successful completion of the program and maintenance of abstinence. Regarding medical condition, those women who entered treatment in poor or critical medical condition had a much better outcome. Regarding income status, women without income were not likely to make it through the program. No other variables distinguished between the 3 groups.

## METHOD

### Treatment Program Description

Transitions' Women's Residential Addiction Program (W.R.A.P.) is a long-term residential treatment facility for chemically dependent women and their children. Opened in May 1991, the facility provides treatment exclusively for women with or without dependent children. The facility now has the capacity for 23 residential clients and up to 20 of their dependent children.

The program is designed for women who have demonstrated an inability to remain sober with less intensive interventions. In addition, the existence of other significant difficulties (e.g., low educational achievement, lack of or poor employment experiences, history of sexual and physical abuse, and significant legal problems) which interfere with the ability to maintain a successful level of independent living are characteristic of the women at W.R.A.P. These types of variables are included in this study to determine which are associated with treatment outcome.

Because of these additional needs, the program takes a holistic approach to treatment. During the first phase of residential treatment, which lasts approximately two to three months, the client receives substance abuse education, individual counseling, and group counseling. This treatment phase also focuses on parenting issues, self-esteem, communication, and relationship issues. Much of the work at this phase of treatment is specifically related to the chemical addiction and occurs within the W.R.A.P. facility. Mental health services and treatment for abuse issues are provided through local agencies as

needed.

During the second treatment phase, which lasts approximately three to six months, services similar to those provided in a halfway house are provided. The client continues to reside at W.R.A.P. but spends the majority of her time outside the facility working, volunteering, attending school or vocational training, or some combination of these activities. Clients are encouraged to spend a minimum of three months in this phase to allow for adequate adjustment to sober, responsible living. Significant involvement with Alcoholics Anonymous, Narcotics Anonymous, or both is required throughout both in-house phases.

Clients who complete the residential programming at W.R.A.P. return weekly for the phase three (Aftercare) as a requirement for graduation. This phase lasts for six months.

### Participants

Participants in this study consisted of 95 clients who received chemical dependency treatment through W.R.A.P. since the program was established in 1991 until September 1995. All clients who graduated from the program were included. In addition, all clients who relapsed while in treatment were included.

Clients were classified by the researcher into three groups based on length of sobriety. The first group was composed of individuals who relapsed either during treatment or immediately after leaving the program. The women who relapse in treatment are terminated from the program by the director. Those women who relapse immediately after treatment usually do not attend

Aftercare. Again, information was collected by program staff from family and collaborative workers. It is important to note that the majority of relapsers in the second and third groups often informed the staff of their relapses because they want to get on the waiting list again and back into treatment as soon as possible.

The second group was composed of individuals who successfully completed the W.R.A.P. program with one or more months of post-treatment sobriety but relapsed before reaching the 6-month point. These women have also attended some Aftercare sessions. When a relapse occurs, their attendance usually discontinues. Program staff follow-up on the reasons for termination from the Aftercare phase if it occurred before the graduation date. In addition, information was received from family members and collaborative professionals (e.g., parole officers).

The final group was composed of individuals who successfully completed the W.R.A.P. program and maintained at least 6 months of post-treatment sobriety. The vast majority of these women attended the Aftercare phase of the program. For those who resided out of the vicinity, personal communication, such as written homework assignments, with the Aftercare staff was maintained instead of weekly group attendance. In addition, information concerning their progress was received from collaborative professionals (e.g., social workers) and family members.

All participants of the program were residents of Kentucky,



over 18 years of age, indigent, and met the Diagnostic and Statistical Manual (4th ed.) (American Psychiatric Association, 1994) criteria for dependence upon at least one psychoactive substance. These are the admission criteria for the program.

### Procedure

This study abided by the Federal Confidentiality regulations (United States Department of Health and Human Services, 1987). All clients signed a Federal confidentiality form allowing the researcher to use data from files, and all Federal confidentiality requirements were followed (United States Department of Health and Human Services, 1987). All information was coded to protect the clients' identity, and no names were used outside of discussion with the program director.

Because there are no agreed-upon formal definitions of recovery (Duckert, 1993), a six-month abstention period was used as the criterion for group 1 in this study for several reasons. First, the 6-month period following discharge from an inpatient treatment constitutes a crucial phase in the rehabilitation of the alcoholic (Armor, Polich, & Stambul, 1978; Polich, Armor, & Braiker, 1981). Second, it is very expensive and difficult for agencies to follow the population of interest for much longer than six months. Third, most self-help organizations, which are considered to be important for aftercare, require their members to have accepted abstinence as their goal of behavior. Compared with patients who try to become average or controlled users, the goal of abstinence has the clear advantage of providing a stable standard across situations and unambiguous feedback as to goal

achievement.

The data for each client were gathered from information obtained in the files. Much of the information was obtained from the psychosocial assessment which is conducted on all clients. The program director clarified ambiguous or contradictory information.

#### Coding and Categorization of Personal-Related Variables

Because this study was exploratory in nature and little previous research has been conducted with this population, the following variables were included because they provide a full, comprehensive picture of the client. Also, many clinicians hold certain beliefs (not based on literature, but rather on practice) about these variables and their relationship to treatment success, so these variables were included to determine if these unsubstantiated beliefs are correct.

Categorical data were then accumulated for 16 personal-related variables: (1) age of client at intake, (2) age of first chemical use, (3) drug of choice, (4) past Alcoholics Anonymous (A.A.) or Narcotics Anonymous (N.A.) involvement, (5) education, (6) marital status, (7) previous psychiatric diagnosis, (8) victim of physical, mental, or emotional abuse, (9) prior chemical dependency treatment attempts, (10) work history, (11) race, (12) income source, (13) medical status, (14) total number of children born, (15) pregnancy status upon intake, and (16) referral source (see Appendix A).

#### Data Analyses

Consistent with the type of data collected, chi square tests

for independence were conducted to test for significant differences among groups on the 16 personal variables under study.

## RESULTS

### Participants

The first group was composed of 33 women (35% of total sample) who relapsed either during treatment or within a month of leaving the program. The second group was composed of 28 individuals (29%) who successfully completed the program with one or more months of post-treatment sobriety, but had a documented relapse before reaching the 6-month post-treatment mark. The final group consisted of 34 women (36%) who graduated from treatment and maintained at least six months of posttreatment sobriety.

Of the 95 participants, 64 women (67.4%) were Caucasian and 31 women (32.6%) were African American. Regarding the ages of the participants, 43 women (45.3%) were between 18 and 29 years of age, and 52 women (54.7%) were 30 and older. Only 9 participants (9.5%) were married and living with their partner at the time of admission; 27 women (28.4%) were never married; 44 women (46.3%) were divorced, widowed, or separated; and 15 women (15.8%) considered themselves as lesbian. The majority ( $N=79$ , 83.2%) were mothers.

Regarding education, 39 participants (41.1%) did not complete high school or receive a General Education Development (GED) certificate. Most women ( $N=56$ , 59.0%) were diagnosed with polysubstance dependency; 19 participants (20.0%) were addicted

to alcohol, narcotics, or depressants; and 20 participants (21.1%) were diagnosed with cocaine or other stimulant dependency. The vast majority ( $N=78$ , 82.1%) had obtained other chemical dependency treatment sometime during their past. Most women ( $N=85$ , 89.5%) identified themselves at the time of admission as being victims of sexual, physical, or emotional abuse. Thirty-two participants (33.7%) entered W.R.A.P. with a documented psychiatric diagnosis such as depression.

In summary, the typical participant was Caucasian, a single mother, high school graduate, and victim of sexual or physical abuse. Also, the typical woman in the study was addicted to more than one drug and had obtained previous treatment before attending the W.R.A.P. program.

#### Analyses of Personal-Related Variables

Due to the nature of the data collected, chi square tests for independence were conducted to test for significant differences among groups on the 16 independent variables under study. Frequency tables were derived on all of the independent variables, and the data were crossed with group affiliation (i.e., length of sobriety). The critical  $p$  value was set at .10 since this is an exploratory study and the sample size is moderate. The results of these analyses are indicated in Table 1.

Significant differences ( $p < .10$ ) among the groups were shown to exist for three variables: A.A. and N.A. participation, chi square (2 df,  $N=95$ ) = 5.36,  $p < .069$ ; abuse history, chi square (2 df,  $N=95$ ) = 5.96,  $p < .051$ ; and

income status, chi square (2 df,  $N=95$ ) = 6.36,  $p$  , .041. Past A.A. or N.A. support group experience was significantly related to treatment completion and sobriety. The majority ( $N=67$ , 70.5%) had less than 3 months involvement, which was considered as no significant prior involvement. Approximately one-third of the participants ( $N=28$ , 29.5%) had at least 3 months of prior support group participation. Of the 67 women without prior support group involvement, 23 women (34.3%) relapsed while in treatment, 24 women (35.8%) relapsed immediately after treatment, and 20 women (30.0%) were in the third group and remained sober 6 months after treatment completion. Groups 1 and 2 account for 70.1% of the total sample; this is the percentage of women who relapsed and did not have prior support group affiliation.

Of the 28 women with prior support group involvement, 10 women (35.7%) relapsed in treatment, 4 participants (14.3%) relapsed within 6 months after treatment, and 14 women (50.0%) graduated and remained sober for 6 months. Groups 1 and 2 (women who relapsed during, immediately after, and within six months of treatment) account for 50% of the total sample; this is the percentage of women who relapsed and had prior support group affiliation.

Of the 33 women in the group 1 (relapse group), 23 women (69.7%) did not have prior A.A. affiliation, and 10 participants (30.3%) did. Of the 34 women in the most successful group, 20 clients (58.8%) had no prior support group experience, and 14 women (41.2%) did.

The data illustrate that those women without prior support

group involvement were more likely to relapse than those with support group involvement. A significantly greater percentage of women with support group involvement were successful than those without such involvement.

Abuse history was inversely related to group affiliation. An interesting finding was that 85 women (89.5%) out of the 95 participants had experienced some form of abuse in the past, and 10 women (10.5%) reported no abuse history. Of the 10 women who were not abused, 9 women (90.0%) graduated from the program, and 1 woman (10.0%) relapsed in treatment. Of the 85 clients who were abused, 32 participants (37.7%) relapsed in treatment, and 53 participants (62.4%) graduated from the program.

Of the 33 women (34.7%) who relapsed in treatment, 32 women (97.0%) were victims of physical, sexual, and/or emotional abuse, and 1 participant (3.0%) was not abused in the past. Of the 34 women in the most successful group, 7 women (20.4%) were not victims of abuse, and 27 women (79.4%) had identified themselves as abuse victims.

The data illustrate that the women who were not abused were more likely to graduate from the program than to relapse, and women who were abused were likely to relapse in or immediately after treatment. In other words, the majority of women who relapsed were abused in the past.

Income source was also related to group affiliation. Approximately one-half ( $N=50$ , 52.6%) of the 95 women had a stable source of income (e.g., Aid for Dependent Children, employment, consistent family or spouse support), and 45 women (47.4%) had no

regular income. Of the 50 women with income, 37 women (74.0%) completed treatment, and 13 women (26.0%) did not complete treatment. Of the 45 women without income, 25 women (55.6%) completed treatment, and 20 women (44.4%) relapsed in treatment.

Of the 33 women in the relapse group, 13 women (39.4%) had some source of income, and 20 women (60.6%) had no income source.

Of the 34 women in the third group (most successful group), 17 women (50.0%) had a stable source of income, and an equal number did not have an income source.

The data illustrate that women without a stable source of income were more likely to relapse in treatment than those with stable income. The majority of the relapse group members had no stable income. There was an equal number of women who did and did not have income in the most successful group.

No other variables distinguished between the 3 groups at a  $p$  value at or near the .10 level.

#### CONCLUSION

Treatment professionals charged with the responsibility of actually treating individual addicted women will find little in the way of sound empirical guidance in the accumulated body of knowledge. Current knowledge regarding treatment outcome with chemically dependent females is lacking (Vannicelli, 1984a). In general, studies examining prognostic variables often have included only men; when women were included their data were generally combined with the male data so that possible sex differences in prognostic variables were lost.

This study, in conjunction with previous studies on

treatment indicators (Kelly et al., 1995; Kropp et al., 1996), is an attempt to determine which female clients will benefit from long-term, residential treatment. Specifically, the following research question was addressed in this study: Which personal characteristics are associated with length of sobriety of women in female-specific, long-term, residential treatment? The following question is also answered by this research: As a result of these findings, how can treatment programming address the special needs of women in treatment in order to increase the likelihood of long-term sobriety? This section will discuss the following: (a) the findings of this study using a relational approach, (b) limitations of the current study, (c) recommendations for treatment, (d) implications for research, and (e) concluding remarks.

#### Relational Approach to Findings

Two single predictor variables, presence of support group experience and income status, were positively associated with long-term sobriety. A third variable, presence of abuse history, was negatively associated with sobriety. The typical chemically dependent woman in this study was indigent, a single mother, disenfranchised, uneducated, polysubstance dependent, and a victim of abuse. The three significant findings of this study (A.A./N.A. experience, income status, and abuse history) as they relate to this sample are explained by using a self-in-relation model.

The self-in-relation theory (Manhal-Baugus, 1998; Doherty & Cook, 1993; Surrey, 1991) is a model of psychological growth



which states that girls' and women's self-concept exists in and grows from a relational context. The females' desires to maintain connections are extremely important to self-esteem and self-concept, and such connections have a powerful influence on psychological adjustment and development (Doherty & Cook, 1993; Surrey, 1991).

The women in this study who had previous support group involvement and relationships with other A.A. and N.A. members were more successful in treatment than those without. The major conclusion is that A.A. and N.A. provide an important foundation for recovery. There is some evidence that A.A. and N.A. provide affiliations and social support (Huselid, Self, & Gutierrez, 1991; Moyar, 1987) and decrease isolation (Huselid, Self, & Gutierrez, 1991) for its members. The woman who is moving through her addiction often loses a sense of herself and her sense of being related with others (Manhal-Baugus, 1998; Finkelstein & Piedade, 1993; Mintz & Wright, 1993; Moyar, 1987).

A.A. and N.A. provide an opportunity for the woman to restore accepting, healthy relationships. Newly recovering women can find women with lengthy periods of sobriety and begin to socialize with them at meetings and other sober, social events. Female sponsors can also serve as positive role models for women in early recovery. In addition, the data suggest that women with prior support group experience are more familiar with treatment ideas; many women with support group experience had previous treatment experience, but the opposite was not true.

Women with no stable income relapsed at a higher rate than

those with an income source, and this finding may be explained within a relational framework, also. There is evidence of considerably lower economic resources among women entering drug treatment than among men, and many women entering treatment with few economic resources have basically no employment experience or higher educational background (Center for Substance Abuse Treatment, 1994; Sandmaier, 1992). This was true for the participants in this study.

The sense of failure and frustration at their inability to financially provide for themselves and their children may lead these women to resort to former behaviors to ensure some income (Kropp et al., 1996), and these negative behaviors often serve as triggers for relapse. For this population of women, many of these unhealthy behaviors are relationship-oriented, such as engaging in prostitution and developing dependent relationships with partners, and many of these relationships are abusive in some way.

In the current study, nearly 90% of the participants reported some history of abuse. This rate of abuse is quite startling. The finding of the inverse relationship between abuse history and sobriety (i.e., those without abuse histories completed treatment at a higher rate than those with such histories) can be understood in terms of unhealthy relationships and self-worth.

For chemically dependent women, a history of abuse has been pinpointed as a consistent relapse issue (Finkelstein & Piedade, 1993). Because a victim's relationships have been violent and

abusive, her self-concept and self-esteem have been destroyed. Women who have been abused often develop a sense of internalized misogyny (Saakvitne & Pearlman, 1993). A woman who has been the victim of physical, sexual, and/or emotional abuse must overcome these obstacles so she can stay sober, and this task is often emotionally overwhelming and serves as an impediment to sobriety.

Treatment must address the above issues for the women to have a greater chance of succeeding in treatment. These implications for treatment of chemically dependent women will be discussed after the limitations of the study are discussed.

### Limitations

The data must be interpreted cautiously, because there were some limitations of this specific study and also limitations inherent in general outcome research. For example, the relatively small sample size ( $N=95$ ) may limit the statistical power of the tests. When cell sizes are below 5, the test may be called into question. This occurred in a few instances, especially in the analyses of the combination of variables. In addition, the data for this study were collected on a severely impaired group involved in a specific residential treatment program. Thus, the involved sample is representative of a relatively small percentage of chemically dependent women. Results must be carefully applied to this specific population.

Also, this study tapped the more objective data recorded at intake including demography, substance abuse, and social histories (Schuckit, Schwei, & Gold, 1986). It is possible that the use of more subtle measure of levels of psychiatric

impairment (McLellan, Luborsky, Woody, O'Brien, & Druley, 1983), family functioning (Moos, Bromet, Tsu, & Moos, 1979) or subjective evaluations of prognosis by treatment staff might have improved the outcome predictability. It is also likely that there may be many factors associated with outcome that cannot presently be easily measured by valid instruments (e.g., level of motivation).

A much more difficult methodological issue arises in the frequent inability of follow-up studies to obtain data on the entire sample, creating a subject mortality bias (Armor et al., 1978; Polich et al., 1981). Lack of follow-up can occur from a variety of sources (incapacitation, relocation, incarceration, refusal to participate, and death). The potential for bias among the group which is not followed is important to consider. Fortunately, there were data on all 95 participants in this study. The Aftercare staff member is in charge of locating individuals when they leave or drop out of treatment.

#### Recommendations for Treatment

Based on the results of this study on personal variables and extensive experience working with this population in this setting, there are some recommendations for future treatment. These are based on a relational framework. These treatment components may not be new; many of them have been incorporated into existing programs. However, the findings reinforce the importance of providing these components in the residential, female-specific programs.

Treatment providers need to determine which predisposing

factors are mutable or immutable (Beckman & Amaro, 1984), although some factors do not clearly fall into one category or the other. Some mutable predisposing factors, such as education and income, can be targeted by treatment providers during treatment, while other mutable predisposing factors, such as religion or marital status, are more often changed through individual decisions, learning, and growth. In other cases, the variables have the status of "givens" that, at least with present knowledge, are viewed as immutable. The factors of sex, age and ethnicity are immutable. Treatment cannot change these variables, but treatment can target these variables by teaching ways to understand and to cope with them.

Treatment programs designed for women need to provide ample opportunities for the clients to interact with other recovering women and attend several types of support groups. W.R.A.P. offers many different meetings in the facility (e.g., Black support, discussion, and lead groups). In addition, the clients are required to attend community meetings and to obtain sponsors. Participation in support group functions, such as dances and parties, is also strongly encouraged.

The tendency for women with stable incomes to maintain longer sobriety corresponds directly to the first pilot study, which focused on the program-related variables (Kelly et al., 1995). In that study, long-term sobriety was significantly related with participation in vocational and education programming. Treatment programs should incorporate job-training skills and educational opportunities for their female clients so

they can take care of themselves and their children. These opportunities will help the women become less dependent upon others for survival, which will help improve their sense of self-worth and self-esteem. This may, in turn, decrease the likelihood of relapse.

If the treatment program neglects or fails to provide opportunities for job training, skills acquisition, and educational courses, these women will leave the program in the same economic situation as when they arrived. Without the prerequisites for an independent, socially acceptable lifestyle, reversion to a lifestyle of chemical dependency and deviancy may become more likely.

Occupational training and the development of employable job skills, job placement, money management, and obtainment of safe housing are all offered within the second and third phases of the W.R.A.P. program. Clients are expected to obtain employment, attend school or vocational training, and obtain safe, secure housing before discharge from the program.

The tendency for women with abuse issues to relapse at a higher rate is related to the findings of the first pilot study on program variables (Kelly et al., 1995). In that study, long-term sobriety was significantly related with participation in abuse counseling. This suggested that treating chemically dependent women for abuse issues concurrently with treatment specifically related to chemical dependency could enhance the likelihood of prolonged sobriety.

Incest, sexual assault, and familial violence survivors

have very special treatment issues (Reed, 1985). Their overwhelming feelings of powerlessness and depression often require treatment experiences that create repeated success experiences (such as achieving small, daily goals) and build up their self-confidence (Reed, 1985). Also, without intervention such as empathy and unconditional positive regard, negative behaviors and coping styles frequently lead to relapse.

At W.R.A.P., the women are responsible for the daily functioning and maintenance of the house (e.g., meals, chores, and childcare), and they are rewarded for completing these tasks daily. In addition, the environment is very supportive, loving, and family-oriented. For example, the women often babysit for each other, and close friendships among the families develop. Upon discharge, the women often stay in contact with each other.

Since many chemically dependent women are victims of abuse, programs should implement abuse counseling as part of the mandatory program (Center for Substance Abuse Treatment, 1994). Women with these issues need to attend individual and supportive group counseling to help them overcome their sense of loss of self and relationships. W.R.A.P. offers intense treatment for the abuse victims. In addition to specific groups conducted by trained staff members for survivors of abuse (both childhood and adult), the staff members refer clients for individual and group counseling at agencies which specialize in these issues.

In the current study, there were some variables such as race, parental status, age of client at intake, age of first chemical use, drug of choice, education, marital status, work

history, medical status, total number of children born, pregnancy status upon intake, and referral source which were not significant in the single variable or combination of variables analyses. It is interesting to note than most of these are immutable and programming can not really modify them. For example, treatment providers can not change a woman's culture or race. However, the treatment can be geared to incorporate appropriate treatment interventions for specific cultures and races.

In addition, clinicians helping the population of chemically dependent women often rely on intuition about specific variables and their association with progress in treatment. For example, when a client is referred by a parole officer, the counselor may assume that the client will complete the program because a prison term is the other alternative. However, this study found that referral source was not significant in treatment outcome. Research will help dispel erroneous beliefs held by counselors and other treatment personnel.

#### Implications for Research

Despite advances in knowledge about women's alcoholism in the past decade, there are many gaps. As explained above, there are still too few studies that include women as subjects, or that include them in numbers sufficient to allow for separate analyses by gender (Vannicelli, 1984b). Second, there is essentially no research that focuses on patient-treatment matching issues within female populations (McCrary & Raytek, 1993). In essence, the rich literature on the heterogeneous nature of the female



alcoholic population and the numerous hypotheses about the differing treatment needs of different subpopulations of women are completely unexamined in the research literature. Third, when new treatments are developed and researched, the early research generally uses all-male populations, or makes no special attempts to recruit female subjects in sufficient numbers (McCrary & Raytek, 1993; Vannicelli, 1984b).

There are ways to address these problems associated with conducting treatment research with the chemically dependent female population. For example, accessing large clinical facilities or developing multisite studies would create a larger subject pool for research. However, clinicians and administrators would have to be willing to allow researchers into their facilities. They would also have to be willing to allow experimental treatment protocols to be used on their clients. In addition, researchers in this field need to put their energies into constructing new studies, such as the one described in this dissertation, instead of writing reviews of literature.

In terms of implications for future research, a larger scale study of some of the identified personal factors related to increased sobriety is indicated. For example, a larger sample size composed of women from a variety of treatment programs may provide a more reasonable sample from which to generalize pertinent findings. Additional outcome studies should include female clients of all types before consistently predictable generalizations can be applied to female addicts at large. Also, research can be conducted on similar programs that serve similar

clients, and the findings can be compared. Finally, studies of all-female, relatively homogenous samples in different types of treatment centers will allow us to evaluate which type of treatment works best for each group of women.

The matching hypothesis (Glaser & Skinner, 1981) is the deliberate attempt to select a specific candidate for a specific method of intervention to achieve specific goals. It is increasingly appreciated by practitioners and researchers that the causes of treatment failure (i.e., dropout and relapse) are due largely to a mismatch between intervention methods and the client's needs and characteristics (Tarter, 1995). The practice of client-treatment matching, which emanates from ongoing research, provides a method for justifying the treatment modality or program for each client. However, formal guidelines have not been developed to advise the clinician regarding the treatment modality most suitable for a particular client.

#### Concluding Remarks

The notion of specialized treatment for chemically dependent women is relatively new and steadily growing, but the investigation of predictor variables and successful treatment is still virtually non-existent. Undoubtedly, there is a need for a more thorough and rigorous empirical investigation of this topic.

This research is a step to help determine which women will succeed in the newer, long-term treatment programs established for them.

When a clearer picture is obtained on which personal variables are important for a women's recovery in long-term

residential treatment, these variables can, and hopefully will, be matched to treatment components that are most beneficial to the women. The ultimate goal of all treatment agencies is to provide the most appropriate treatment to each client. Researchers and clinicians alike are in need of empirical evidence and knowledge to deal with this long-time neglected area of research.

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Table 1. Summary of Chi-Square Tests of Independent Group Affiliation (i.e. Length of Sobriety) for 16 Personal-Related Variables

VARIABLES	CHI SQUARE	D.F.	p value
Past A.A. or N.A.	5.36*	2	.069
Abuse History	5.96*	2	.051
Income Status	6.38**	2	.041
Medical Condition	1.78	2	.411
Age of First Use	5.24	2	.263
Age at Intake	3.59	2	.166
Drug of Choice	1.21	4	.877
Education	1.43	2	.489
Marital Status	1.93	2	.926
Psychiatric Diagnosis	2.68	2	.262
Prior Treatment	3.09	4	.213
Work History	1.47	2	.480
Race	1.95	2	.377
Children (Parental Status)	3.01	2	.222
Pregnancy Status	.22	2	.896
Referral Source	9.52	6	.146

Note. The dependent variable is group, with three levels represented: less than one month of sobriety, between one and six months of sobriety, more than 6 months of sobriety. The significant results represent longer sobriety for participants at

higher levels of the independent variable examined (see Appendix A for classification).

\* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$

## **Appendix A**

### Categorization of Personal Characteristics of Clients

#### Outcome group

1. completed program, sober at least 6 months post-treatment
2. completed, sober 1-6 months post-treatment
3. unsuccessful treatment due to relapse during treatment, or within 1 month post-treatment

#### Age

1. 18-29
2. 30 and above

#### Age of first use

1. 12 and under
2. over 12

#### Drug of choice

1. alcohol/depressants/narcotics, opiates
2. cocaine/stimulants/amphetamines
3. polydrug

#### Previous A.A./N.A. experience

1. none
2. 1 or more months

#### Education level

1. no high school diploma or G.E.D.
2. at least a high school diploma or G.E.D.

#### Marital status at intake

1. married
2. not married

Previous psychiatric diagnosis

1. no previous psychiatric diagnosis
2. previous diagnosis (e.g., affective disorder, PTSD)

Abuse history

1. none
2. sexual, physical, or verbal/emotional or a combination

Number of prior treatment episodes

1. 0
2. 1 or more

Race

1. Caucasian or other European ancestry
2. African American

Work History

1. basically none
2. some (e.g., short-term jobs, long-term positions, currently employed at admission)

Income

1. no stable income - no fixed amount
2. some type of income (e.g., wages from employment, Aid for Dependent Children, SSI, public aid, stable family support)

Medical status

1. excellent/good
2. fair/poor/critical need for treatment

Number of children born

1. 0

2. 1 or more

Pregnancy status

1. no
2. yes

Referral Source

1. self
2. legal system
3. other treatment facilities
4. Children's Protective Services/family court

## Abstract

The purpose of this study is to provide information about treatment outcome for women in long-term, residential treatment by focusing on personal-related variables. Specifically, the following research question will be addressed in this study: Which personal characteristics are associated with length of sobriety of women in female-specific, long-term, residential treatment? Part of the discussion addresses the following question: As a result of these findings, how can treatment programming address the special needs of women in treatment in order to increase the likelihood of long-term sobriety?

Participants in this study consisted of 95 clients who received chemical dependency treatment in a long-term treatment program over a four-year period. Clients were classified into three groups based on length of sobriety. Categorical data were accumulated for the following 16 personal-predictor variables and then analyzed for their association with length of sobriety. Two single predictor variables, support group experience and income source, were positively associated with long-term sobriety. A third variable, abuse history, was negatively associated with sobriety. The results are discussed using a relational theoretical approach.



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