The Effectiveness of a Psychoeducational Group for HIV-Infected/Affected Incarcerated Women

Elizabeth C. Pomeroy
University of Texas—Austin

Risa Kiam
Portland State University

Eileen M. Abel
University of Central Florida

Objective: The effectiveness of a psychoeducational group intervention for HIV/AIDS-infected and affected women was examined at a large southeastern county jail facility. Method: A quasi-experimental pretest-posttest design was used to examine depression, anxiety, and trauma symptoms of women inmates. Results: A multivariate analysis of covariance yielded significant differences between the experimental and comparison groups. Subsequent analysis of covariance for each dependent variable indicated significant differences between groups as well. Effect sizes ranged from moderate to strong. Conclusions: The psychoeducational group intervention appeared to be effective in alleviating depression, anxiety, and trauma symptoms among women inmates infected and affected by HIV/AIDS.

The number of women entering the jail and prison systems in the United States escalated by 202% over the past decade. Currently, women inmates account for about 9% of the entire prison population (Stephan & Jankowski, 1991), and women of color make up 57% of this group. One of the increasing health and emotional concerns of women prisoners and prisons themselves is the impact of HIV/AIDS on the jail population. To date, incarcerated women infected or affected by HIV/AIDS have received little interventive attention from corrections personnel. Despite indications that psychoeducational groups for people living with HIV/AIDS have been found to be effective in

Authors' Note: Correspondence may be addressed to E. Pomeroy, School of Social Work, University of Texas at Austin, Austin, TX 78746. Research for this article was supported in part by the Lois and Ann Silberman Award. The authors would like to thank Sandra Davy, M.S.W., for her supervision of students at the Orange County jail and her contributions to this research. We would also like to thank the administration of the Orange County Corrections Department, especially Don Bjoring, for their support for this project.

Research on Social Work Practice, Vol. 9 No. 2, March 1999 171-187

lessening the emotional stress experienced by these individuals (Pomeroy, Rubin, Van Laningham, & Walker, 1997; Pomeroy, Rubin, & Walker, 1995), few groups for jailed women have been discussed in the literature. Because social workers often are employed in corrections systems, they have opportunities to assess, intervene, and provide needed services for incarcerated women who are infected/affected by HIV/AIDS.

This study was developed to evaluate the effectiveness of a psychoeducational group intervention for incarcerated women who are infected/affected by HIV/AIDS. It was part of a larger rehabilitation project within the Orange County, Florida, jail system to provide educational and occupational skills as well as a variety of therapeutic interventions to both male and female inmates.

Although AIDS has shown a decline recently in the gay community, an increasing number of people diagnosed HIV-positive (positive for the human immuneodeficiency syndrome) or with AIDS are women. Since 1981, the Centers for Disease Control (CDC) have reported 92,242 cases of women with AIDS. These figures represent an increase of about 63% in the number of cases of women with HIV/AIDS over the past 3 years (personal communication with CDC, December 29, 1997).

According to Hoffman (1993), 90% of women with HIV/AIDS have dependent children, are single parents, may have lost a partner to AIDS, and are often grappling with issues of poverty. Frequently, these families affected by HIV/AIDS are at a pronounced risk of becoming homeless (Reidy, Taggart, & Asselein, 1991). This situation may be due to a multitude of factors, such as discrimination, declining health, loss of employment, and dwindling finances resulting from intravenous drug use, treatment expenses for infected members, and poverty.

Initial responses to an HIV/AIDS diagnosis are often "heightened anxiety, retreat into defense mechanisms such as denial, and understandable preoccupation with maintaining health" (Buckingham & Rehm, 1987, p. 7). Often, a woman is asymptomatic and unaware of her HIV status until she becomes pregnant or her baby is diagnosed (Herdt & Boxer, 1991; Tiblier, Walker, & Rolland, 1989). In addition, the pregnancy itself may accelerate the woman's own disease process. Another threat to immune functioning is the seropositive person's self-beliefs. Bandura (1990) suggests that "perceived coping inefficacy increases vulnerability to stress and depression and activates biochemical changes that can affect various facets of immune function" and influence health habits (p. 129).

Issues affecting HIV/AIDS-infected women participating in a support group included the following: feelings of isolation, stigma, and shame; lack of medical information; and poor self-image (Chung & Magraw, 1992). Regardless of their illness, women were still expected to be the central

caretakers for their families. They worried about infecting other family members through casual contact and feared becoming a burden. Other concerns included if, when, and how to tell their children about their own illness or their children's illness. Women also processed feelings of loss regarding their sexuality and desirability following diagnosis, resulting in loss of self-esteem and mourning for the loss of reproductive choice (Chung & Magraw, 1992).

Mayer and Spiegel (1992) found similar concerns raised in parental support groups conducted in a pediatric AIDS clinic. Women expressed guilt about HIV transmission to their children and feelings of isolation from family, friends, and medical staff.

The majority of women infected or affected by HIV/AIDS are members of ethnic minority groups and live in impoverished inner cities where community services are sparse and difficult to obtain. Although the gay and lesbian community has provided overwhelming support for HIV/AIDS infected people in their own cohort, disadvantaged women and intravenous drug users who become infected find little help available in their own communities (Walker, 1991).

As the number of women infected with HIV/AIDS has increased, so too has the need for safe, nonjudgmental environments in which women can express their needs and concerns. Support groups for people living with HIV/AIDS, initially composed primarily of gay men, have spread to other subpopulations of infected individuals. Interventions that focus primarily on the gay client (El-Mallakh & El-Mallakh, 1989; Getzel, 1991; Miller & Green, 1985; Morokiff, Holmes, & Weisse, 1987; Rounds, Galinsky, & Stevens, 1991), the gay partner (Carl, 1986), or significant others (i.e., friends, family members, or spouses) (Bowes & Dickson, 1991; Frierson, Lippman, & Johnson, 1987; Greif & Porembski, 1988; Land & Harangody, 1990) have been the foci of most of the existing effectiveness studies. The literature on women who are infected or affected by HIV/AIDS has been limited to descriptive and anecdotal accounts of this population.

Just as there has been little research conducted on interventions for women with HIV/AIDS, there is a proportionate dearth of information on interventions for incarcerated female inmates. Since the beginning of the 1980s, the population of female inmates in the United States has increased by over 200% (Gabel & Johnston, 1995). It is estimated that 25% of all women inmates are HIV positive (Stephan & Jankowski, 1991).

The majority of these women are arrested for nonviolent crimes. Typical offenses include fraud, drugs, and/or prostitution (Singer, Bussey, Song, & Lunghofer, 1995). Nearly half of women inmates report that they were physically or sexually abused as children (U.S. Department of Justice, 1991). As many as two thirds of women inmates require mental health services at, or

soon after, their initial incarceration (James, Gregory, Jones, & Rundell, 1985). Gabel and Johnston (1995) reported that prior to incarceration, one in five women inmates had received some form of mental health treatment.

In their recent investigation of female inmates, Singer et al. (1995) found that 64% of their sample fell within the clinical range for mental health problems. The same study found that 83% of the women were in the substance abuse range, and 81% had been victimized at some point in their lives. In an effort to respond to the mental health needs of incarcerated populations, jail-based rehabilitation programs have been established. Most programs that have been established within a corrections setting have been educational and preventative in nature (Coulson & Nutbrown, 1992; El-Bassel et al., 1995) and have focused on providing information to inmates. Recently, a skill building and social support enhancement group was established to prevent HIV/AIDS in drug-abusing incarcerated women (El-Bassel et al., 1995). This pilot study evaluated the effectiveness of a group intervention for reducing the spread of HIV/AIDS among 145 female inmates. The study, "confirmed the feasibility of implementing a skill-building intervention for drug-using women in jail" (El-Bassel et al., 1995, p. 131).

Despite the enormous need for interventions targeting women prisoners, there has only been a minimal amount of research conducted in this area. As in other areas of social work, few studies have been conducted that examine the effectiveness of the interventions that social workers employ within the jail system. This study examined the effectiveness of a time-limited, psychoeducational, task-centered group for incarcerated women infected or affected by HIV/AIDS. Three primary hypotheses were tested in this research and are stated as follows:

Hypothesis 1: The psychoeducational group intervention will reduce the amount of depression experienced by women inmates.
Hypothesis 2: The psychoeducational group intervention will reduce the amount of anxiety experienced by women inmates.
Hypothesis 3: The psychoeducational group intervention will reduce the amount of trauma symptoms experienced by women inmates.

METHODS AND PROCEDURES

Clients

The research participants in the study were drawn from the population of HIV-infected or affected women incarcerated at the Orange County jail.

Announcement of the group was made prior to the initiation of the study, and women had the opportunity to sign up for it. If more than 12 women signed up for the group, the overflow inmates were placed in the comparison group and were given the opportunity to participate in the following group. Each of the nine experimental groups filled to capacity for a total of 108 women. Twenty-one women dropped out of the experimental group due to being transferred or released from the jail. The total number of women who completed the group intervention was 87. Fifty-two women were placed on a waiting list for the group intervention and served as the comparison group. Thus, the total sample size for the study consisted of 139 women. Because of strict laws regarding confidentiality and AIDS in the state, we were not allowed to ask the women to divulge their HIV status; however, many women who were HIV-positive shared this information with group participants during the course of the intervention. Due to constraints of the jail system, subjects were not randomly assigned to the experimental and comparison conditions.

Psychoeducational Group Intervention

The intervention approach used in the current study is based on previous research by one of the authors of a psychoeducational group intervention for family members of people living with HIV/AIDS (Pomeroy et al., 1995). The psychoeducational approach proved to be effective in alleviating the emotional turmoil associated with caring for people living with HIV/AIDS. The authors also examined the effectiveness of a psychoeducational group for heterosexuals with HIV/AIDS and found similar, positive results (Pomeroy et al., 1997; Rubin, Pomeroy, & Gordon, 1995). Because of the prior success of this intervention with other populations, modification of this approach to specifically meet the informational needs and emotional concerns of incarcerated women who are infected or affected by HIV/AIDS and then test its effectiveness with this female target population appeared to be warranted.

The educational component of the psychoeducational intervention is based on the assumption that people coping with HIV/AIDS need accurate information about the disease. Due to the wide variety of rare opportunistic infections that may develop as a result of the illness, people affected by HIV/AIDS often develop inaccurate or false assumptions about the disease. Information about medication is also an important issue, particularly in light of the recent advances in treatment with protease inhibitors. Women also need to be informed about their ability to increase their chances of preventing the transfer of this illness to their newborn infants with medication protocols and good prenatal care. People coping with HIV/AIDS are often seeking information that is comprehensible and accurate.

In addition to education, the intervention provides social and emotional support, the need for which has been well-documented in the literature on coping with a chronic illness (Biegel, Sayles, & Schultz, 1991). A safe, confidential group environment can ameliorate the loneliness, isolation, and emotional distress experienced by people affected by a chronic/terminal illness. People infected or affected by HIV/AIDS, in particular, need this group support due to the high degree of stigma associated with this illness (Cadwell, 1991; Pomeroy, 1994; Powell-Cope & Brown, 1992).

Although the psychoeducational approach provides the structure for the group intervention, the conceptual framework also consists of elements of cognitive-behavioral theory and the task-centered approach (Reid & Epstein, 1972). Cognitive behavioral techniques have proven to be effective in the reduction of anxiety and depression as well as trauma symptoms. Numerous studies have indicated the efficacy of cognitive-behavioral techniques in individual or group therapy settings (Rehm, 1995). The basic assumption underlying cognitive-behavioral theory is that dysfunctional cognitions make a person vulnerable to anxiety and depression and lower self-esteem (Hammen, 1995).

The task component or homework assignments are seen as a way to help clients work on the emotional impact of HIV/AIDS in their lives between group sessions. Whereas information can be readily assimilated if presented in a coherent manner, making emotional changes can be far more time-consuming and difficult. Therefore, it is important for group participants to spend time working daily on the emotional issues with which they are confronted, especially given the time-limited nature of the intervention.

Each of the 1.5-hour psychoeducational group sessions consisted of an educational, didactic component and a supportive component. The first part of each session lasted about 45 minutes and consisted of a presentation and/or discussion concerning an educational topic relevant to HIV-infected or affected women. The second part of each session, also 45 minutes in length, focused on supportive group processes using cognitive-behavioral and task-centered techniques. Some of the topics in the supportive component of the sessions include ways to cope with depression, anxiety, and stress; the importance of social support; self-esteem and empowerment issues; grief over multiple losses; and coping skills (see Table 1).

Outcome Measures

The dependent variables in this research study were anxiety, depression, and trauma symptoms of the HIV-infected or affected incarcerated women. These variables appear to exemplify the psychological consequences and

TABLE 1: Psychoeducational Content of Group Intervention

Group Session	*Educational Component*	*Support Component*	*Homework Assignment*
1	Overview of HIV/AIDS/ Establishing group trust	Trust and self-esteem	"I am" exercise
2	Opportunistic infections/ Challenging irrational thoughts	Coping with depression	Automatic thoughts exercise
3	Medication issues/ Recognizing inner strengths	Depression (continued)	Changing negative thoughts
4	Safer sex/Healthy versus unhealthy relationships	Dealing with anxiety	Stress reduction exercise
5	Safer sex (continued)/ Decision-making skills	Anxiety (continued)	Stress reduction exercise
6	Nutritional needs/ Communication skills	Coping with anger, grief, and loss	Anger management
7	Women and children with HIV/AIDS/Parenting issues	Anger, grief, and loss (continued)	Anger management
8	Financial issues/ Building confidence	Problem solving and goal setting	Goal-setting exercise
9	Planning for the future/ Recognizing personal resources	Empowerment	Strengths exercise
10	Termination	Accomplishments in the group	Moving out and moving on

relationship issues associated with the impact of HIV/AIDS on women as discussed in an earlier section.

At the beginning and the end of the group sessions, participants in the treatment group were given scales to measure the above named symptoms. Participants in the comparison group were also given the instruments at times that paralleled the beginning and end of the experimental group. Anxiety was measured with the state version of the State-Trait Anxiety Inventory (STAI), a standardized scale that has been validated and shown to have coefficient alpha reliability coefficients ranging from .86 to .95 (Spielberger, 1983). Depression was measured using the Beck Depression Inventory (BDI). The

BDI has been shown to be sensitive to clinical changes, to be valid, and to have reliability coefficients ranging from .74 to .93 (Beck, Ward, Mendelson, Mock, & Erbaugh,1961; Corcoran & Fischer, 1987). Trauma symptoms were measured using the Trauma Symptom Checklist (TSC-33), a 33-item instrument that has been employed in clinical research as a measure of traumatic impact. It has been used in relation to the long-term effects of childhood physical/sexual abuse. The scale has been shown to have internal consistency with an alpha of .89 (Briere & Ruentz, 1989).

Research Design

A time-limited psychoeducational group intervention was provided to HIV-positive infected and affected women in a county jail system. Due to the varying lengths of stay of the women in the jail, the intervention was conceptually similar to the groups in prior studies (Pomeroy et al., 1995, 1997). The length of the group, however, was modified to 5 weeks with two 90- minute groups per week rather than the 6- or 8-week, once a week format of the prior studies.

To test the hypotheses of this study, an experimental/treatment group and a comparison group were established. To have an adequate sample size, the group was held on five occasions for a 5-week period with two intervening weeks to recruit new members. Each treatment group had a comparison group. Two treatment groups ran concurrently with the exception of one occasion. A total of nine treatment groups and eight comparison groups composed the research design. Because the participants were not randomly assigned to the two groups, the study used a quasi-experimental nonequivalent control group design. This type of group design has, as its major weaknesses, the chance of statistical regression and the interaction of selection and maturation; this poses a threat to the internal validity of the design (Campbell & Stanley, 1963). However, it does control for the main effects of history maturation, testing, and instrumentation and is far superior to the one-group pretest-posttest design. In psychotherapy research, this design has often been used due to feasibility constraints surrounding sampling procedures and may be the most appropriate design to use (Campbell & Stanley, 1963).

Prior to the initiation of the first group, a facilitator's manual was developed. It included information on pertinent group theories as well as educational and support sections of each group session. An experienced M.S.W. group facilitator was selected to co-facilitate the groups with 4 second-year clinical M.S.W. social work students. The students received training in the group process prior to the beginning of the group. Two students and the group

facilitator conducted each group. The principal investigator and the group facilitator supervised the students throughout the group experience.

HIV-infected or affected women in the county jail system received information about the group and research study about 2 weeks before the first group session. All women were contacted by one of the co-facilitators, who thoroughly explained the confidential nature of the research and read a consent form to them. Each woman who understood and agreed to be in the study signed an informed consent form. Women participating in the experimental and comparison groups completed the pretest forms prior to the beginning of the group.

Posttests were administered at the end of the last group session, which was lengthened to provide adequate time to complete the scales. The comparison group participants' posttests became their pretests if they were still incarcerated in the jail system and chose to participate in the following 5-week session. Due to the high turnover rate at the jail, the majority of women in the comparison group were released or transferred before the beginning of the next treatment group. At the end of the group sessions and prior to release, women were given the names of community counselors and encouraged to obtain needed support for their reintegration into the community following their discharge from the jail. Community-based agencies supported this project and collaborated with the project social workers in accepting referrals and providing needed services for these women following their release from jail.

RESULTS

For the main part of the data analysis, the nine groups that received the psychoeducational intervention were combined. The eight groups that served as the waiting list comparison groups were also combined. Preliminary analyses were made by comparing the attributes of experimental and comparison group members. No significant differences were found in any variable with the exception of prior counseling experiences. As can be seen in Table 2, the groups were demographically similar, although the comparison group had a higher proportion of women who reported receiving some form of mental health services in the past. The proportion of African American women represented in the comparison group (53.8%) was somewhat higher than the proportion of African American women in the experimental group (41.2%). This difference was not statistically significant, Cramer's $V(1, 3) = .133$; $p = .29$. The mean age of the women was 31.5 years old in the experimental group and 32.1 years old in the comparison group. This difference was not significant.

Women in the experimental and comparison groups were very similar in terms of marital status, number of children, and the average age of their children. A significantly higher proportion of women in the comparison group (59.6%) had received prior counseling as compared to women in the experimental group (34.5%).

The groups were tested for equivalency on the pretest measure, using one-way ANOVA procedures. There were no significant differences between the experimental and comparison groups on the pretest trauma symptom scores or the anxiety scores. Regarding depression, however, there were significant differences between groups on the BDI, $F(1, 37) = 6.59$; $p = .01$. The means of the BDI pretest were 39.5 for the experimental group and 33.5 for the comparison group; thus, both groups were in the moderately severe range of depression.

Multivariate analysis of covariance (MANCOVA) was the primary statistical procedure used to test the hypotheses of this study. Prior to running MANCOVA, the data were tested for four primary assumptions underlying its use: the independence of observations, the homogeneity of variances or multivariate normality, the homogeneity of covariance matrices, and the homogeneity of regression hyperplanes. Each of these assumptions was met.

Significant overall main effects were found between groups on the posttests. Wilk's Lambda yielded a value of .14, $F(4, 130) = 94.25$; $p < .001$. A multivariate effect size was also calculated using the D2 statistic, a value known as Mahalanobis distance. Results of this analysis yielded a multivariate effect size of 8.85. This effect size is considered very large and suggests that the effects of the treatment were strong (Stevens, 1992).

Subsequently, separate analyses of covariance were performed on each dependent variable, as displayed in Table 3. Results were statistically significant at the .001 level for scores regarding depression, anxiety, and trauma. The partial η^2 statistic showed that the proportion of the variance in the scores between groups at posttest explained by the intervention was .37 for the BDI (depression), .28 for the STAI (anxiety), and .14 for the TSI (trauma). The effect sizes between groups at posttest were also high, at 1.66 for the BDI, 1.01 for the STAI, and .87 for the TSI.

The intervention had a particularly strong effect on depression. Both the experimental and comparison group mean pretest scores on the BDI were indicative of an individual who is moderately to severely depressed. The experimental group's mean posttest score of 17.6, however, is indicative of an individual experiencing mild depression (the normal range is a score of 0 to 9). The mean posttest score for the comparison group (33.9) remained in the moderate to severe range (Beck & Beamesderfer, 1974).

TABLE 2: Demographic Characteristics of Female Inmates

	Experimental Group N = *87*	*Comparison Group* N = *52*
Age of inmate		
Mean	31.5 years	32.1 years
SD	6.4 years	7.7 years
Ethnicity		
African American	36 (41.2%)	28 (53.8%)
Hispanic	7 (8%)	2 (3.9%)
White	44 (50.6%)	22 (42.3%)
Marital status		
Single	30 (34.5%)	18 (34.6%)
Married	33 (37.9%)	17 (32.6%)
Divorced	11 (12.6%)	7 (13.4%)
Separated	3 (3.4%)	3 (5.7%)
Widowed	8 (9.2%)	7 (13.4%)
Other	2 (2.2%)	0 (0%)
Educational level		
Mean	11.2 years	12.0 years
SD	1.9 years	2.1 years
Number of children		
Mean	2.3	2.4
SD	1.3	1.5
Age of children		
Mean	10.8 years	11.1 years
SD	3.1 years	4.7 years
Prior counseling	30 (34.5%)	31 (59.6%)

The intervention also had a strong effect on anxiety. Whereas the pretest mean scores for the experimental and comparison groups were considered high at 46.8 and 43.9 respectively, the posttest mean score for the experimental group decreased significantly to 33.3. The comparison group's mean posttest score of 44.4 remained high. At posttest, the experimental group's mean score would be considered indicative of people with mild anxiety, whereas the posttest mean score for the comparison group remained in the moderate to severe range for anxiety.

The intervention had the smallest effect on trauma symptoms. Although the mean scores from pretest to posttest for the experimental group represented a significant decrease from 24.6 to 11.0 and the mean scores from pretest to posttest for the comparison group remained relatively similar from 24.7 to 28.02, the percentage of variance that could be explained by the

intervention was only .14. The smaller effect size could have been due to several factors and will be discussed in a later section.

A post hoc analysis assessed whether the significant findings supporting the effectiveness of the intervention were consistent across the nine experimental groups and the six practitioners (each set of two practitioners led three groups each). None of the differences among groups or practitioners was near significance, and all were trivial differences.

DISCUSSION AND APPLICATIONS TO SOCIAL WORK PRACTICE

The findings of this study suggest that the psychoeducational group intervention had a meaningful impact in reducing the distressing emotions experienced by women inmates who were infected or affected by HIV/AIDS. These results are consistent with prior studies with other subpopulations infected or affected by HIV/AIDS (Pomeroy, 1994; Pomeroy et al., 1995, 1997). Given the jail environment, however, one might wonder why the current study's effect sizes were so strong. One possible reason is that the majority of women came from highly dysfunctional environments. Although the women in the study were primarily charged with nonviolent crimes, they had histories of child abuse (physical, sexual, and emotional), substance abuse, prostitution, and domestic violence. Their support systems were usually minimal, transitory and, generally, unreliable and dysfunctional. The group leaders' support and the mutual assistance provided by group members may have been the first time many of these women experienced any real, consistent, and therapeutic help in their lives. The opportunity to discuss well-hidden secrets in a confidential atmosphere with others who had similar experiences may have played a part in the effectiveness of the intervention.

Another possible reason for the effects may have been connected to the informational needs of the group members. The female inmates in the study were not knowledgeable about the connections between thoughts, feelings, and behavior. They also had a limited repertoire of coping skills, which had obviously been inadequate given the situation in which they found themselves. Each of the group sessions focused on feelings and the resulting behavior as well as how to cope more adequately with situations that engendered intense feelings.

Group members also appeared to benefit from the information on HIV/AIDS. Many of the women could not distinguish between the myths and facts about the illness. All of the group participants were at high risk for acquiring HIV/AIDS due to their lifestyles. The intervention was designed to

TABLE 3: Mean Outcome Scores of Experimental and Comparison Groups at Pretest and Posttest

	Mean Score		
Outcome Measure	*Experimental Group* n = *87*	*Comparison Group* n = *52*	*PVE*
Beck Depression Inventory			
Pretest	39.5	33.5	.37
Posttest*	17.6	33.9	
State Anxiety Scale			
Pretest	46.8	43.9	.28
Posttest*	33.3	44.4	
Trauma Symptom Checklist			
Pretest	24.6	24.7	.14
Posttest*	11.0	28.0	

NOTE: Analysis of covariance comparing posttest scores of experimental and comparison groups, using pretest score as covariate.
*$p < .001$.

provide women with the opportunity to discuss their attitudes and at-risk behavior related to HIV/AIDS and to obtain factual information concerning the illness.

A third possible reason was that being a member of the group associated with the university became a status symbol among the female inmate population. Each group member was given a pad of paper, a pencil, and a university-embossed folder in which to keep her homework assignments. These items were considered luxuries and highly prized in the jail environment. Women who participated in the group remained seriously motivated to complete the 5-week program to maintain their status. Because the majority of women entering the group had very low self-esteem and were moderately to severely depressed, this small but important factor may have contributed to their feelings of empowerment and overall well-being by the end of the group sessions.

The outcome variable on which the intervention had the smallest effect was trauma symptoms. This may have been due to a variety of reasons. First, a 5-week group may not have been a long enough period of time for group participants to fully resolve the amount of trauma they had experienced in their lives. The majority of women in the group had experienced abuse either in the present or as a child. Many of the inmates had few if any functional social supports. Group participants discussed fears of losing their children due to their incarceration, and several women's families had abandoned

them. The trauma faced by these women was often long-standing and intensely personal. Although the group intervention may have initiated some therapeutic resolve to some of these issues, further counseling was indicated for many of the women. All women who participated in the group intervention were given referrals to agencies in the community for follow-up counseling on their release from the jail.

As is common in clinical outcome studies, the fact that subjects were self-selected and not randomly assigned to the experimental and comparison groups limits the generalizability of the findings. In the present study, the self-selection process yielded a sample that consisted primarily of women who had committed nonviolent offenses and were motivated to make changes in their lives. Whether or not similar results could be obtained with women who had committed violent crimes is a question for future research. Another limitation of the study was the lack of equivalence on the depression scale pretests between the experimental and the comparison group. Although statistical procedures were used to correct for the lack of comparability, they do not erase the possibility that the lack of equivalence may have influenced the results. However, because the experimental group's mean decreased significantly from pretest to posttest and the comparison group's mean remained virtually the same from pretest to posttest, it is unlikely that the improvement was due to the lack of equivalence at pretest.

A third limitation to the study was the lack of control of social desirability. It is conceivable that women in the experimental condition wanted to respond in a manner that would indicate improvement. Future research should assess social desirability as a possible factor influencing favorable results.

Finally, the lack of long-term follow-up data is another limitation of this study. Although it appears that female inmates benefitted from the group treatment while in the jail environment, it is not known whether these effects carried into the outside environment. A study is currently under way that will examine recidivism rates of women who receive the group intervention. While this study examined an intervention designed to benefit a broad spectrum of the problems experienced by female inmates infected or affected by HIV/AIDS, the development of interventions for specific problems (e.g., violence or abuse) could be helpful to those inmates whose primary problems fall in specific categories. Without long-term follow-up data, we cannot assume that the positive effects of this intervention will continue following release from jail.

The intervention described in this study may be an efficient mechanism for social workers to use to enhance the psychosocial functioning of HIV-infected or affected female inmates both inside and outside of the jail setting. It could enhance the stability of the female population within the jail and

possibly lower the recidivism rate for women after leaving the jail system. It may also provide women in jail with the opportunity to experience the benefits of mental health counseling and motivate them to pursue further counseling on release from the jail.

The psychoeducational intervention could also provide practitioners working in the corrections environment with a framework that can be successfully implemented within this often overwhelming system. Social workers in the corrections system often have large caseloads that consist largely of clients in crisis, whom they see individually until the crisis is resolved. This group intervention allows social workers to serve several clients at one time and to provide mental health services that would not otherwise by available.

Future research needs to be conducted to examine the long-term effectiveness of interventions undertaken while inmates are incarcerated. Follow-up research examining the recidivism rates of women who attend mental health programs while in jail is also needed. Interventions that address specific issues such as substance abuse and domestic violence for women inmates should be developed. Examining the effectiveness of these programs could enhance our knowledge of social work methods that could be used within the jail and prison systems.

REFERENCES

Bandura, A. (1990). Perceived self-efficacy in the exercise of control over AIDS infection. *Evaluation and Program Planning, 13*(1), 9-17.

Beck, A. T., & Beamesderfer, A. (1974). Assessment of depression: The depression inventory. In P. Pichot (Ed.), *Modern problems in pharmacopsychiatry* (Vol. 7). Basel: Karger.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 12*, 63-70.

Biegel, D. E., Sales, E., & Schulz, R. (1991). *Family caregiving in chronic illness: Alzheimer's disease, cancer, heart disease, mental illness, and stroke*. Newbury Park, CA: Sage.

Bowes, J. W., & Dickson, J. F. (1991). Support group for those affected by AIDS in the family. *The American Journal of Hospice & Palliative Care*, *35*, 39-45.

Briere, J., & Ruentz, M. (1989. The Trauma Symptom Checklist (TSC-33): Early data on a new scale. *Journal of Interpersonal Violence, 4*(2), 151-163.

Buckingham, S., & Rehm, S. (1987). AIDS and women at risk. *Health and Social Work, 12*, 5-11.

Cadwell, S. (1991). Twice removed: The stigma suffered by gay men with AIDS. *Smith College Studies in Social Work, 61*(3), 236-246.

Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Boston: Houghton Mifflin.

Carl, D. (1986). Acquired immune deficiency syndrome: A preliminary examination of the effects on gay couples and coupling. *Journal of Marital and Family Therapy*, *12*, 241-247.

Chung, J., & Magraw, M. M. (1992). A group approach to psychosocial issues faced by HIV-positive women. *Hospital and Community Psychiatry, 43*, 891-894.

Corcoran, K., & Fischer, J. (1987). *Measures for clinical practice: A sourcebook*. New York: Free Press.

Coulson, G. E., & Nutbrown, V. (1992). Properties of an ideal rehabilitative program for high-need offenders. *International Journal of Offender Therapy and Comparative Criminology, 36*, 203-208.

El-Bassel, N., Ivanoff, A., Schilling, R. F., Gilbert, L., Borne, D., & Chen, D. R. (1995). Preventing HIV/AIDS in drug-abusing incarcerated women through skill building and social support enhancement: Preliminary outcomes. *Social Work Research, 19*, 131-141.

El-Mallakh, P. L., & El-Mallakh, R. S. (1989). Group psychotherapy for AIDS patients. *AIDS Patient Care, 3*, 18-20.

Frierson, R., Lippman, S. B., & Johnson, J. (1987). AIDS: Psychological stresses on the family. *Psychosomatics, 28*, 65-68.

Gabel, K., & Johnston, D. (1995). Female criminal offenders. In R. L. Edwards (Ed.), *Encyclopedia of social work* (pp. 1015-1027). Washington, DC: NASW Press.

Getzel, G. (1991). Survival modes for people with AIDS in groups. *Social Work, 36*, 7-11.

Greif, G. L., & Porembski, E. (1988). AIDS and significant others: Findings from a preliminary exploration of needs. *Health and Social Work, 13*, 259-264.

Hammen, C. (1995). The social context of risk for depression. In K. Craig & K. S. Dobson (Eds.) *Anxiety and depression in adults and children* (pp. 82-99). Thousand Oaks, CA: Sage.

Herdt, G., & Boxer, A. M. (1991). Ethnographic issues in the study of AIDS. *Journal of Sex Research, 28*, 171-187.

Hoffman, M. A. (1993). Multiculturalism as a force in counseling clients with HIV-related concerns. *The Counseling Psychologist, 21*, 712-731.

James, J. F., Gregory, D., Jones, R., & Rundell, O. (1985). Mental health status of prisoners in an urban jail. *Criminal Justice and Behavior, 12*, 29-53.

Land, H., & Harangody, G. (1990). A support group for partners of persons with AIDS. *Families in Society, 71*, 471-481.

Mayer, A., & Spiegel, L. (1992). A parental support group in a pediatric AIDS clinic. Usefulness and limitations. *Health and Social Work, 17*, 183-191.

Miller, D., & Green, J. (1985). Psychological support and counseling for patients with acquired immune deficiency syndrome (AIDS). *Genitourinary Medicine, 61*, 273-278.

Morokiff, P., Holmes, E., & Weisse, C. S. (1987). A psychoeducational program for HIV seropositve persons. *Patient and Education Counseling, 10*, 287-300.

Pomeroy, E. C. (1994). *A psychoeducational group intervention for family members of persons with AIDS: An effectiveness study*. Unpublished doctoral dissertation, University of Texas-Austin.

Pomeroy, E. C., Rubin, A., Van Laningham, L., & Walker, R. J. (1997). "Straight Talk": The effectiveness of a psychoeducational group intervention for heterosexuals with HIV/AIDS, *Research on Social Work Practice, 7*, 149-164.

Pomeroy, E. C., Rubin, A., & Walker, R. J. (1995). The effectiveness of a psychoeducational, task-centered group intervention for family members of persons with AIDS, *Social Work Research, 19*, 142-152.

Powell-Cope, G. M., & Brown, M. A. (1992). Going public as an AIDS family caregiver. *Social Science and Medicine, 34*, 571-580.

Rehm, L. P. (1995). Psychotherapies for depression. In K. Craig & K. S. Dobson (Eds.), *Anxiety and depression in adults and children* (pp. 82-99). Thousand Oaks, CA: Sage.

Reid, W. J., & Epstein, L. (1972). *Task-centered casework*. New York: Columbia University Press.

Reidy, M., Taggart, M. E., & Asselin, L. (1991). Psychosocial needs expressed by the natural caregivers of HIV-infected children. *AIDS Care, 3*(3), 331-343.

Rounds, K. A., Galinsky, M. J., & Stevens, L. S. (1991). Linking people with AIDS in rural communities: The telephone group. *Social Work, 36*, 13-18.

Rubin, A., Pomeroy, E. C., & Gordon, V. (1995, April 8-11). *Experimental and quasi-experimental studies on the effectiveness of a psychoeducational/task-centered group intervention approach for people infected or affected by AIDS*. Paper presented at the First National Conference of the Society for Social Work and Research, Washington, DC.

Singer, M., Bussey, J., Song, L., & Lunghofer, L. (1995). The psychosocial issues of women serving time in jail. *Social Work, 40*, 103-113.

Spielberger, C. D. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.

Stephan, J., & Jankowski, L. (1991, June). *Jail inmates, 1990*. Washington, DC: Government Printing Office.

Stevens, J. (1992). *Applied multivariate statistics for the social sciences*. Hillsdale, NJ: Lawrence Erlbaum.

Tiblier, K. B., Walker, G., & Rolland, J. S. (1989). Therapeutic issues when working with families of persons with AIDS. In E. D. Macklin (Ed.), *AIDS and families* (pp. 81-127). New York: Harrington Press.

U.S. Department of Justice. (1991, March). *Women in prison*. Washington, DC: Government Printing Office.

Walker, G. (1991). *In the midst of winter: Systematic therapy with families, couples, and individuals with AIDS infection*. New York: Norton.