USE OF THE BRIEF SYMPTOM INVENTORY TO DETERMINE OUTCOME SUCCESS IN AN MANAGED-CARE OUTPATIENT CHEMICAL DEPENDENCY TREATMENT ENVIRONMENT

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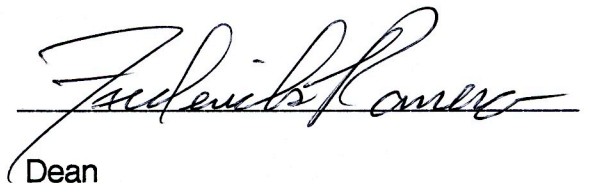
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ABSTRACT

This study attempted to determine if the pretreatment Brief Symptom Inventory scores of clients can predict program effectiveness as well as measure posttreatment changes in an outpatient chemical dependency treatment program. Results showed no significant differences on the pretest scores between completers and non-completers except for the Somatization and Phobic Anxiety scales which were higher. However, there were significant differences between pretest and posttest scores on all nine primary symptom dimensions and the Global Severity Index of the BSI for the program completers. Women had a greater reduction of symptoms than men on the mean scores for Hostility and the Global Severity Index. According to this study the BSI is not a predictor of outcome; however, Phobic Anxiety and Somatization do seem related to outcome. Clients in the study who had physical complaints. and panic disorders tended not to complete treatment.

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CHAPTER 1

THE PROBLEM

Introduction

The demand for empirical measures to assess program effectiveness and treatment outcome has become the rule rather than the exception as managed health care systems have become a nationally dominant force in evaluating mental health and chemical dependency services. Given the increasing emphasis on brief-therapy models and the demand for proven therapeutic effectiveness in a managed mental health environment, there is a need for assessment tools which are efficient and provide measurable data which can demonstrate treatment success (Royse and Drude, 1984; Bartlett and Cohen, 1993).

The Brief Symptom Inventory (BSI) has become recognized as a useful empirical instrument of predictive value when administered in chemical dependency treatment programs (Royse and Drude, 1984; Benishek et al., 1992; Pekarik, 1994; Piersma, 1994). This project assessed whether or not the pretreatment Brief Symptom Inventory (BSI) scores of clients can predict program effectiveness as well as measure posttreatment changes in chemical dependency treatment. This was done by examining the pretest BSI scores of clients at the time of program admission and the posttest scores at a six-month followup.

Development of the Problem

Alcohol and drug abuse treatment has received increasing attention as an integral part of mental health care. Because alcoholism and drug addiction/use has become a widely publicized and increasingly problematic health care issue over the past two decades, the general medical and psychiatric communities and publicly funded mental heath treatment groups have incorporated substance abuse treatment services into their delivery systems.

In 1990, a general medical care facility located in a large metropolitan area of Arizona established a behavioral health subsidiary in response to a growing demand for mental health and chemical dependency services. A specific intensive outpatient chemical dependency treatment program was established for the purpose of providing a multi-level integrated treatment approach for clients in the least restrictive, therapeutically appropriate environment. This allowed the client to remain employed and maintain involvement in the supportive environment of home, family and/or friends. The philosophy followed by the treatment program is to view chemical dependency as a condition which effects all areas of a person's life: physical, psychological, social, and spiritual. To treat the client and his/her family, many aspects of life need to be addressed beyond that of just focusing on the abuse of mood altering substances. During the treatment process the client is given numerous resources from which to draw, including medical, psychiatric, educational, and other clinical and community referrals.

The program was established to provide quality care for clients affected by drug and alcohol abuse and/or dual mental health diagnoses. To achieve the goal of quality care the program provides assessment, referral services,

case management, treatment, and relapse prevention assistance. Clients are expected to complete all program requirements, including, but not limited to: abstinence from all mood-altering substances, attendance at community support groups, psychoeducational groups, aftercare groups, and detox, if needed.

Although there has been some recent modification to the structure of the program since its inception, the original therapeutic model consisted of three treatment phases. The Intensive Outpatient Phase (IOP) involved a five-week period where clients met 4 days per week for 2.5 hour sessions. The second level, or Primary Outpatient Phase (POP), involved a five-week course which required 2 sessions per week for 2.5 hour per session. The third level was a one-year aftercare group identified as the Sobriety Maintenance Phase (SMG). This group involved meeting one time per week for 2.5 hour sessions. Attendance to community support programs, such as Alcoholics Anonymous, Narcotics Anonymous, and Cocaine Anonymous, were required as an adjunct to the treatment process. At least two meeting per week were mandatory. Along with case management sessions with an assigned counselor, clients were required to submit to random drug screens on demand. Weekly clinical staffings, which included all of the clinicians on the chemical dependency team, were conducted on every client once per week.

Standard protocol at the time of initial assessment required the client to complete approximately thirty minutes of paperwork. Included in the paperwork was a psychosocial history, a medical history, the Substance Abuse Assessment Inventory (SAASI), and The Brief Symptom Inventory(BSI). The client then met with a Board Certified specialist in substance abuse counseling. The therapist would review the paperwork and conduct an interview to obtain

an assessment of the client's problem(s) and then make appropriate recommendations for treatment or referral.

Although there has been a development of chemical dependency treatment systems of various types (ie., residential, inpatient, partial inpatient, and outpatient services) over the past 15 years, there has not been a concomitant lowering of cost or proven program effectiveness in the provision of mental health and chemical dependency services (Rawson,1991; Barlett and Cohen, 1993; Rainer, 1996). According to Rainer (1996) "employers, insurance companies and other 'interested third parties' saw year-over-year cost for mental health increase at a rate than more than doubled the Medical Consumer Price Index" (p. 216). Consequently managed mental health organizations have emerged to contain cost and to evaluate treatment program outcome through empirical measures (Rawson, 1991).

The focus of this study was to analyze the pretest and posttest scores of the Brief Symptom Inventory on a sample of chemically dependent clients who were treated during the time that this program existed in its original structure. Pretest and posttest data on the Brief Symptom Inventory and other followup data have been collected on all chemically dependent clients since 1991. However, none of these data has been utilized in any purposeful manner to this point in time. There is current interest by the behavioral health agency, to which the chemical dependency treatment program is affiliated, to utilize these data to both justify the cost of the program and to improve client treatment outcome. Rainer (1996) points out that although there is a plethora of research which convincingly suggests that mental health treatment reduces the utilization of

medical and surgical services regardless of the diagnosis, the

> cost of outpatient mental health care (including substance abuse) have
> been treated as if care were expensive, over used, and in need of
> external management . . .to curtail cost. (p. 16).

Rainer (1996) also contends that mental health service providers have not been successful in adequately measuring treatment outcome.

Need for the Study

Chemical dependency assessment instruments have not had much success in predicting treatment outcome. Although the efficacy of mental health treatment has been well established for some time, there has been considerable debate over the effectiveness of therapeutic processes because of the difficulty in measuring the "immediate, cumulative and predictive effects" (Rainer, 1996, p. 21). There is some research literature (Royse and Drude, 1984; Stoffelmayr et al., 1989; Blume, 1989; Benishek et al.,1992; Pekarik, 1992; Goldenberg et al., 1995) which suggest that initial psychiatric distress may have a direct bearing upon treatment success. The purpose of this study was to discover if currently employed measures of psychiatric distress in a managed-care setting can be used to predict treatment outcome for an outpatient chemical dependency program. There may be some clients who, because of the severity of their psychological distress, are not appropriate for outpatient treatment but require a higher level of care (i.e., medical detoxification, partial inpatient, or residential). These clients would not be admitted to outpatient care but referred to a treatment resource better suited to their needs. Identifying clients who potentially have poorer prognoses for treatment success in an outpatient environment during the initial assessment process can provide for proper continuity of service delivery and quality of care.

Previous clinical research suggests that chemically dependent clients

have a high occurrence of additional psychiatric disorders and those identified with multiple diagnoses tend to have greater psychological distress and poorer treatment outcomes (Stoffelmayr et al., 1989; Blume, 1989; Frances et al., 1993; Goldenberg et al., 1995). If the initial Brief Symptom Inventory scores can be used to predict treatment outcome, then program adjustments can be rendered, thereby increasing the probability of program completion; the result of which can be reflected in improved financial viability for the program, increased patient satisfaction, and of course improved treatment results.

This same issue was explored by Royse and Drude (1984) in their study to determine if the Brief Symptom Inventory (BSI) had predictive value when administered to a drug-using population. Because there is evidence that drug use is associated with symptoms of psychological distress, "it was hypothesized that those clients with low drug use should have lower GSI scores than those higher drug use" (Royse and Drude, 1984, p. 852). Because the researchers' findings showed that the differences among the two groups were significantly different, their hypothesis was supported. Further evidence showed that those clients with greater symptomatology also "tended to have a greater number of life areas affected by the problem of drug abuse" (Royse and Drude, 1984, p. 854).

The type of programmatic changes to be made would depend upon the degree and nature of the psychological distress. The general implications are that there would be an increased intensity of treatment for those clients who scored high on both the global and individual scales of the Brief Symptom Inventory. This instrument is well suited for this purpose since it assesses levels of general distress as well as symptoms across a variety of clinical dimensions (Royse and Drude, 1984; Benishek et al., 1992; Pekarik, 1992;

Piersma et al., 1994).

Purpose of the Study

The purpose of the this study was to determine how the severity of initial psychological distress indicators as measured by the Brief Symptom Inventory predict treatment outcome.

Research Question

How does the initial psychological stress of clients as measured by the Brief Symptom Inventory in outpatient chemical dependency treatment relate to program completion? How do these psychological stress indicators change for those clients who successfully completed treatment?

Definition of Terms

These definitions have been provided by this researcher to help the reader with an understanding of unfamiliar terms which may be encountered in this document.

Anti-social Personality Disorder - a specific psychiatric diagnosis from the Diagnostic and Statistical Manual of Mental Disorder, Fourth Edition, (DSM-IV) used to describe personality traits which tend to be inflexible and/or self-defeating, and cause either significant functional impairment or distress.

Comorbidity - a disease or condition coexisting with the primary disease or mental condition (eg., a client identified as a substance abuser with a coexisting problem of depression).

Empirical Evidence - refers to evidence which is observable or "relying or based solely on experiment or observation" (Webster's New World Dictionary, 1957, p. 466).

Etiology - refers to the science or theory which describes the causes or origin of physical diseases or mental conditions.

<u>Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition,</u> <u>(DSM-IV)</u> - published by the American Psychiatric Association "to provide clear descriptions of diagnostic categories in order to enable clinicians and investigators to diagnose, communicate about, study, and treat people with various mental disorders" (DSM-IV, p. xi).

<u>Psychiatric Diagnosis</u> - a diagnostic term used by medical, psychiatric, psychologists, and other mental health professionals to identify specific mental disorders from the <u>Diagnostic and Statistical Manual of Mental Disorders,</u> <u>Fourth Edition(DSM-IV).</u>

<u>Psychiatric Symptomatology</u> - change is a individual's mental processes or its functioning that produces a set of behavioral signs or symptoms which indicates a mental disorder or the kind or phase of mental dysfunction.

<u>Psychopathology</u> - (suffering); "the study of causes and nature of a mental disease or an abnormal behavior associated with defective character or personality" (Taber Cyclopedic Medical Dictionary, 1993, p. 1630).

CHAPTER 2

LITERATURE REVIEW

Introduction

The following literature review was conducted with the focus on four topics: (1) A general review of chemical dependency treatment and its development as a delivery system within the health care field; (2) the influence of managed health care on outcome research in psychotherapy; (3) The relationship between the outcome of chemical dependency treatment when another psychiatric diagnosis is present, and; (4) The use of the Brief Symptom Inventory as an instrument to measure treatment success in chemical dependency programs.

Chemical Dependency: A Health Care Issue

Historically, according to Rawson (1991), societal attitudes in America regarding alcohol and drug abuse have consistently been a blend of hysteria, apathy, and ambivalence. Since the late 1800's the treatment of alcoholism and drug addiction has been considered the step-children of health care. The debate continues today whether or not alcoholism and drug addiction is a "disease" or even if it can be treated (Rawson, 1991, p.1516). During a twenty-year period between 1950 and 1970, public interest in alcohol and drug abuse waxed and waned. Drug abuse treatment systems in the 1970's were shaped by the priorities of the National Institute on Drug Abuse (NIDA) which created a

system of treatment modalities including "therapeutic communities, outpatient methadone clinics, outpatient drug-free programs, and university-affiliated clinical research centers" (Rawson, 1991, p. 1517).

Rawson (1991) asserts that although the National Institute on Alcohol Abuse and Alcoholism was sponsoring important research on the biological aspects of alcoholism and producing educational material for prevention efforts, it did not assume a leadership role in the treatment field. The treatment impetus for alcoholism treatment at this time was the self-help fellowship of Alcoholics Anonymous and the rapid expansion of the private, commercial 28-day inpatient programs. This latter phenomenon was primarily driven by private insurance reimbursement (Rawson, 1991). Although there was increased awareness about, and access to alcoholism treatment in the 1980's, there was "little interest in outcome studies" and concern for empirical data to demonstrate program effectiveness (Rawson, 1991, p. 1522).

Rawson (1991) indicates that because the National Council on Alcoholism and the American Medical Association supported the "disease concept" of alcoholism, the commercial treatment system accepted and institutionalized this model of treatment. The disease concept contends that alcoholism is a primary and progressive disease which can only treated through abstinence. It was during this period that "the areas of alcoholism treatment and drug addiction/use treatment began to be addressed jointly as chemical dependency treatment" (Rawson, 1991, p. 1516). The emergence of the cocaine epidemic when the model of 28-day inpatient alcoholism treatments were generalized to include all alcohol and drug abuse problems. The term "was adopted primarily for marketing reasons rather than from medical or psychiatric considerations" (Rawson, 1991, p. 1532).

However, in Rawson's (1991) view, the proliferation of addiction treatment systems of various types (ie., residential, inpatient, partial inpatient, and outpatient services) over the past two decades has not brought a concomitant lowering of cost or proven program effectiveness in the provision of mental health and substance abuse services. As a result managed mental health organizations have emerged to contain cost and to monitor treatment outcome through empirical measures (Rawson, 1991).

Outcome Research in Psychotherapy

Over the past decade the issues of health care has been in heated debate. Along with widely publicized issues of the cost of physical health care and the quality of those services, there has been unprecedented growth in the delivery of psychiatric and chemical dependency services (Rainer, 1996). "Correspondingly, employers, insurance companies and other 'interested third parties' saw year-over-year cost for mental health care increase at a rate that more than doubled the Medical Consumer Price Index" (Rainer, 1996, p.21). Research has shown (Bartlett and Cohen, 1993; Rainer, 1996) that although there is a plethora of research which convincingly suggests that mental health treatment reduces the utilization of medical and surgical services regardless of the diagnosis, the effectiveness of the treatment programs themselves and the justification for their cost has not been adequately demonstrated.

Rainer (1996) further states that because of increasing general health care costs and the lack of measurable outcome data, the

> costs of outpatient mental health care (including substance abuse) have been treated as if care were expensive, over used, and in need of external management . . . to curtail costs. (p. 16).

Rainer (1996) contends that consensus on the relative effectiveness of mental health care has not been reached because of the difficulty in measuring the

"immediate, cumulative, and predictive effects" (Rainer, 1996, p.21).

Bartlett and Cohen (1993) indicate that the current state of the managed care environment is steeped in a fiercely competitive market. In addition to touting significant savings in medical costs to those purchasing services, managed care providers also promise care of equal or higher quality compared to their competitors. Even when these claims are grounded in theory and individual clinical practice, there is a increasingly demand for objective proof (Bartlett and Cohen, 1993 Dornelas et al., 1996; Beutler et al., 1996). In response to this demand, several "managed mental health and substance abuse vendors have undertaken. . . outcome studies designed to provide empirical support for the claims of either their organization or their industry (or even both") (Bartlett and Cohen, 1993; p.52).

Some researcher (Bartlett and Cohen, 1993; Dornelas et al., 1996), assert that in order to be competitive in the marketplace, managed-care companies need to develop a general strategic approach which would be continuous and ongoing, methodologically sound, and one in which could be integrated into the routine operations of the organizations. The goal: to "improve" and not merely "prove" the quality of treatment services (Bartlett and Cohen, 1993, p. 53). These researchers also suggest that long term follow-up is important in evaluating outcome. Specific outcome domains should include both the presence of abstinence and/or current levels of drug use, employment performance, social functioning, emotional state, and physical health (Bartlett and Cohen, 1993; Dornelas et al., 1996).

In the history of every discipline, according to Beutler et al. (1996), there has probably been a schism between science and practice. The authors (Beutler et al., 1996) emphasis that this is no less true in the field of psychology.

Scientists and practitioners have tended to maintain a hostile distance from the other, even holding different standards of proof, reading different journals, and valuing different outcomes (Beutler et al., 1996). Scientists place more faith in randomized clinical trials, diagnoses, symptoms, and manuals. In contrast, practitioners value naturalistic and qualitative research methods, giving more importance to external validity (Beutler et al., 1996). Dornelas et al. (1996) distinguish between these two designs of outcome assessment. Efficacy studies, touted as the "gold standard", is the research design most often used in traditional psychotherapy research. This design includes randomly assigning patients to treatment and control groups where treatment manuals are used and diagnostic criteria are rigorously followed (Dornelas et al, 1996, p.237). The other design called "effectiveness studies", "aim to evaluate an intervention as it is routinely delivered . . . by typical practitioners" (Dornelas et al., 1996, p. 237).

According to Beutler et al. (1996) cooperation between science and practice is being motivated by the demands of managed health care program to provide empirical outcome research to help management set policy. As a result there is a call for a methodological role-integration of both efficacy and effectiveness research. Beutler et al. (1996) suggest that this integration of research design would emphasize

> the use of focused instruments that have the very specific purpose of predicting prognosis and differential treatment response. That is, they must shift focus to studies of predictive validity, the substance of treatment, and away from the current focus on concurrent validity, the substance of diagnostic assessment. (p. 205).

Bartlett and Cohen (1993) view an integrated system of data collection as a necessary "compromise between scientific rigor and business realities" (p. 4) in today's managed health care environment.

Treatment Outcome Related To Dual Diagnosis

Stoffelmayr et al. (1989) report their findings indicate a high prevalence of additional psychiatric disorders in chemically dependent clients, and those identified as having another psychiatric diagnosis have poorer treatment outcomes than if they had a single diagnosis (Stoffelmayr et al., 1989; Blume, 1989). Studies indicate that the most commonly found psychiatric diagnoses among the chemically dependent are depression, antisocial personality, and dual chemical dependency problems (Stoffelmayr et al., 1989; Kosten et al. 1989). Clients dependent on more than one mood-altering substance are considered chemically dependent with a concomitant psychiatric diagnosis (Stoffelmayr et al., 1989).

Blume (1989) reports that among the chemically dependent , as in the general population, more women than men were diagnosed as depressed and that alcoholic men who were also diagnosed as antisocial personality had poorer treatment outcomes. Blume (1989) states the research has not been able to establish a clear relationship between psychoactive substance dependence and personality disorders, and that the presence of a personality disorder cannot necessarily account for the the etiology of the client's addiction. Nonetheless, Axis II diagnosis has value for the purposes in assessment, treatment planning, and prognosis. In addition Blume (1989) and Goldenberg et al. (1995) contend that the treatment of on disorder cannot be successful without concurrent treatment of the other. "However, these findings by themselves do not justify the inference that it is the additional psychiatric diagnosis that the causes the problem" (Stoffelmayr et al., 1989, p. 150). According to several researchers (Stoffelmayr et al.,1989; Blume,1989; Frances et al., 1993) the most cautious interpretation throughout the literature is that

global psychiatric problem severity rather than specific psychiatric diagnosis is more predictive of treatment outcome. The greater the problem severity, the poorer the prognosis (Stoffelmayr et al., 1989; Frances et al., 1993).

Previous clinical studies have shown a high incidence and high degree of coexistence between anxiety and substance use disorders, although the etiology underlying these high rates of comorbidity is still unknown (Goldenberg, et al., 1995). According to Frances et al. (1993), because of the complexity of the interaction between substance use disorders and anxiety disorders, each can lead to the other condition and each may heighten the other's symptoms. Both disorders can occur at different times or in combination. Also, "approximately 40% to 50% of patients with alcoholism who do not have anxiety disorders have anxiety symptoms" (Frances and Borg, 1993, p. 38).

Goldenberg et al. conducted research to empirically "substantiate the relationship between substance choice and the chronology of onset of anxiety and substance abuse disorders" (Goldenberg et al., 1995, p. 19) and to provide information on the drug preference of clients with anxiety disorders. Their sample consisted of 181 subjects in the Anxiety Research Project who had a history of substance use problems. The researchers hypothesized that clients whose anxiety disorders preceded their use substance abuse would choose central nervous system depressants (i.e., alcohol, sedatives and opiates) to self-medicate their anxiety symptoms (primary anxiety).This group was compared to those client whose substance use preceded (secondary anxiety) their anxiety disorder (Goldenberg et al., 1995, p. 319).

Findings of the Goldenberg et al. (1995) study do not support their hypothesis that clients with a primary anxiety disorder have an earlier onset of anxiety disorder than compared with those whose anxiety disorder followed a

substance abuse problem. Regarding gender comparisons, there were no significant differences between men and women in either the distribution across anxiety disorders or were there any observed across the type of substance use disorders (Goldenberg et al., 1995). Their results also do not support the hypothesis that clients were self-treating the anxiety they were experiencing. Their data do support the notion that "these dually diagnosed patients showed no special vulnerability to drugs usually used to treat anxiety disorders (e.g., sedatives)" (Goldenberg et al., 1995, p. 326).

<u>Predicting Treatment Outcome with the Brief Symptom Inventory</u>

Royse and Drude (1984) conducted a study on a sample of 300 clients at a rural outpatient drug treatment agency to determine if the Brief Symptom Inventory (BSI) had predictive value when administered to a drug-using population. Because there is evidence that drug use is associated with symptoms of psychological distress, "it was hypothesized that those clients with low drug use should have lower GSI scores than those with higher drug use" (Royse and Drude, 1984, p. 852). The research question posed by the authors was "Can an instrument designed to reflect the psychological symptom patterns of psychiatric and medical patients be used advantageously in screen drug abuse clients?" (Royse and Drude, 1984, p. 850). The mean scores on the Global Severity Index scale of the BSI were lower for clients with low levels of drug use and higher for clients with higher levels of self-reported drug use. Further evidence showed that those clients with greater symptomatology also "tended to have a greater number of life area affected by the problem of drug abuse" (Royse and Drude, 1984, p. 854). Since the differences among the two groups were significantly different, the researchers' hypothesis was supported.

Since data was collected on all of the clients from intake to follow-up in

the Royse and Drude study, "it was possible to examine the relationship between client disposition and the initial BSI score" (Royse and Drude, 1984, p. 852). Because the BSI has demonstrated discriminative validity, the authors recommend it for use with outpatient substance abuse populations. Royse and Drude (1984) conclude that because the instrument furnishes empirical evidence, the BSI has value in better addressing client needs, particularly those whose problems are more severe. A further conclusion by the authors is that the BSI also appears to be advantageous in client outcome studies and justifying budget allocations (Royse and Drude, 1984).

Using three psychological instruments, Benishek et al. (1992) explored "gender differences in treatment outcome related to global psychopathology, anxiety, depression, and alcohol related problems with substance abusers" (p. 243). All three instruments in the study were used to assess client symptomatology. The study was based on a sample of 507 clients (373 men; 134 women) who received treatment for substance abuse problems at 30 state funded treatment programs. Clients were assessed at the time of program entry and again 6 months later.

The Brief Symptom Inventory (BSI) is a 53-item multidimensional self-report measure of the client's functioning within the past 7-days. Three specific measures of the Brief Symptom Inventory, The Global Symptom Index (GSI) and two subscales, anxiety and depression, were used in the study (Benishek, et al., 1992). The ASI , another instrument, provided a structured interview that assesses common life-problem faced by substance abusers and uses a set of composite scores to measure the degree of alcohol and psychological problems over the past 30 days. Higher composite scores reveal greater patient problems (Benishek, et al., 1992). A 25-item Alcohol Dependence Scale, which

rates alcohol dependence symptoms on a range from 0 to 47 was also used in the study. Higher scores indicate higher level of symptomatology.

Results of the study (Benishek et al., 1992) indicate there were gender differences in strength of the relationship between anxiety and depression. The researchers report that the "role of global psychopathology in predicting treatment outcome was different for men and women" (Benishek, et al., 1992, p. 243) in this study. Regarding the measure of global psychopathology on the BSI at program entry, the correlation between anxiety and depression with global psychopathology was about twice as strong for women than it was for men. "At both intake and follow-up, women reported significantly less severe alcohol problems and more psychopathology than men ($p < .05$) though there were no significant differences between men and women on their levels of alcohol dependence" (Benishek, et al., 1992, p. 240). According to Benishek et al. (1992),

> For the whole sample and for men, initial levels of alcohol problems and alcohol dependence were the best predictors of alcohol problems at follow-up. For women, the initial level of alcohol dependence and a global measure of psychological functioning were predictive of outcome at follow-up. (p. 235).

None of the specific indicators of psychopathology were predictive of outcome. Improvement was seen in all of the symptoms studied for men and women from intake to follow-up. "Intake levels of alcohol problems and alcohol dependence were significant predictors for the whole sample of clients and the male sample" (Benishek, et al., 1992, p. 240).

Benishek et al. (!994) indicate that "depression, anxiety, and the interaction between the two were not predictive of outcome for either the whole client sample or the male and female sample" (p. 243). This contrasts with other studies which found that alcohol problems associated with depression with

better drinking-related outcomes in women and poorer outcomes in men (Benishek et al.,1994). Although this study suggests that anxiety is is positively related to alcohol problems in women at both intake and follow-up, it does not suggest that "the interaction of depression and anxiety also is related to alcohol problems in women" (Benishek, et al., 1992, p. 243).

Pekarik (1992) asserts that although research on the high rate of treatment dropouts and associated service delivery problems have been extensively documented, detailed outcome evaluations on the causes and clinical effects of dropping out is lacking. Previous approaches to studying drop-outs have focused on client or therapist characteristics associated with dropping out of treatment. Using the Brief Symptom Inventory to gather empirical evidence, Pekarik (1992) conducted research to "assess clients' reasons for dropping out of treatment and their treatment outcome" (p. 91). He noted that the few previous studies which directly compared satisfaction to outcome measures found that the correlation between the two were very low. Pekarik's (1992) study assessed client satisfaction and treatment outcome separately. "In order to clarify the relationship among termination status, outcome, and satisfaction with treatment, the drop-outs were compared to treatment completers and clients who remained in treatment" (Pekarik, 1992, p. 91).

Pekarik (1992) categorized all of the reasons for dropping out were categorized into three termination groups (dropout, completer, and continuer). An attempt was also made to better "understand clients' motives for choosing each termination group" (Pekarik, 1994, p. 92). It was for this reason that drop-outs were compared to clients who completed treatment and those who remained in treatment 4 month after intake (Pekarik, 1994, p. 92). The drop-

outs in the study were a heterogeneous group of dissatisfied, unimproved clients. This was consistent with Pekarik's (1983) earlier study and other previous studies whose findings were only suggestive because of methodological problems. The current study found three majors reasons were cited by drop-outs for terminating treatment: Problem improvement, environmental obstacles, and dissatisfaction with treatment (Pekarik, 1994). "These reasons are incompatible with the general perception of drop-outs as treatment failures" (Pekarik, 1992, p. 96). The therapists in this study gave all three drop-out groups low ratings which support the traditional belief by therapists that all drop-outs are failures. This study also suggests that such a perception is flawed.

The finding of the research (Pekarik, 1992) on all three client based measures showed Problem Improved drop-outs had superior improvement and satisfaction and inferior outcome and satisfaction for the Dissatisfied drop-outs. This study provided support for the validity of therapist' designation of clients as treatment completers. Those clients who completed treatment had " symptom improvement and client satisfaction that was superior to other groups"(Pekarik, 1992, p. 97). Ironically the clients who continued treatment had superior satisfaction ratings but the lowest BSI symptom improvement. This somewhat paradoxical finding "emphasized the importance of distinguishing the two when one is evaluating treatment" (Pekarik, 1992, p. 97).

Piersma et al. (1994) administered the Brief Symptom Inventory (BSI) in an adult psychiatric inpatient setting to 89 males and 128 females. The instrument was administered at intake and again at discharge. Their results showed a statistically significant decrease in the mean score on all BSI scales and global indices, indicating an improvement at the time of discharge.

(Piersma et al., 1994). The authors made several conclusions regarding their study. One, the BSI was promising "as a global measure of psychological distress but that little reliance could be placed on the subscale profiles" Piersma et al., 1994, p. 562). Secondly they doubted that their results could be generalized to the general population since their sample was primarily depressed inpatient population. Thirdly, the BSI was a useful instrument "for future retrospective analyses by linking it with demographic, diagnostic, and treatment variables in attempt to determine predictors of treatment success or failure" (Piersma et al., 1994, p. 562).

Summary

Societal attitudes toward alcoholism and drug abuse have had a tradition of being mixed between hysteria and apathy. The treatment of these problems have been the step-children of the general field of mental health since the late 1800's. The unprecedented growth in the delivery of mental health and chemical dependency services over the past two decades has brought about new debates in health care particularly regarding the cost and effectiveness of these services. In spite of the proliferation of treatment delivery systems, the cost of treatment services has escalated.

Although the efficacy of mental health and substance abuse treatment has been established, justification for their cost has not been adequately demonstrated. In response, managed mental-health care systems were created to contain cost and evaluate effectiveness of service delivery. However, the search for empirical measures to prove program effectiveness appears to be lacking.

Studies indicate that there is a high incidence and a high degree of coexistence between substance abuse disorders and other psychiatric

disorders. Those chemical dependent clients who do have another psychiatric diagnosis tend to have poorer treatment outcomes than those clients with only a single diagnosis. Because of the complexity of the interaction between substance abuse disorders and other psychiatric disorders, each can lead to the other condition and each may heighten the other disorder's symptoms. According to researchers, the greater the number and severity of psychological symptoms, the poorer the treatment outcome.

The Brief Symptom Inventory has developed a reputation as an empirical instrument which can reflect the psychological symptom patterns of psychiatric and medical patients. The BSI has been administered to both inpatient and outpatient chemically dependent populations and the instrument has demonstrated some predictive value when assessing client's success in treatment. Clients who had greater psychological distress also tended to have a greater number of life problems as a result of their drug use. Although there are inconsistencies in research findings, it appears that the role of global severity scales on the Brief Symptom Inventory are more predictive of treatment outcome than are the individual subscales on the instrument.

According to one study (Benishek et al., 1992) the pretest results on the BSI at the time of program entry showed a relationship between anxiety and depression with global distress severity to be about twice as strong for women than it was for men. Another study (Pekarik, 1992) using the Brief Symptom Inventory compared the reasons for clients dropping out of treatment with their treatment outcome. The findings indicated that clients who dropped-out of treatment were not necessarily failures, and that the general assumption of equating drop-outs with poor outcome was flawed. Because the BSI furnishes empirical evidence, the instrument was viewed as having value in better

addressing client needs, particularly those whose problems are more severe. It also appears to be advantageous in client outcome studies and justifying budget allocations.

CHAPTER 3
METHODOLOGY

Introduction

The purpose of this study was to determine how the severity of initial psychological distress indicators on the Brief Symptom Inventory predicts treatment outcome, and secondly to measure treatment effectiveness by analyzing the changes in the psychological symptoms of those chemically dependent clients who successfully completed outpatient treatment.

Research Design

This study used a descriptive research design. "The central focus of descriptive research is to examine facts about people, their opinions and attitudes" (Merriam and Simpson, 1995, p. 61). Another focus is to examine the relationship between events or phenomena. The purpose of a descriptive research is not to manipulate the variable or control the environment, but to "systematically describe the facts and characteristics of a given phenomenon, population, or area of interest" (Merriam and Simpson, 1995, p. 61).

Sample and Population

The clients were outpatients in a chemical dependency program in a managed-care behavioral health operation located at two facilities in a major metropolitan area of Arizona. The process of selection was conducted retrospectively by randomly sampling charts of clients previously enrolled in

treatment. The sample was taken from a total populations of 851 clients (389 males; 462 females). Included in the sample were clients from both treatment facilities and who were categorized as both completers and non-completers at the time of discharge. All were administered the BSI at intake. A sample of 132 clients (99 males; 33 females) or 16% of the total sample were randomly selected. The clients ranged from 19 to 65 years of age.

The predominant ethnic group represented was Caucasian followed by Hispanic, African-American and Native-American. All of the clients had a primary Axis I initial diagnosis of an substance abuse disorder, and most had at least one other Axis I secondary diagnosis. Diagnoses were assigned by masters-level and board certified substance abuse clinicians according to the Diagnostic and Statistical Manual of Mental Disorders - Revised (DSM-III; American Psychiatric Association, 1987).

Referral sources included primary care physicians, employer EAP's, the Judicial System, health insurance, other community heath care providers, family, friends, and self. A significant number were referred as involuntary clients because of receiving positive drug screens either at the work place or through being monitored by probation or parole personnel.

Assumptions and Limitations

One of the limitations of this study is that it precludes any firm conclusions about clients' reasons for not successfully completing the full program or if any improvement was shown during their varying lengths of stay in treatment. It is doubtful that the results on this sample of outpatient chemically dependent clients can generalize to other chemically dependent clients. Given that treatment in this study was provided in a managed care environment, all of the clients in this sample either had third-party payers to support the financial cost

of their treatment or were able to afford treatment through self-pay. Not included were clients without health insurance or who could not pay for treatment on their own and were consequently referred to community resources. Also not included were heroin addicts where appropriate referrals to other resources were made.

The receptionists, who administered the pretests, were advised that the BSI should be introduced in a calm manner and care should be taken so that clients fully understood testing instructions. However, because of frequent staff turnover and the many pressures at the reception desks during high client volume, full understanding of testing instructions by clients cannot be guaranteed.

Instrumentation

The Brief Symptom Inventory(BSI) is a 53-item multidimensional self-report measure of the client's psychological functioning within the past 7-days. The BSI is a shorter model of the Symptom Checklist 90-R (SCL-90-R) and was developed for use in clinical and research environments in which their was a need for a efficient measure to assess client's level of psychological distress.

Each of the 53-items is rated on a 5-point scale of distress, ranging from "not at all (0) to "extremely" (4). "The BSI is scored and profiled in terms of 9 primary symptom dimensions and 3 global indices of distress" (Derogatis, 1992, p. 4).

Definition of Primary BSI Symptom Dimensions are:

Somatization (SOM) - "This dimension reflects distress arising from perceptions of bodily dysfunction", including cardiovascular, gastrointestinal and respiratory complaints (Derogatis, 1992, p. 10).

Obsessive-Compulsive (O -C) -"This dimension reflects symptoms that are often identified with the standard clinical syndrome of the same name"

(Derogatis, 1992, p. 10).

Interpersonal Sensitivity (INT) - "This dimension centers on feelings of personal inadequacy and inferiority particularly in comparison with others" (Derogatis, 1992, p. 11).

Depression (DEP) - This dimension reflects a representative range of symptoms associated with clinical depression including dysphoric mood and affect as well as signs of withdrawal, lack of motivation, and suicidal thoughts, among others (Derogatis, 1992).

Anxiety (ANX) - This "dimension is composed of a set of symptoms and signs that are associated clinically with high levels of manifest anxiety", such as nervousness, tension, panic attacks, and feelings of terror, etc (Derogatis, 1992, p. 12).

Hostility (HOS) - This "dimension reflects thoughts, feelings or actions that are characteristic" of anger (aggression, irritability, rage and resentment, etc.) (Derogatis, 1992, p. 13).

Phobic anxiety (PHOB) - This dimension reflects symptoms that are often identified with the standard clinical syndrome of the same name (Derogatis, 1992).

Paranoid Ideation (PAR) - This dimension represents characteristics of paranoid thinking and behavior, including projective thought, hostility, suspiciousness, grandiosity, etc (Derogatis, 1992).

Psychoticism (PSY) - "This scale provides for a graduated continuum from mild interpersonal alienation to dramatic evidence of psychosis" (Derogatis, 1992, p. 5).

Definition of the Global Indices are:

General Severity Index (GSI) - This index is calculated by taking the grand total

    for all items and dividing by 53 - the number of items on the scale

    (Derogatis, 1992).

Positive Symptom Total (PST) - This index is a count of the number of

    symptoms endorsed or "positive" (non-zero) responses (Derogatis,

    1992).

Positive Symptom Distress Index (PSDI) - This index is calculated by dividing

    the previously calculated grand total by the positive symptom total

    (Derogatis, 1992).

Interpretation of the Global Indices

    The BSI "is designed to be interpreted at 3 distinct but related levels: The global level, the dimensional level, and the discrete symptom level" (Derogatis, 1992, p. 35).

    Global Level. "The GSI provides the most sensitive single indicator . . . combining information on the number of symptoms and intensity of distress" (Derogatis, 1992, p. 35). PST is simply " the number of symptoms the patient reports experiencing" (Derogatis, 1992, p. 35). PSDI is a measure of symptom minimization or amplification.

    Dimensional Level. According to Derogatis (1992) a GSI score on on-patient norms greater than or equal to T-score 63, "or any two primary dimension scores greater than or equal to T-63" (Derogatis, 1992, p. 36) are considered significant scores. A major advantage of a multidimensional scale over a unidimensional scale "is that the additional dimensions assessed provide important information about the overall psychopathological context"

(Derogatis, 1992, p. 36).

Discrete Symptom Level. Knowledge of discrete symptoms may be extremely important "in developing a comprehensive picture" (Derogatis, 1992, p. 36) of the client's level of distress. Client data on intensity of symptoms such as suicidal ideation, guilt and self-blame provide useful information in arriving at an accurate clinical impression (Derogatis, 1992).

Test Administration and Instructions. "The BSI is a measure of current, point-in-time psychological symptom status" (Derogatis, 1992, p. 7). A brief introduction and explanation of the instructions are required if the BSI is expected to be valid. Care should be taken to insure that the client understands the questions. The test instructs clients to respond to the questions according to the standard time reference for "the past 7 days including today" (Derogatis, 1992, p. 6). The BSI is normed on a 7-day referent period; "however, other periods may be utilized particularly if the time period of interest flows naturally from the situation or condition under study" (Derogatis, 1992, p. 7).

Appropriate Samples and Applications. The BSI has been used in a wide variety of clinical research and counseling situations including psychiatric patients medical patients, patients with substance abuse problems. It has also proven highly sensitive with prison populations, HIV patients, individuals with sexual dysfunctions, and individuals with numerous other dysfunctions.

According to Derogatis (1992) "the BSI may be used in a single, point-in time assessment of an individual's clinical status, or it may be utilized sequentially, either to document trends through time or in prepost evaluations" (p. 9). Test-retest reliabilities are high and there has been no evidence of any "significant 'practice' effects which could bias the profile on repeated administration" (Derogatis, 1992, p. 9).

Internal Consistency Reliability. Derogatis (1992) established internal consistency coefficients on a sample of 719 psychiatric outpatients and he reported that the "alpha coefficients for all 9 dimensions of the BSI were very good, ranging from a low of .71 on the Psychoticism dimension to a high of .85 on Depression"(p. 21).

Test-Retest Reliability. According to study on a sample of 60 non-patient individuals, Derogatis'(1992) findings on the test-retest coefficients ranged from a low of .68 for Somatization to a high of .91 for Phobic Anxiety. Derogatis (1992) asserted that "the GSI also reveals an excellent stability coefficient of .90 giving strong evidence that the BSI represents consistent measurement across time" (p. 21).

Convergent and Discriminant Validity. Derogatis (1992) conducted a study which showed excellent convergent validity for the BSI with the MMPI. This was a reanalysis of an earlier study comparing the SCL-90-R with the MMPI, but the reanalysis was scored for the BSI rather than the SCL-90-R. According to Derogatis (1990) "correlations between the BSI Symptom Dimensions and MMPI Clinical, Wiggins and Tryon scores" listed coefficients between .30 and .72 (p. 25).

Procedure

Treatment. At intake, clients were administered the BSI as part of the admission process by the front office staff. The initial BSI was used by the clinical staff as adjunct assessment instrument to determine the extent of the client's problems. The BSI was administered again in aftercare shortly before discharge. The t-test results on this post-test were then compared with the initial pretest scores at intake. The primary counselor would discuss the results with the individual client. If the t-scores on the nine symptom dimensions and the

Global Severity Index were not significantly lower or at least within normal limits compared to the pretest scores, and/or other relapse potential indicators were present, the recommendation was given that the client remain in aftercare for another month. If the severity of psychological stress on this post-test reflected an acceptable decrease in symptoms, and the appropriate support systems were in place, then the client was recommended for discharge "treatment completed."

Follow-up. Six months after the successfully completing treatment, follow-up contacts were initiated by telephone and by mail. A seven-question "Outcome Survey" form with a rating scale of 1-10 (1=poor; 10=excellent) was administered on each graduated client with whom contact was made. Each client was asked to rate their current status of physical health, family relationships, job satisfaction, emotional and mental well-being, spiritual well-being, and most significant reason for relapse (if any), and/or maintaining abstinence. In addition, each follow-up contact was asked to complete a post-discharge BSI which was mailed with a self-addressed, stamped, return envelope.

This same follow-up procedure was conducted at one and two years following treatment completion. However, a complete data set was not available for the one and two year followups because not all of the sample of 114 treatment completers were able to be consistently contacted at these points. Therefore, only the 6-month followup data were used in this study.

Method of Analysis

Means and standard deviations for each of the nine primary symptom dimensions, the Global Index of distress for the BSI, and the results of t-tests were used to compare two data sets: (1) The means of pretests of clients who

successfully completed treatment were compared with pretest scores of non-completers. (2) The means of pretest scores were compared with the posttests of clients who successfully completed treatment. The results of t-tests were scored according to adult outpatient norms.

CHAPTER 4

PRESENTATION AND ANALYSIS OF THE DATA

Demographic Description

A random sample of one hundred thirty-two (132) clients were taken from a total population of 831 clients who were engaged in treatment between 1992 and 1996. The sample included 99 (75%) males and 33 (25%) females. The ages of the clients in the sample ranged from 19 to 65 years of age. The mean age of the sample was 35.65 (S.D. 10.17) years with 67 % over the age of 30.

Seventy (53%) of the client sample did not complete the treatment program while 62 (47%) successfully completed treatment. The males and females who were identified as completers represented 34% and 15% respectively of the total client sample. Forty-two (42%) of the males who entered treatment were successfully discharged and 20 (61%) of the females who entered also were completers.

The predominant ethnic group represented was 109 (83%) Caucasians followed by 16 (12%) Hispanics, 3 (2%) African-Americans and 4 (3%) Other. All of the 132 clients had a primary Axis I initial diagnosis of a substance abuse disorder, and the majority (55%) were identified with a dual-diagnosis; that is, having at least one other Axis I secondary diagnosis. Sixty (45%) of the client sample had only one Axis I diagnosis. Thirty-five (49%) of the dual-diagnosed clients had another substance abuse disorder as a secondary diagnosis, and

37 (51%) had a secondary psychiatric diagnosis according to the <u>Diagnostic</u> <u>and Statistical Manual of Mental Disorders -Revised</u> (DSM-III; American Psychiatric Association, 1987).

<u>The BSI as Predictor of Treatment Success</u>

Table 1 compares the mean pretest scores of completers and non-completers on the nine primary symptom dimensions and the GSI. The means and standard deviations for each of the nine primary symptom dimensions, the Global Severity Index of distress for the BSI, and the results of the t-tests which compared the means of pretest of clients who successfully completed substance abuse treatment with the pretest scores of non-completers as presented in Table 1 below.

TABLE 1

BSI Mean Scores

Treatment Completer/Non-Completer Comparison

Symptom Dimensions	<u>Completer</u> <u>N=62</u>		<u>Non-Completer</u> <u>N=70</u>		<u>t-test</u>
	M	S D	M	S D	t
SOM	48.03	08.38	51.91	10.66	2.30*
OC	45.77	09.85	47.89	10.16	-1.21
INT	46.37	09.97	48.11	10.69	-0.97
DEP	46.32	10.69	48.00	10.22	-0.92
ANX	46.42	09.68	47.69	12.17	-0.66
HOS	48.84	10.01	51.54	09.67	-1.58
PHO	46.05	07.96	49.23	09.01	-2.14*
PAR	51.00	08.77	52.46	09.20	-0.93
PSY	47.16	10.77	50.14	10.26	-1.67

TABLE 1 continued.

Global Index

| GSI | 46.47 | 10.77 | 49.09 | 12.65 | -1.28 |

* p < .05

There were no significant differences on the pretest scores between completers and non-completers except for Somatization and Phobic Anxiety. The mean scores on the Somatization and Phobic Anxiety scales were higher for the non-completers than for the completers. The results of t-test and Analysis of Variance indicated that there were no significant differences on the mean pretest GSI by diagnostic category or gender.

Symptom Reduction on the GSI as a Measure of Treatment Outcome

Table 2 compares the mean pretest score and the posttest scores of treatment completers on the nine primary symptom dimensions on the BSI. Means and standard deviations for each of the nine primary symptom dimensions, the Global Index of distress for the BSI, and the results of the t-tests which compares the means of pretest with the posttests of clients who successfully completed substance abuse treatment are presented below.

TABLE 2
BSI Mean Scores
Comparison of Pretest/Posttests of Treatment Completers

Symptom Dimensions	Pretest N=62		Posttest N=62		t-test
	M	S D	M	S D	t
SOM	48.03	08.38	41.15	05.15	06.01*
OC	47.77	09.85	37.55	05.43	06.29*

TABLE 2 continued.

INT	46.37	09.97	37.10	04.82	07.13*
DEP	46.32	10.69	35.31	04.91	08.35*
ANX	46.42	09.68	36.02	05.90	07.25*
HOS	48.84	10.01	39.29	05.89	06.70*
PHO	46.05	07.96	40.68	04.28	04.70*
PAR	51.00	08.77	43.39	06.26	06.85*
PSY	47.16	10.20	38.77	05.43	05.97*
Global Index					
GSI	46.47	10.77	33.52	6.81	08.39*

* $p < .001$

There were significant differences between pretest and post-test scores on all nine primary symptom dimensions and the Global Severity Index of the BSI. When analyzed according to gender, there was a greater reduction of symptoms on the mean scores for Hostility and the Global Severity Index for women than for men. There was a decrease of 10.66 points (23%) for the mean score on the Global Severity Index for men. The corresponding decrease in the mean Global Severity Index for women was 17.75 points which represents a 37% reduction.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of the study was to determine how the initial psychological stress of clients in outpatient treatment related to program completion, and how these psychological stress indicators changed for those clients who successfully completed treatment. Pretest and posttest scores of the Brief Symptom Inventory were analyzed on a sample of chemically dependent clients in a chemical dependency outpatient treatment program in southwest Arizona.

Relative to this study a literature review was conducted with the focus on four general topics: (1) A general review of chemical dependency treatment and its development as a delivery system within the health care field; (2) The influence of managed care on outcome research in psychotherapy; (3) The relationship between the outcome of chemical dependency treatment when another psychiatric diagnosis is present, and ; (4) The use of the Brief Symptom Inventory as an instrument to measure treatment success in chemical dependency programs.

Data was collected on a ran random sample of one hundred thirty-two (132) clients from a total population of 831 clients who were engaged in alcohol and drug treatment between 1992 and 1996. The sample included 99 (75%)

males and 33 (25%) females. The mean age of the sample was 35.65 (S.D. 10.17) years with 67% over the age of 30. Referral sources included primary care physicians, employee assistance programs, courts, health insurance carriers, family, friends, and other community health care providers. This was a retrospective study because it was analyzed with data which was collected following client discharge.

The Brief Symptom Inventory, a 53-item multidimensional self-report of a client's psychological functioning, was administered during the initial intake process and again at the time of client discharge. t-test were used to measure the mean scores on the nine symptom dimensions and the three global indices to assess client's self -reported psychological distress. Mean score on clients' initial pretest at admission was compared to the posttreatment mean scores to determine the change in the severity of symptoms. The BSI was scored according to adult outpatient norms. Clients were also administered the BSI at a 6-month, one and two year followup, but these data were not included as part of this study. Because of its limitations, this study precludes any firm conclusions about clients' reasons for discharge or client level of improvement during their varying lengths of stay in treatment.

The results of this study when the pretest scores between completers and non-completers were compared showed no significant differences except for Somatization and Phobic Anxiety. The mean scores on the Somatization and Phobic Anxiety scales were higher for the non-completers than for the completers. There were, however, significant differences when the mean pretest scores and the posttest scores of treatment completers on the nine primary symptom dimensions and the Global Severity Index on the BSI were compared. The results of the t-tests and Analysis of Variance indicated that

there were no significant differences on the mean pretest GSI by diagnostic category or gender. When analyzed according to gender, there was a greater reduction of symptoms on the mean scores for Hostility and the Global Severity Index for women than for men. There was decrease of 10.66 points (23%) for the mean score on the Global Severity for men. The corresponding decrease in the mean Global Severity Index for women was 17.75 points which represents a 37% reduction. On the pretest mean scores there was a significant correlation between age and the Global Severity Index. As the age of clients increased there was lowering of mean scores on the Global Severity Index.

Conclusions

In general, data from this study indicate that levels of distress on the nine symptom dimensions and the Global Severity Level of the BSI does not predict outcome. However, the Phobic Anxiety and Somatization scales do seem to be related to Outcome. Data reflects that people who tend to be predisposed to physical complaints and who are fearful tend not to complete treatment. This suggests a prognosis of people who are physically ill. As a result of diminished physical and psychological functioning and the chronicity of their drug use it is estimated that over 25% of the clients who entered the outpatient program were admitted directly from medical detox. Perhaps for this group of clients a different level of care is required from those not as severely impaired.

The data reflects that those who did complete the treatment program showed a decrease in symptomatology in all nine primary symptom dimensions and the Global Severity Index. This suggests that the program was successful in reducing life stressors for those clients who completed the program. Although there is no data to support the hypothesis, non-completers also may have experienced a reduction in their symptomatology. There may have been some

clients who after experiencing relief in certain psychological domains decided to terminate treatment. There is scant data in the current study to determine what program components were successful and how they were effective.

Women who completed the program benefited more than men in a reduction of hostility and in the reduction of their overall symptomatology. As suggested by Benishek et al. (1992) and Hughes (1992) one possible reason for this gender difference is because women are more likely to report psychological distress and to express emotions more than men. Also women may have possibly been more empowered by exposure to the treatment components of the program addressing codependency issues and inculcating more assertive behavior.

There were design limitations to this research project. Initially data from the 6-month and one-year followup was to be included as part of the research; however because of organizational efforts to followup on all of the program completers at the six and 12-month followups were unsuccessful, the sample size from these data was insufficient to adequately evaluate results. Because this was a retrospective study there was no opportunity to establish a control group.

Recommendations

As suggested by Bartlett and Cohen (1993) and Dornelas et al. (1996) long term followup is important in evaluating outcome, and methodologically sound evaluation procedures should be adequately integrated into the routine operations of the organization. This would help ensure more consistent collection of outcome data during the course of treatment and following client discharge, including the posttreatment followup of non-completers. Also It would have been interesting to compare the mean BSI's scores at intake of

clients who entered directly from medical detox facilities with those not requiring medical treatment prior to admission to the outpatient program. It is suggested that, during the initial phase of outpatient admission, less focus be placed on breaking through denial and behavior change and more on self care issues such as proper rest, nutrition, exercise, and stress reduction strategies, including meditation and relaxation techniques.

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