

Applying the Creating Lasting Family Connections Marriage Enhancement Program to Marriages Affected by Prison Reentry

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Divorce proportions are currently high in the US and they are even higher among those who are incarcerated with substance abuse problems. Although much research has examined marital interventions, only two studies have examined marital interventions with prison populations. There is some empirical evidence that incarcerated couples benefit from traditional marital therapy (O'Farrell and Fals-Stewart, 1999, Addictions: A comprehensive guidebook, New York, Oxford University Press). An adaptation of the evidencebased Creating Lasting Family Connections program was implemented with 144 married couples, where one spouse was incarcerated, in a southern state with particularly high divorce and incarceration proportions. Results suggested that married men exposed to the program had larger improvements in some relationship skills relative to a convenience sample of men not so exposed. Both husbands and wives exposed to the program exhibited similar and significant increases in relationship skills. The results were comparable to a Prevention and Relationship Enhancement Program adaptation for inmates. The implications of the findings for prevention practitioners are discussed.

Keywords: Prison Populations; Marriage; Prevention

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Recent estimates suggest that 85% of the U.S. population will marry; however, 40–50% of all marriages will end in divorce (Popenoe & Whitehead, 2010). These high rates of marital dissolution are significantly higher in the U.S. South, where this study was conducted (Elliot & Simmons, 2011). Marital dissolution is higher in populations with stressful life situations, such as incarceration or separation from a spouse (Massoglia, Remster, & King, 2011). Dissolution is also more likely among those who have previously

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been incarcerated (Apel, Blokland, Nieuwbeerta, & Schellen, 2010). As noted by Einhorn and her colleagues (Einhorn et al., 2008), prevention interventions are needed for these populations with a high level of marital distress.

Although most marriages face challenges, those that have been affected by incarceration and/or substance abuse issues are challenged with multiple stressors. Therapeutic efforts have had some success in addressing the marital problems of those recently incarcerated or those with substance abuse problems (Center for Substance Abuse Treatment [CSAT], 2005; O'Farrell & Fals-Stewart, 1999; Slaght, 1999). For those in recovery, participating in traditional couple therapy was more likely to be abstinent; they had better relationships, they had a decrease in the incidence of separation and divorce, and they had a reduction in domestic violence. In this same study, the benefits for those in recovery were also larger than for those in a comparison group who were only exposed to individual therapy (O'Farrell & Fals-Stewart, 1999). Family members who do not participate in treatment/education programs can be a negative influence on substance-abusing criminal offenders upon reentry to the community (CSAT, 2005). Furthermore, Slaght (1999) found that the only significant predictor of relapse at 3 months after release was whether the offender was getting along with family members. These findings in concert underscore the conclusion from several studies (Jeffries, Menghraj, & Hairston, 2001; Slaght, 1999; Wright & Wright, 1992) that more extensive efforts to involve family members in drug treatment are needed.

Relationship Skills Needed for a Healthy Marriage

Communication, conflict resolution, inter-personal skills, and relationship management skills are extremely important in relationships. Gottman's (1994; Gottman & Levenson, 2000) research has demonstrated that escalating negative communication patterns among spouses are strong predictors of marital dissolution. Nevertheless, early perceived negative communication may be more predictive of dissolution than actual behavior (Markman, Rhoades, Stanley, Ragan, & Whitton, 2010). Across the course of relationships, negative communication decreases for all couples; however, there is less of a decrease for couples on the road to dissolution (Markman, Rhoades et al., 2010).

Relationship characteristics such as emotional awareness, emotional expression, and intra-personal skills are also important in relationships. A lack of positive social support in the beginning of a relationship has been shown to be related to negative communication patterns (Sullivan, Pasch, Johnson, & Bradbury, 2010). Negative attributions for partner behavior are also related to more negative and less positive behavior by the partner making negative attributions (Osterhout, Frame, & Johnson, 2011).

Relationship commitment has been demonstrated as a necessary component of successful relationships, as it frames someone's intentions to stay in the relationship, as well as one's psychological attachment to the relationship. Commitment can also be conceptualized as perceived constraints to ending the relationship (e.g., a shared loan), where these constraints are related to a lower perceived likelihood of relationship dissolution (Rhoades, Stanley, & Markman, 2012), and satisfaction is positively related to favorable constraints and negatively related to unfavorable constraints (Kurdek, 2006). Partners who actively monitor the health of their relationship are more likely to have higher levels of commitment (Kurdek, 2009). Relationship satisfaction is related to commitment (Agnew, Martz, & Rusbult, 1998; Le & Agnew, 2003; Rhoades et al., 2012; Rusbult, 1980) and changes in relationship satisfaction/adjustment are related to more global assessments of life satisfaction (Stanley, Ragan, Rhoades, & Markman, 2012).

Improving Marital Skills in High-Risk Populations

A review of the literature uncovered only two prevention efforts to improve the marriages of inmates returning to the community. Accordino and Guerney (1998) implemented the Relationship Enhancement Program (REP) with Jewish prisoners and their wives. The REP (Accordino & Guerney, 1998) consists of two sessions, each lasting 8 hours. The prevention material focuses on developing the following skills: empathic, expressive, discussion/negation, problem/conflict resolution, self-change, other-change, facilitation (i.e., continuing the use of learned skills), generalization (i.e., how to use developed skills outside of the marriage), and maintenance (i.e., maintaining skills learned). Unfortunately, the authors did not report any data on changes in relationship outcomes and processes as a result of the program (Accordino & Guerney, 1998).

The Prevention and Relationship Enhancement Program (PREP; Markman, Stanley, & Blumberg, 2010) developed by Howard Markman and his colleagues was adapted (PREP: PREP Inside and Out-Marriage Education for Inmates) for implementation with inmate populations (Einhorn et al., 2008). Curriculum adaptations included additional communication skills training, modeling how to complete homework assignments, capturing inmates' attention quickly, and providing examples, videos, and movies that are specific to inmates' lives and current situations (Einhorn et al., 2008). This program consists of six weekly sessions lasting 2 hours per session delivered by prison staff and chaplains. The topical content of the program focuses on problem-solving skills, ground rules for relationships, unrealistic expectations, protection of friendship, and negative communication patterns. The study reported involved an intervention group only design, where the intervention occurred while individuals were still incarcerated. Attrition was particularly high in this study between pretest and posttest prior to reentry, as data from only 57% of the original sample of 448 participants were available for analysis. The study reported improved outcomes and relationship processes for all variables examined: satisfaction, commitment, confidence, communication skills, friendship, negative interaction, and loneliness (Einhorn et al., 2008). These studies suggest the need for a program that (1) can be implemented with inmates upon reentry to reduce program attrition, which (2) offers the added benefit of these skills being taught more proximal to when the learned skills can be enacted.

Creating Lasting Family Connections (CLFC) Marriage Enhancement Program

The Council on Prevention and Education: Substances (COPES), Inc., developed a collaborative, community-based effort to strengthen the marriages of individuals and their spouses recently reentering the community after incarceration. The project was designed specifically to (1) increase the likelihood of marital stability and (2) promote marriage and relationship skills with this high-risk population. This program is an adaptation of the Creating Lasting Family Connections program (Strader, Collins, & Noe, 2000; Strader, & Noe, 1998a,b,c,d; Strader, Noe, & Crawford-Mann, 1998), which is listed on the Substance Abuse and Mental Health Services Administration's National Registry of Evidence-based Programs and Practices. The adapted version is called the Creating Lasting Family Connections Marriage Enhancement Program (CLFCMEP).

The substantive topics addressed in program sessions include marriage enrichment, effective communication, refusal and conflict resolution skills, using positive parenting techniques, and encouraging responsible and healthy attitudes and behaviors regarding substance abuse. This approach was specifically designed to cultivate an atmosphere of inclusion, respect, and cultural sensitivity for a high-risk audience traditionally considered resistant and difficult to recruit and retain in a program of significant scope and duration.

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The larger body of literature of relationship education research categorizes programs into four types of strategies used by programs: awareness, feedback, cognitive change, and skills training (Halford, Markman, Kline, & Stanley, 2003). Awareness activities focus on teaching and making relationship partners aware of relationship processes that can lead to negative relationship outcomes. Feedback education provides formal information to partners on the areas of their relationship where there may be deficits that will lead to negative relationship outcomes (e.g., through feedback from a validated inventory). Cognitive change activities get partners to talk about aspects of their relationship that promote commitment and get partners to not make negative attributions about partner behaviors. Skills training is largely didactic in nature, where couples are taught about skills to improve their relationship and they may be given exercises to enact these learned skills.

CLFCMEP largely uses cognitive change and skills training as the methods to educate couples and improve relationship quality. Like most relationship education programs, CLFCMEP consists of a core set of didactic lessons where relationship partners are largely taught relationship communication skills and self-awareness skills (e.g., how their behavior affects their partner). The former are particularly amenable to change with treatment programs of this duration (Hawkins, Stanley, Blanchard, & Albright, 2012). There are also exercises accompanying most lessons where couples can enact the learned skills. Some exercises focus on cognitive change, as several exercises (1) ask relationship partners to reflect upon how their past relationships and behavior in their current relationship have brought them to the present state of their relationship; (2) ask couples to envision and discuss a positive future for their relationship; and (3) teach partners to have empathy by taking on the perspective of the partner (i.e., discouraging negative attributions for partner behavior).

A key factor in our theoretical approach to effective treatment and prevention is human "connectedness" (Strader et al., 2000). Research on adolescence identifies family connectedness as one of the most important factors for psychological well-being and positive outcomes (Blum & Rinehart, 1997; Doll & Lyon, 1998; Field, Diego, & Sanders, 2001); however, studies relating connectedness to adult marital outcomes are lacking. Social support systems represent a proxy for connectedness among adults, and they are an important predictor of substance abuse treatment compliance and outcomes (Booth, Russell, Soucek, & Laughlin, 1992). Similarly, improved personal relationships during substance abuse treatment are associated with reduced drug use and greater program compliance (Hiller, Knight, & Simpson, 1996).

We define connectedness in this context as feeling emotionally close, cared about, and listened to in one's family and with others in the broader community. Furthermore, when "connected," one is able to express personal thoughts and feelings, and to discover that one's self and one's family are rooted in—and are connected to—a community of "others" in significant and meaningful ways. Feeling or perceiving one's self to be connected (to self, family, and community) appears to create a protective shield of resiliency and strength to resist problem behaviors. From this reference, the term "Connect-Immunity" was developed. Being able to reflect upon and reconnect to one's past pain or abuse (including pains/abuse from childhood) can open the door to many new insights into how to heal one's self and their partner in their current marriage relationship. This information can be helpful in avoiding future, recurring wounds in the relationship, and can ultimately lead to peace and mutual comfort.

The CLFC model proposes that connectedness is a critical protective and healing force in human beings—young or old, rich or poor, male or female. Deep, healthy human connections build strong protective shields (or immunity) to prevent harm and provide both nurturing and healing support even when challenges penetrate this shield. A more thorough review of the theoretical framework underlying the CLFC model appears elsewhere (see Strader et al., 2000).

The CLFC model is a good fit to reentry marital relationships, because it focuses on positive relational changes for the entire family system, which will enhance and support the reentry process for the offender. Conversely, in the absence of such support for both the family and offender, the offender will likely revert to his/her prior antisocial behavior (Slaght, 1999). Furthermore, when the reentering inmate recognizes that the community is invested in their future, he or she often has the potential for positive, long-term change.

Overview

Toward these ends, data were collected from prison residents recently released. Participants in the CLFCMEP program participated with their spouses. Participants completed surveys containing study measures prior to program implementation, immediately after program implementation, and 3 months after program implementation. A convenience sample of reentry husbands similar to the male program participants also completed the same surveys at the same time intervals. This represents nonrandom assignment to condition, making this a quasi-experimental design. As such, this analysis should only be considered a preliminary approximation to what would be found in a randomized controlled trial. On the basis of the CLFC fostering a sense of connectedness in family relationships, we predicted that (1) CLFCMEP husbands would exhibit improved relationship skills (i.e., communication skills, conflict resolution skills, intrapersonal skills, emotional awareness, emotional expression, inter-personal skills, relationship management skills, relationship satisfaction, and relationship commitment) relative to our comparison sample and (2) both husbands and wives participating in the CLFCMEP program would exhibit an increase in relationship skills. The CLFCMEP program (typically 10 once-a-week sessions) was implemented in two formats with one specifically designed to be more amenable to completion by high-risk participants (i.e., an intensive weekend retreat format). The latter is more amenable to completion, as reentry populations often have competing pressures to get a job, see their parole officer, and attend Alcoholics/Narcotics Anonymous meetings. We predicted that (3) we would not find any evidence of differences in the outcomes experienced by those participating in either program format.

METHOD

Participants

The participants for this study were 250 married individuals who voluntarily participated in the COPES, Inc., Jefferson County Healthy Marriage Initiative (i.e., intervention group) or one of the programs typically offered for those being released from prison (i.e., the comparison group). All participants were recruited through local social services organizations or the Kentucky Department of Corrections. Data were collected from intervention group participants between October 2007 and February 2011 and data were collected from the comparison group between February 2008 and January 2011. Of the 250 individuals, 230 participated in the intervention condition and 20 participated in the comparison condition. As can be seen in Table 1, the individuals were in their mid-thirties (M = 33.72) and predominantly African American (57%) or Caucasian (40%) with very few Hispanics (3%) being represented in the sample. Close to half lived with their spouse at the time of the study (45%), which is lower than might be expected for married couples. This is due to participants fulfilling requirements of their parole (e.g., living in a halfway house). Examining the background characteristics of these individuals, the majority of the

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Ν	All cases 250	Intervention analysis 135	Couple analysis 230 (or 115 couples)
Pretest participants	250 (100%)	135 (100%)	230 (100%)
Posttest participants	208 (83%)	114 (84%)	189 (82%)
Follow-up participants	204 (82%)	111 (82%)	186 (81%)
Dropped out post or follow-up	46 (18%)	24 (18%)	44 (19%)
Male	135 (54%)	135 (100%)	115 (50%)
Hispanic	8 (3%)	6 (4%)	7 (3%)
Caucasian	101 (40%)	51 (38%)	95 (41%)
African American	143 (57%)	81 (60%)	129 (56%)
Live with relationship partner	113 (45%)	72 (53%)	101 (44%)
Has child	207 (83%)	111 (82%)	188 (82%)
Lives with <18 year old child	153 (62%)	70 (53%)	141 (62%)
Independently housed	165 (67%)	69 (52%)	155 (68%)
High school grad or GED	243 (98%)	132 (99%)	223 (98%)
Employed	134 (54%)	61 (46%)	122 (53%)
Age (average)	33.72	34.80	33.21

TABLE 1 Sample Sizes and Percents for Sample Characteristics

participants had children (83%) and about two thirds of the clients reported living with their children (62%) and being independently housed (67%). Most clients had a high school diploma or a GED (98%) and about half (54%) were employed. There were two separate subsets of these cases examined in our analysis.

Intervention analysis

The first subset was used to examine whether there was differential change in relationship skills between the intervention and comparison group for men only (hypothesis 1). This subset consists of 115 husbands participating in the Jefferson County Healthy Marriage Initiative, which implemented the CLFCMEP as previously adapted for couples and 20 husbands participating in other programs typically offered to prisoners upon release.

$Couples \ analysis$

The second subset was used to examine whether there were positive changes in relationship skills in CLFCMEP husbands and wives (hypothesis 2) and whether treatment format moderated positive changes (hypothesis 3). The second subset consists of 115 married couples (i.e., 230 persons) participating in the CLFCMEP. The husband was previously incarcerated and the wife participated with them in the program. Couples identifying as *married* were eligible to receive services.

We also explored the background characteristics for these two subsets of data, which also appear in Table 1. The sample subsets were generally similar with one exception. More specifically, the intervention analysis sample subset had fewer participants who were independently housed than the couple analysis sample subset (52% vs. 68%). The recruiting methods for intervention and comparison participants both highlighted that the program was for recent reentry husbands, and program staff highlighted this in the initial screening of participants (i.e., collecting basic background information). Data were not collected on the number of months participants were in reentry; however, due to the nearly identical recruitment methods used for both groups, we have no reason to suspect that the length of time in reentry was different for intervention and comparison husbands.

Selectivity Biases

Two alternative explanations for putative study findings are that (1) intervention effects could be due to nonrandom assignment of individuals to the intervention and comparison groups (i.e., a quasi-experimental design), and (2) effects could be due to participants who are likely to exhibit negative outcomes being more likely to drop out of the study, especially among those exposed to CLFCMEP. With respect to the latter, attrition from the study was relatively low and all participants who completed the posttest survey completed the program. Of the 115 husbands participating in the intervention group, 95 (or 83%) completed the intervention and posttest survey and 93 (or 81%) completed the follow-up survey. Of the 20 husbands participating in the comparison group, 19 (or 95%) completed the posttest survey and 18 (or 90%) completed the follow-up survey. Both of these potential sources of selectivity biases were addressed using a Heckman two-step procedure (Heckman, 1976, 1979). This approach involves regressing either (1) intervention group or (2) attrition status on participant background characteristics in the first step using a probit regression model. Intervention status was also included as a predictor when examining attrition as the dependent measure. The second step involves producing predicted scores, where these scores are transformed to an inverse Mill's ratio (IMR), and the IMR is included as a predictor in all inferential analyses.

Prior to performing the first step probit models, missing background characteristic data were imputed using the Expectation Maximization algorithm (Dempster, Laird, & Rubin, 1977), as implemented in PASW 18.0. Due to the necessity of eliminating any case with any missing background characteristic, we felt that imputation posed fewer inferential risks than eliminating entire cases, as less than 4% of observations were missing for any variable. It is important to note that data imputation was not used for our dependent measures of interest. Our selectivity bias analyses were conducted separately for the two sample subsets, where we examined attrition and assignment biases in the intervention versus comparison sample subset and only attrition biases in the couples sample subset.

Examining selectivity biases in the intervention comparison sample subset, there was evidence to suggest that participants in the comparison group were likely to be slightly older, z = -2.35, p = .02; however, the overall model did not significantly predict assignment to condition, $\chi^2(126) = 127.58$, p = .44. There were no significant predictors of attrition for this sample subset, and the overall model was not significant, $\chi^2(125) = 133.58$, p = .28. Examining selectivity biases due to attrition in our couple sample subset, Hispanic participants, z = 2.08, p = .04, and those who lived with their partner, z = 2.18, p = .03, were more likely to drop out of the study; however, the overall model did not predict attrition, $\chi^2(602) = 636.44$, p = .16. On the basis of these results, we created an IMR representing biases due to attrition in the couple sample subset and an IMR representing biases due to attrition in the couple sample subset.

Measures

Questionnaire

Clients completed a questionnaire at each of the three waves of the study that included 71 items inquiring about various relationship skills using a 1 (strongly disagree) to 5 (strongly agree) Likert scale. Some of the relationship skill items, developed by McGuire and Associates, were adapted from scales by Olson and colleagues (Barnes & Olson, 2003; Olson, 2006; Olson, Fournier, & Druckman, 1986; Olson & Schaefer, 2000) to more closely align with the content and principles of CLFC. Scale scores were calculated by taking the average of responses to items comprising each scale. The nine scales measured in the data with example item content were as follows:

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- Communication Skills ($\alpha = .80$, *n* items = 8). Example item: I am able to express my true feelings to those whom I trust.
- Conflict Resolution Skills ($\alpha = .53$, n items = 6). Example item: Even when in a conflict with someone I trust, I can respectfully share my thoughts and feelings.
- Intra-Personal Skills ($\alpha = .65$, n items = 9). Example item: I am honest with myself about what I feel and need.
- *Emotional Awareness* ($\alpha = .77$, *n items* = 9). Example item: Those I trust can really understand my hurts and joys.
- *Emotional Expression* ($\alpha = .81$, *n items* = 9). Example item: I often let others know what I am feeling.
- Inter-Personal Skills ($\alpha = .81$, n items = 8). Example item: I'm open and honest with what I say to those I trust.
- Relationship Management Skills ($\alpha = .66$, n items = 8). Example item: I know I can count on some of the people in my life.
- Relationship Satisfaction ($\alpha = .89$, *n* items = 7). Example item: I am happy with how conflict is resolved in my relationships.
- Relationship Commitment ($\alpha = .79$, n items = 7). Example item: I trust my partner enough to stay with them.

Alphas were acceptable for all of the scales, except for the Conflict Resolution Skills scale. The alpha for the Conflict Resolution Skills scale was not easily remedied, as it was not substantially improved by dropping a small number of items. As such, findings for the Conflict Resolution Skills scale should be interpreted with caution.

Preliminary examination of the data indicated that these nine relationship skills were highly correlated at each wave. We performed a principal component at each wave to determine whether all of these relationship skills loaded on a single relationship skills component. This was indeed the case, as all loadings on the first principal component were greater than .60 at each time period. Furthermore, alphas were high at pretest (.88), posttest (.92), and follow-up (.93) for this aggregate scale. As such, we created a relationship skills aggregate, which serves as a summary measure for all of the relationship skills examined.

Procedure

No studies have directly examined the deficits in relationship skills among reentry populations to our knowledge. Toward this end, an informal needs assessment prior to the implementation of the program was conducted to guide program adaptations. The needs assessment was conducted via focus groups with key informants, such as Department of Corrections' personnel, probation/parole officers, and social service clinicians, as well as members of the reentry population. Although this only serves as preliminary and unvalidated evidence, it was noted in these groups that reentry populations tend to struggle in most of their relationships (e.g., parents, siblings, spouses, relationship partners, children, employers). Common themes were that reentry populations experience problems with delayed gratification, impulse control, traumatic stress, and low self-awareness. Furthermore, as is well known, these problems are likely compounded by frequent substance abuse or dependency in prison populations (Winterfield & Castro, 2005). Although not established through a quantitative empirical study for this population, marital distress likely occurs through common mechanisms, such as communication problems, poor conflict resolution, inter-personal skill deficits, and relationship management skill deficits.

The southern state of Kentucky, where this study was conducted, has seen vast growth in prison populations in the past decade, where the prison population has more than doubled in size (2.6 times larger: Pew Center on the States, 2009, 2010). These problems are compounded by 38% of these inmates being drug offenders, as substance abuse problems are often associated with marital distress (Whishman, 1999). A large proportion of this population in the Jefferson County metropolitan area (where the city of Louisville is located) indicates that they are married or that they were previously married (and currently divorced) after release from prison (39%; Allen, Nicholson, Kruzich, & Hardison, 2005).

Due to the large number of married inmates reentering the local community and our mandate to serve a large proportion of this population, a comparison group was not readily available; however, another initiative with a comparison group of reentry men was being conducted within the same time frame. These men only participated in other programs typically required upon prison release (i.e., treatment as usual). The services to which these comparison men were exposed depended on their needs, but the services typically received by this population are exposure to parole staff (i.e., officers and social service staff) and after-care programming, such as residential reentry centers, training and job assistance, substance abuse treatment, and group-based substance abuse support (e.g., Alcoholics/Narcotics Anonymous). Although this comparison group serves as a sample of convenience, it does allow us to conduct a more meaningful and rigorous analysis of the data.

Participants in both groups were recruited through the use of brochures in locations that would be seen by reentry populations and referrals (e.g., friends or family aware of the program). The brochures recruiting intervention participants highlighted that the program was a relationship skills training/education for couples, where one couple member was recently released from prison. The brochures recruiting the comparison group focused on relationship skills training/education for fathers. The 20 married fathers examined as a comparison group in this study were those who were randomly assigned to the comparison group for the purposes of another study (McKiernan, Shamblen, Collins, Strader, & Kokoski, in press).

The CLFCMEP was offered in a weekend retreat format (two 8-hour sessions) or a 10-session format (2 hours per session) to which participants were assigned nonrandomly, based on their availability. Although this does introduce variability into the intervention being administered, this was necessary to accommodate the schedules of the target population. Twelve guided exercises were employed to strengthen marriage through learning open, nondefensive communication skills. The specific topical content and lessons of the CLFCMEP intervention were as follows: (1) job descriptions of parents and children in families; (2) a shared vision for a happy marriage; (3) roles in a marriage and raising children based on family experiences; (4) expressing and validating emotions and discuss differing beliefs; (6) learning to appreciate a partner's strengths and weaknesses; (6) how your past family experiences may impact your current relationships; (7) how to listen and respond to your partner; (8) recognizing defenses in relationships; (9) recognizing your and your partner's needs; (10) listening and validation skills; (11) practicing skills and conflict management; and (12) rediscovering romance. These skills are gained through the couple developing a shared vision, understanding positive and negative traits, personal and others' past wounds and needs, active listening, expectations, compassion, romance, and learning to "fight fairly" by employing conflict resolution skills including mutual validation and respect. The group setting allowed for couples to learn from others by sharing hope and practice skills in a safe environment. Two trainers (typically one male and one female) led all sessions. All trainers were certified prevention specialists and certified in CLFC (the latter certification requires completion of a 5-day, 40-hour training).

The survey used to collect data for this report was administered to all participants at pretest (i.e., prior to any intervention activities), posttest, and 3-month follow-up. Pretest

and posttest surveys were administered by program staff using a set of standard survey protocols. Informed consent was obtained from all participants before completing the survey. All participants were informed that their participation in the survey was voluntary and their decision to not complete the survey would not affect their participation in the program. Participants were also informed that their responses were confidential and would not be shared, except in aggregate form for reporting purposes. Full proctoring (i.e., staff reading the survey to participants) was offered to those participants who had difficulty reading, but this was used by less than 3% of participants. Completed surveys were placed in a sealed envelope and sent to the evaluator for data entry and analysis. Follow-up surveys were largely collected through surveys mailed to participants. CLFCMEP participants were offered a \$50 gift card as an incentive for completion of both the posttest and follow-up surveys.

Analysis

All analyses performed were concerned with whether there were changes over time among those who participated in the intervention group. A convenience sample of comparable husbands being released from prison allowed us to examine this change for male intervention participants to male comparison participants. Thus, the former design reflects a purely correlational research design and the latter design reflects a quasi-experimental (and correlational) research design.

Hierarchical Linear Modeling (HLM) was conducted to address multiple observations being nested within each participant (i.e., multiple wave repeated observations) for all analyses and this approach is more consistent with an intent-to-treat approach (Raudenbush & Bryk, 2002). All models were posed as random intercept models, which assume that variability may arise among individuals due to nesting. Analyses for couples examined both husbands and wives in the same equation using the form suggested by Raudenbush and his colleagues (Raudenbush, Brennan, & Barnett, 1995). These analyses included separate slopes and intercepts for husbands and wives in the same equation. Both linear and quadratic contrasts were included in our models, as linear \times intervention interactions represent sustained intervention effects, and quadratic \times intervention interactions represent immediate intervention effects that decayed over time. Stated differently, the latter quadratic effect tests whether initial gains due to the intervention are lost.

In our model examining differential change for intervention men and comparison men (hypothesis 1), at level one (i.e., the repeated observation level), all outcomes were seen as being predicted by orthogonally coded linear (-1, 0, 1) and quadratic contrasts (1, -2, 1; i.e., "u"-shaped) time contrasts:

 $Outcome = \pi_0 + \pi_1(Linear) + \pi_2(Quadratic)$

At level two (i.e., the individual level), the level one intercept was seen as being predicted by a coded contrast (-1 vs. 1) representing the intervention group, our correction for selectivity due to assignment, and our estimate of random variability:

 $\pi_0 = \beta_{00} + \beta_{01}(\text{Intervention}) + \beta_{02}(\text{Selection IMR}) + r_0$

The remaining level two equations represented the cross-level interactions between time and intervention group:

 $\pi_1 = \beta_{10} + \beta_{11}(Intervention)$

 $\pi_2 = \beta_{20} + \beta_{21}(Intervention)$

In our models examining change only for intervention group couples (hypothesis 2), at level one (i.e., the repeated observation level), all outcomes were seen as being predicted by orthogonally coded linear (-1, 0, 1) and quadratic contrasts (1, -2, 1; i.e., "u"-shaped) time contrasts for husbands and wives separately:

$$\begin{split} \text{Outcome} &= \pi_0(\text{Husband Constant}) + \pi_1(\text{Wife Constant}) + \pi_2(\text{Husband Linear}) \\ &+ \pi_3(\text{Wife Linear}) + \pi_4(\text{Husband Quadratic}) + \pi_5(\text{Wife Quadratic}) \end{split}$$

At level two (i.e., the individual level), the level one intercepts were seen as being predicted by our correction for selectivity due to attrition and our estimates of random variability:

 $\pi_0 = \beta_{00} + \beta_{01} (\text{Selection IMR}) + r_0$ $\pi_0 = \beta_{10} + \beta_{11} (\text{Selection IMR}) + r_1$

The remainder of the level two equations simply represented an intercept with no predictors:

 $\pi = \beta$

We also performed a series of models that were nearly identical to the prior model; however, we also explored whether attending the weekend retreat implementation moderated intervention effects (hypothesis 3). More specifically, at level two, we included a predictor for husbands and wives representing whether they attended the weekend retreat (-1 =attended 10 week sessions $[n_{couples} = 93]$ or 1 = attended weekend retreat $[n_{couples} = 51]$):

 $\begin{aligned} \pi_0 &= \beta_{00} + \beta_{01}(\text{Selection IMR}) + \beta_{02}(\text{retreat}) + r_0 \\ \pi_1 &= \beta_{10} + \beta_{11}(\text{Selection IMR}) + \beta_{12}(\text{retreat}) + r_1 \end{aligned}$

We also entered the cross-level interactions for husband and wife linear and quadratic effects, which represent whether there were differential changes over time for husbands and wives who attended the 10-week sessions or the weekend retreat:

 $\begin{aligned} \pi_2 &= \beta_{20} + \beta_{21}(\text{retreat}) \\ \pi_3 &= \beta_{30} + \beta_{31}(\text{retreat}) \\ \pi_4 &= \beta_{40} + \beta_{41}(\text{retreat}) \\ \pi_5 &= \beta_{50} + \beta_{51}(\text{retreat}) \end{aligned}$

All models were run using SPSS 18.0.

RESULTS

Changes in Relationship Skills for Men Exposed and Not Exposed to the Intervention

Hypothesis one predicted that we would see more positive relationship skill change for husbands in the intervention group relative to husbands in the comparison group. We first examined the pattern of means for relationship skills by condition and wave, which appears in Table 2. As can be seen in the table, the pattern of changes in means by condition for most scales is similar. The contrast of changes in the intervention and comparison groups appears in Table 3. Statistically significant effects of particular interest appear in

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		Interve	ntion		Compa	rison
Ν	Pre 115	Post 98	Follow-up 96	Pre 20	Post 19	Follow-up 18
Communication skills	3.84	4.07	4.13	4.00	4.11	3.95
Conflict resolution skills	2.99	3.19	3.31	2.95	2.96	2.96
Intra-personal skills	3.23	3.40	3.41	3.18	3.28	3.20
Emotional awareness	3.42	3.62	3.70	3.50	3.64	3.54
Emotional expression	3.65	3.87	3.98	3.69	3.71	3.78
Inter-personal skills	3.54	3.82	3.87	3.66	3.66	3.66
Relationship management skills	3.65	3.82	3.82	3.61	3.56	3.60
Relationship satisfaction	3.50	3.92	3.91	3.43	3.51	3.67
Relationship commitment	4.27	4.39	4.35	4.32	4.14	4.31
Relationship skills (avg. of 9 prior skills)	3.57	3.79	3.83	3.59	3.62	3.63

TABLE 2 Intervention and Comparison Unadjusted Cell Means for Study Outcomes

columns five and six (i.e., Intervention \times Linear and Intervention \times Quadratic) of Table 3. The findings for the individual scales and the aggregate relationship skills scale appear in both tables. Findings were in the same direction for all scales; however, the Intervention × Linear and Intervention × Quadratic interactions failed to reach a conventional level of significance for some of the scales. Specifically, the changes in the intervention group were more positive than those in the comparison group only for communication skills, conflict resolution skills, emotional awareness (marginal), and inter-personal skills. Relationships commitment exhibited an initial increase that was larger in the intervention group relative to the comparison group, but this effect decayed over time. As suggested by the significant effect for our aggregate relationship skills scale, and as can be seen in Figure 1, the general pattern of results suggested that relationship skills remained relatively constant for the comparison group; however, relationship skills improved for the intervention group. More specifically, relationship skills exhibited a large increase between pre and posttest for the intervention group and the level of relationship skills remained high and increased slightly between post-test and follow-up for the intervention group.

Change Over Time in Relationship Skills for CLFCMEP Husbands and Wives

Hypothesis two predicted that there would be positive relationship skill change for both husbands and wives (i.e., couple members) exposed to CLFCMEP. For these analyses, we first examined the pattern of means for relationship skills by spouse gender and wave, which appears in Table 4. The examination of changes over time for husbands and wives appears in Table 5. Statistically significant effects of particular interest appear in columns two and three for wives and seven and eight for husbands (i.e., Intervention \times Linear and Intervention \times Quadratic) of Table 5. The pattern of findings for the aggregate relationship skills scale and the pattern of changes over time for each individual scale (except for relationship commitment), as well as statistical significance decisions, were similar, so we only interpreted the Relationship Skills aggregate here in the interest of brevity. As can be seen in Figure 2, results suggested that the pattern of changes in relationship skills was nearly identical for husbands and wives. Also, relationship skills exhibited a large increase between pre and posttest and these skills remained high and increased slightly between posttest and follow-up.

	Intercept	Linear Change	Quadratic (U-shaped) Change	Intervention	Intervention × Linear	Intervention × Quadratic	Random Intercept Effect (ICC)
Communication skills	$4.01 \left(.99\right)^{**}$.05(.10)	$04(12)^{+}$	(00) 00.	$.08(.15)^{*}$.01 (.02)	$.18(.53)^{**}$
Conflict resolution skills	$3.04(.98)^{**}$	$.07(.13)^{*}$	01(02)	$.11(.16)^+$	$.08(.16)^{*}$.00(02)	$.20(.58)^{**}$
Intra-personal skills	$3.28(.98)^{**}$.04(.09)	$03(11)^{+}$.07(.11)	.04(.10)	(00.) 00.	$.16(.60)^{**}$
Emotional awareness	$3.57(.98)^{**}$	$.08(.15)^{*}$	$03(11)^{+}$.01(.02)	$.06(.12)^{+}$.01(.03)	$.19(.57)^{**}$
Emotional expression	$3.78(.99)^{**}$	$.10(.18)^{**}$	01(03)	.05(.08)	.06(.10)	01(04)	$.16(.49)^{**}$
Inter-personal skills	$3.71(.98)^{**}$	$.08(.14)^{*}$	02(06)	.04(.06)	$.08(.13)^{*}$	02(06)	$.17(.49)^{**}$
Relationship management skills	$3.69(.99)^{**}$	(00.) 50.	01(03)	$.08(.15)^{+}$.04(.08)	02(08)	$.11(.47)^{**}$
Relationship satisfaction	$3.66(.97)^{**}$	$.16(.22)^{**}$	03(08)	.11(.13)	.03(.05)	04(09)	$.30(.53)^{**}$
Relationship commitment	$4.29(.99)^{**}$.01(.02)	.01(.05)	.04(.07)	.02(.05)	$04 (14)^{*}$	$.10(.39)^{**}$
Relationship skills (avg. of 9 prior skills)	$3.67 (.99)^{**}$	$.07(.18)^{**}$	02 (08)	.06(.11)	$.06(.14)^{*}$	01(06)	$.12 (.60)^{**}$

Note. Unstandardized regression coefficients listed first, and in parentheses t-values with accompanying degrees of freedom were transformed to an effect size r, using the formula presented in Cohen (1988). $^{\dagger}p < .10.$ $^{*}p < .05.$ $^{*}p < .01.$

Intervention Effect Unstandardized Regression Coefficients, Effect Sizes, and Statistical Significance TABLE 3



FIGURE 1. Average relationship skills as a function of intervention group and time.

		Wiv	es		Husba	ands
Ν	Pre 115	Post 95	Follow-up 94	Pre 115	Post 98	Follow-up 96
Communication skills	3.73	4.08	4.10	3.84	4.07	4.13
Conflict resolution skills	3.08	3.30	3.38	2.99	3.19	3.31
Intra-personal skills	3.27	3.45	3.48	3.23	3.40	3.41
Emotional awareness	3.44	3.66	3.77	3.42	3.62	3.70
Emotional expression	3.63	3.97	4.02	3.65	3.87	3.98
Inter-personal skills	3.54	3.86	3.94	3.54	3.82	3.87
Relationship management skills	3.69	3.94	3.94	3.65	3.82	3.82
Relationship satisfaction	3.34	3.83	3.86	3.50	3.92	3.91
Relationship commitment	4.32	4.41	4.43	4.27	4.39	4.35
Relationship skills (avg. of 9 prior skills)	3.56	3.83	3.88	3.57	3.79	3.83

TABLE 4 Couple Unadjusted Cell Means for Study Outcomes

Change Over Time in Relationship Skills by CLFCMEP Implementation Type

Hypothesis three predicted that there would be no difference in positive relationship skill outcomes as a result of program implementation type. Again, we first explored the scale means for husbands and wives separately for those who attended the 10-week session implementation and those who attended the weekend retreat implementation, which appears in Table 6. The examination of differential change over time as a result of implementation type appears in Table 7. Statistically significant effects of particular interest appear in columns five and six (i.e., Retreat \times Linear and Retreat \times Quadratic) of Table 7, as a significant difference suggests differential change over time as a result of program implementation type. There was no evidence to suggest an effect of program

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		1	Vives			Ηι	ısbands		Randon (IC	ı effects C)
	Intercept	Linear Change	Quadratic (U-shaped) Change	Attrition Correction (IMR)	Intercept	Linear Change	Quadratic (U-shaped) Change	Attrition Correction (IMR)	Wife Intercept	Husband Intercept
Communication skills	3.46 (.57)**	.17 (.29)**	05 $(16)^{**}$.25 (.10)	4.63 (.71)**	.14 (.24) ^{**}	$03 \left(10 \right)^{*}$	34 (13)	.24 (.42)**	$.19 (.33)^{**}$
Conflict resolution skills	$3.29 (.59)^{**}$.16 (.27) ^{**}	02 (07)	02 (01)	$3.48 (.59)^{**}$.15 (.27) ^{**}	01 (04)	18 (07)	$.18 (.37)^{**}$.20 (.42)**
Intra-personal skills	$2.78(.55)^{**}$	$.09(.19)^{**}$	02 (08)	.31 (.15)	3.47 (.63) **	$.09(.19)^{**}$	$03(11)^{*}$	07 (03)	$.18(.37)^{**}$	$.17 (.35)^{**}$
Emotional awareness	2.90(.52)	$.15(.27)^{**}$	01(05)	.35(.15)	3.90(.65)	$.14(.26)^{**}$	02 (08)	17(07)	$.23(.40)^{**}$.19(.33)
Emotional expression	$3.24(.55)^{**}$	$.18(.31)^{**}$	$05(14)^{**}$.31(.13)	$4.24(.70)^{**}$	$.16(.28)^{**}$	02(07)	22(09)	$.23(.42)^{**}$	$.16(.29)^{**}$
Inter-personal skills	$2.89(.52)^{**}$	$.18(.30)^{**}$	$03(10)^{+}$	$.44(.18)^{*}$	$4.23(.69)^{**}$	$.16(.27)^{**}$	$04(13)^{*}$	26(11)	$.20(.41)^{**}$	$.17(.35)^{**}$
Relationship	$3.25(.61)^{**}$	$.11(.22)^{**}$	$04 (14)^{**}$.29 (.14)	$4.43(.77)^{**}$	$.08(.18)^{**}$	03 $(11)^{*}$	$36(18)^{+}$	$.18(.34)^{**}$	$.11(.21)^{**}$
management skills Relationshin	2 40 (34)**	93 (39) ^{**}	$-07(-18)^{**}$	63(19)*	5 30 (69)**	20 (27)**	- 07 (- 17) ^{**}	$-84(-27)^{**}$	44 (53)**	97 (39) ^{**}
satisfaction										
Relationship	3.88 (.67)**	$.05(.09)^{+}$	01 (03)	.24 (.11)	4.77 (.79) ^{**}	.04(.07)	03 (09)+	24(12)	$.18(.50)^{**}$.11 (.31)**
commitment Relationship skills (avg. of 9 prior skills)	3.11 (.64) ^{**}	$.14 (.36)^{**}$	03 (16) ^{**}	.32 (.17) ⁺	4.27 (.77)**	$.13(.33)^{**}$	03 $(15)^{**}$	30(15)	$.15 \left(.35 ight)^{**}$.12 (.28)**
<i>Note</i> . Unstandardized	l regression co	oefficients li	sted first, and i	n parentheses	t-values with	ı accompany	ving degrees of	freedom were t	rransformed t	o an effect

TABLE 5

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size r, using the formula presented in Cohen (1988). ${}^{\dagger}_{p} < .10$. ${}^{*}_{p} < .05$. ${}^{*}_{p} < .01$.



FIGURE 2. Couple average relationship skills as a function of gender and time.

	TABLE 6	
Couple Unadjusted Cell Means for	Study Outcomes by Intervention	Type and Retreat Attendance

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		Wiv	ves		Husba	ands
	Pre	Post	Follow-up	Pre	Post	Follow-up
			10-Week Ses	sion So	uples	
Ν	72	56	55	72	58	57
Communication skills	3.69	4.12	4.11	3.86	4.12	4.16
Conflict resolution skills	3.09	3.35	3.34	3.01	3.16	3.25
Intra-personal skills	3.22	3.47	3.45	3.28	3.45	3.44
Emotional awareness	3.35	3.69	3.75	3.41	3.66	3.72
Emotional expression	3.57	4.01	4.00	3.65	3.89	3.98
Inter-personal skills	3.52	3.87	3.98	3.56	3.86	3.91
Relationship management skills	3.66	3.94	3.95	3.66	3.83	3.82
Relationship satisfaction	3.32	3.84	3.83	3.49	3.90	3.88
Relationship commitment	4.28	4.39	4.43	4.26	4.41	4.35
Relationship skills (avg. of 9 prior skills)	3.52	3.85	3.87	3.58	3.81	3.84
Ν			Weekend ret	treat co	uples	
	43	39	39	43	40	39
Communication skills	3.80	4.03	4.09	3.82	4.01	4.07
Conflict resolution skills	3.06	3.22	3.44	2.96	3.22	3.40
Intra-personal skills	3.36	3.42	3.52	3.14	3.33	3.36
Emotional awareness	3.58	3.62	3.81	3.44	3.56	3.67
Emotional expression	3.73	3.91	4.05	3.65	3.84	3.96
Inter-personal skills	3.58	3.84	3.89	3.51	3.77	3.80
Relationship management skills	3.75	3.93	3.92	3.64	3.81	3.81
Relationship satisfaction	3.38	3.82	3.89	3.53	3.94	3.96
Relationship Commitment	4.37	4.45	4.45	4.28	4.35	4.34
Relationship skills (avg. of 9 prior skills)	3.62	3.81	3.90	3.55	3.76	3.82

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Couple Change Effect Unstandardized Regression Coefficients, Effect Sizes, and Statistical Significance by Retreat Attendance

	Intercept	Linear Change	Quadratic (U-shaped) Change	Weekend Retreat	Retreat × Linear	Retreat × Quadratic	Attrition Correction (IMR)	Random Intercept Effect (ICC)
Wives								
Communication skills	$3.48(.57)^{**}$.17 (.28) ^{**}	$05 (15)^{**}$.01(.03)	02(04)	.02(.06)	.24(.10)	$.25(.42)^{**}$
Conflict resolution skills	$3.28(.59)^{**}$	$.17(.28)^{**}$	02(06)	.01(.01)	.04(.07)	(02)	01(01)	$.18(.37)^{**}$
Intra-personal skills	$2.79(.55)^{**}$	$.08(.18)^{**}$	02(06)	.04(.09)	01(02)	.02 (.08)	.30(.15)	$.18(.37)^{**}$
Emotional awareness	$2.93(.52)^{**}$	$.14(.26)^{**}$	01(02)	.04(.08)	04(07)	$.04(.12)^{*}$.34(.14)	$.23(.40)^{**}$
Emotional expression	$3.26(.55)^{**}$	$.18(.30)^{**}$	$04(12)^{*}$.03(.05)	02(03)	$.03(.11)^{*}$.30(.12)	$.23(.42)^{**}$
Inter-personal skills	$2.90(.52)^{**}$	$.18(.29)^{**}$	$03(10)^{+}$.01(.03)	02(03)	.00(01)	$.44\left(.18 ight)^{*}$	$.20 (.41)^{**}$
Relationship management skills	$3.26(.61)^{**}$	$.10(.21)^{**}$	$04(14)^{**}$.04(.08)	01(02)	.00(.01)	.30(.14)	$.18(.34)^{**}$
Relationship satisfaction	$2.40(.34)^{**}$.24 (.31)**	$07 (17)^{**}$.03(.04)	.01 (.02)	.01(.03)	$.63(.19)^{*}$	$.45(.53)^{**}$
Relationship commitment	3.88 (.67)**	$.05(.09)^{+}$	01(04)	.05(.10)	.00 (01)	01(02)	.25(.12)	$.18(.50)^{**}$
Relationship skills (avg. of 9 prior skills)	$3.12(.64)^{**}$	$.14(.36)^{**}$	$03(14)^{**}$.03 (.07)	01 (01)	.02 (.07)	.32 (.17) ⁺	$.15 (.55)^{**}$
Husbands								
Communication skills	$4.60(.70)^{**}$	$.14(.24)^{**}$	$03(10)^{+}$	02(04)	(00) 00.	.01(.02)	32(13)	$.19(.33)^{**}$
Conflict resolution skills	$3.52 (.59)^{**}$	$.16(.28)^{**}$	01(04)	.03(.06)	$.05(.09)^{+}$.00(01)	20(08)	$.20(.42)^{**}$
Intra-personal skills	$3.40(.63)^{**}$	$.09(.20)^{**}$	$03(11)^{*}$	05(10)	.02 (.04)	(00.) 00.	04(02)	$.17(.35)^{**}$
Emotional awareness	$3.88(.64)^{**}$	$.14(.26)^{**}$	02(07)	02(04)	02 (04)	.01(.05)	16(06)	$.19(.34)^{**}$
Emotional expression	$4.22(.69)^{**}$.16 (.28)**	02(07)	01(03)	01(01)	.01 (.02)	21(09)	$.16(.29)^{**}$
Inter-personal skills	$4.18(.68)^{**}$	$.16(.26)^{**}$	$04(12)^{*}$	04(09)	02 (04)	.00(.01)	24(10)	$.17(.35)^{**}$
Relationship management skills	4.42 (.77)***	.08 (.17)**	$03(11)^{*}$	01(02)	.00 (01)	.00(.01)	$36(18)^{+}$	$.11(.21)^{**}$
Relationship satisfaction	$5.37 (.69)^{**}$.20 (.27)**	$07(17)^{**}$.05(.09)	.01 (.02)	.00(.01)	$87(28)^{**}$	$.27 (.32)^{**}$
Relationship commitment	4.77 (.79) ^{**}	.03 (.07)	$02(08)^{+}$	01(01)	01 (02)	.01(.04)	24(12)	$.11 (.31)^{**}$
Relationship skills (avg. of 9 prior skills)	4.26 (.77)**	$.13(.33)^{**}$	$03(14)^{**}$	01 (02)	.00 (00)	.01 (.03)	29(15)	$.12(.45)^{**}$
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Note. Unstandardized regression coefficients listed first, and in parentheses t-values with accompanying degrees of freedom were transformed to an effect size r, using the formula presented in Cohen (1988). ${}^{\dagger}_{D} < .10$. ${}^{*}_{P} < .05$. ${}^{*}_{P} < .01$.





FIGURE 3. Wife emotional awareness as a function of retreat attendance and time.

implementation type on differential change over time for husbands, but there were two significant quadratic interactions for wives suggesting differential change for emotional awareness and emotional expression. An examination of the pattern of means is displayed in Table 6 and is graphically depicted in Figure 3 for emotional awareness, which was the stronger of the two effects. These findings suggest that whereas wives participating in the 10-week session format have a larger and more immediate increase in emotional awareness and expression by posttest that then remains constant until follow-up, the wives participating in the weekend retreat format have a more gradual straight-line increase in emotional awareness and expression. Thus, this suggests that time may be required for wives to actually enact the learned material in their relationships, which does not occur immediately for those in the more intensive weekend retreat format. Nevertheless, these differences do not appear consequential, as wives in either implementation format are nearly indistinguishable by follow-up.

DISCUSSION

This study used correlational designs to examine whether an implementation of CLFC promoting healthy marriages (1) produced better outcomes in men exposed to the program relative to those not so exposed, and (2) produced positive changes in both husbands and wives exposed to the program. The results of the analyses produced small-to-medium sized effects suggesting that the program: (a) improved the relationship skills of husbands exposed relative to a sample of men not so exposed; (b) improved the relationship skills of both husbands and wives; and (c) created improvements in relationship skills that persisted at follow-up. Furthermore, the program offers two implementation options that appear to produce equivalent outcomes. As such, the program can be implemented in a 2-day format for this hard to reach population.

A key difference between implementing the CLFCMEP and the implementations of the REP (Accordino & Guerney, 1998) and *PREP Inside and Out* (Einhorn et al., 2008)

discussed previously is that the latter programs were implemented while the participants were still incarcerated, whereas the CLFCMEP was implemented after participants were released from prison. Both implementation modes have their unique benefits and challenges. Implementing programs in the prisons confers the benefit of dosage being high for program implementation; however, as was observed in the *PREP Inside and Out* (Einhorn et al., 2008) implementation, attrition was extremely high due to transfers to different facilities and releases and there is likely less control over who is chosen as the trainers for the program (e.g., prison staff and chaplains were used as trainers).

Implementing programs after release, like the CLFCMEP, presents the challenges of keeping dosage high and obtaining data from participants to assess their long-term outcomes; however, it offers the benefits of lower study attrition and skills being taught more proximally to when learned skills can be enacted. We feel these challenges were dealt with effectively in the CLFCMEP, as 77% of the initial participants were exposed to the intervention (i.e., at least 16 hours of the program) and we obtained data from 76% of participants at 3-month follow-up, respectively. These challenges were dealt with effectively through attempts to make the program maximally convenient (e.g., offering a weekend retreat format) for this difficult to reach population with multiple demands for their time and by the use of highly skilled trainers.

The necessary data were not reported to compare the results of our program to the REP (Accordino & Guerney, 1998); however, we can assess the degree to with which our program is comparable to *PREP Inside and Out* (Einhorn et al., 2008). Both programs targeted a very similar set of outcomes and the curricula attempt to impart similar skill sets, despite the PREP (Markman, Stanley et al., 2010) having a more inter-personal communication theoretical focus and the CLFCMEP having a focus on connectedness to the community and family. The CLFCMEP and *PREP Inside and Out* (Einhorn et al., 2008) were both found to improve relationship satisfaction, commitment, communication, conflict resolution, and friendship/emotional expression. The only differences in outcomes between the two programs were likely a function of the measures used in each study, where the CLFCMEP also found improvements in intra-personal skills and the *PREP Inside and Out* (Einhorn et al., 2008) also found decreases in loneliness. Nevertheless, as a major goal of the CLFCMEP is to foster a sense of inclusion and community connectedness, we suspect that feelings of loneliness would have improved if they were measured.

One benefit of the CLFCMEP and the CLFC model more generally is that there is a focus on the broader social context of families, as opposed to only marriages. Future research must determine whether there is a positive impact on children as a result of parent participation in CLFCMEP. We suspect there may be, as there is an abundance of research supporting the idea that when parents are not in high-conflict relationships, children often perform better socially and emotionally (e.g., Amato & Booth, 1997; Cowan, Cowan, Pruett, Pruett, & Wong, 2009; Cummings & Davies, 2002; Katz & Gottman, 1993). The couples who participated in CLFCMEP were provided with the opportunity to reduce conflict in their relationship, increase their commitment to one another, and reestablish (or establish for the first time) trust with one another. This likely creates an environment for their children to feel safer and more secure. In addition, benefits are conferred upon the nonreentry partner through participation in the program.

The findings reported here come from correlational research with an extremely small comparison group, so they must be interpreted with caution. More specifically, differences between husbands exposed to CLFC and a similar sample of men not so exposed may be an artifact of the comparison group representing a nonrandomly assigned convenience sample, which was small in size. Firm conclusions about the effects of CLFCMEP on marital outcomes await further replications with a randomized controlled trial. Nevertheless, it should be noted that similar findings emerged when using the CLFC intervention to improve fatherhood/family skills among a sample more closely approximating random assignment to condition (McKiernan et al., in press). Furthermore, although there was no comparison group sample of wives, we suspect that we would find similar positive findings if we had such a sample, as wives participating in the CLFCMEP program had a trajectory of increasing relationship skills that was nearly identical to the trajectory of their husbands. Although the program appears to offer two implementation options with equivalent outcomes, it should be noted that our small sample size and nonrandom assignment to implementation necessitate replicating these results in a sample where the possibility of refuting the null hypothesis is more likely. Future studies should also examine recidivism as an outcome from these programs, as evidence from a study examining a similar intervention to improve fatherhood/family skills clearly suggested that the likelihood of recidivism was reduced as a result of program exposure (McKiernan et al., in press). Most importantly, the operationalization and measurement of connectedness is needed to further explicate the mechanisms by which the CLFCMEP program works in future studies.

This study suggests that the CLFCMEP had a robust positive effect on relationship communication skills, investment in the relationship (i.e., satisfaction and commitment), and social support. These findings replicate similar, recent findings for more general implementation of the CLFC program with fathers (McKiernan et al., in press). The CLFCMEP program also produced marital outcomes similar to the *PREP Inside and Out* (Einhorn et al., 2008) program when implemented with inmates. A key difference between the CLFCMEP and other program offerings is that the CLFCMEP is designed to be implemented upon reentry, which is more proximal to when learned relationship skills can actually be enacted. Possibly, the most important difference is that CLFCMEP has a more global focus on feeling connected to the community, family, and the marriage, as opposed to a more specific focus on the marriage. This is particularly relevant for the outcomes of reentry populations, as these populations will often return to their prior patterns of antisocial behavior without a change in their broader social context.

REFERENCES

- Accordino, M. P., & Guerney, B. (1998). An evaluation of the Relationship Enhancement Program with prisoners and their wives. *International Journal of Offender Therapy and Comparative Criminology*, 42, 5–15.
- Agnew, C. R., Martz, J. M., & Rusbult, C. E. (1998). The Investment Model Scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Journal of Personal Relationships*, 5, 357–391.
- Allen, K. M., Nicholson, D., Kruzich, R., & Hardison, K. (2005). Louisville metro justice reinvestment project: Final report. Louisville, KY: Louisville Metro. Government.
- Amato, P. R., & Booth, A. (1997). A generation at risk: Growing up in an era of family upheaval. Cambridge, MA: Harvard University Press.
- Apel, R., Blokland, A., Nieuwbeerta, P., & Schellen, M. (2010). The impact of imprisonment on marriage and divorce: A risk set matching approach. *Journal of Quantitative Criminology*, 26, 269–300.
- Barnes, H., & Olson, D. H. (2003). Parent-adolescent communication scale. Minneapolis, MN: Life Innovations, Inc.
- Blum, R. W., & Rinehart, P. M. (1997). *Reducing the risk: Connections that make a difference in the lives of youth.* Minneapolis, MN: University of Minnesota.
- Booth, B. M., Russell, D. W., Soucek, S., & Laughlin, P. R. (1992). Social support and outcome of alcoholism treatment: An exploratory analysis. *American Journal of Drug and Alcohol Abuse*, 18, 87–101.
- Center for Substance Abuse Treatment. (2005). Substance abuse treatment for adults in the criminal justice system. Treatment improvement Protocol (TIP) series 44.DHHS Publication No. (SMA) 05-4056. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Erlbaum.

Cowan, P. A., Cowan, C. P., Pruett, M. K., Pruett, K., & Wong, J. J. (2009). Promoting fathers' engagement with children: Preventive interventions for low-income families. *Journal of Marriage and Family*, 71, 663–679.

- / 497
- Cummings, E. M., & Davies, P. T. (2002). Effects of marital conflict on children: Recent advances and emerging themes in process-oriented research. Journal of Child Psychology and Psychiatry, 43, 31–63.
- Dempster, A., Laird, N., & Rubin, D. (1977). Maximum likelihood from incomplete data via the EM algorithm. Journal of the Royal Statistical Society, Series B, 39, 1–38.
- Doll, B., & Lyon, M. A. (1998). Risk and resilience: Implications for the delivery of educational and mental health services in schools. *School Psychology Review*, 27, 348–363.
- Einhorn, L., Williams, T., Stanley, S., Wunderlin, N., Markman, H., & Eason, J. (2008). PREP Inside and Out: Marriage Education for Inmates. *Family Process*, 47, 341–356.
- Elliot, D. B., & Simmons, T. (2011). Marriage Events of Americans: 2009, American Community Survey Reports, ACS-13. U.S. Census Bureau, Washington, DC.
- Field, T., Diego, M., & Sanders, C. (2001). Adolescent depression and risk factors. Adolescence, 36, 491-498.
- Gottman, J. M. (1994). What predicts divorce? Hillsdale, NJ: Lawrence Erlbaum Associates.
- Gottman, J. M., & Levenson, R. W. (2000). The timing of divorce: Predicting when a couple will divorce over a 14-year period. *Journal of Marriage and the Family*, 62, 737–745.
- Halford, K. W., Markman, H. J., Kline, G., & Stanley, S. M. (2003). Best practice in couple relationship education. Marital and Family Therapy, 29, 385–406.
- Hawkins, A. J., Stanley, S. M., Blanchard, V. L., & Albright, M. (2012). Exploring programmatic moderators of the effectiveness of marriage and relationship education programs: A meta-analytic study. *Behavior Therapy*, 43, 77–87.
- Heckman, J. J. (1976). The common structure of statistical models of truncation, sample selection and limited dependent variables and a simple estimator for such models. Annals of Economic and Social Measurement, 5 (4), 475–492.
- Heckman, J. J. (1979). Sample selection bias as a specification error. Econometrica, 47(1), 153-161.
- Hiller, M.L., Knight, K., & Simpson, D.D. (1996). Risk factors that predict dropout from corrections-based treatment for drug abuse. *Prison Journal*, 79(4), 411–430.
- Jeffries, J., Menghraj, S., & Hairston, C. F. (2001). Serving incarcerated and ex-offender fathers and their families. New York: Vera Institute of Justice.
- Katz, L. F., & Gottman, J. M. (1993). Patterns of marital conflict predict children's internalizing and externalizing behaviors. *Developmental Psychology*, 29, 940–950.
- Kurdek, L. A. (2006). The nature and correlates of deterrents to leaving a relationship. *Personal Relationships*, 13, 521–535.
- Kurdek, L. A. (2009). Assessing the health of a dyadic relationship in heterosexual and same-sex partners. Personal Relationships, 16, 117–127.
- Le, B., & Agnew, C. R. (2003). Commitment and its theorized determinants: A meta-analysis of the Investment Model. Personal Relationships, 10, 37–57.
- Markman, H. J., Rhoades, G. K., Stanley, S. M., Ragan, E. P., & Whitton, S. W. (2010). The premarital communication roots of marital distress and divorce: The first five years of marriage. *Journal of Family Psychology*, 24, 289–298.
- Markman, H. J., Stanley, S. M., & Blumberg, S. L. (2010). *Fighting for your marriage* (3rd ed.). San Francisco, CA: Jossey-Bass.
- Massoglia, M., Remster, B., & King, R. D. (2011). Stigma or separation? Understanding the incarceration-divorce relationship. Social Forces, 90, 133–155.
- McKiernan, P., Shamblen, S., Collins, D., Strader, T., & Kokoski, C. (in press). Creating Lasting Family Connections: Reducing recidivism with community-based family strengthening model. *Criminal Justice Policy Review*.
- O'Farrell, T. J., & Fals-Stewart, W. (1999). Treatment models and methods: Family models. In B. S. McCrady & E. E. Epstein (Eds.), Addictions: A comprehensive guidebook (pp. 287–305). New York: Oxford University Press.
- Olson, D. H. (2006). Four ENRICH couple scales. Minneapolis, MN: Life Innovations, Inc.
- Olson, D. H., Fournier, D. G., & Druckman, J. M. (1986). Prepare, prepare-MC and enrich inventories (2nd ed.). Minneapolis, MN: Life Innovations Inc.
- Olson, D. H., & Schaefer, M. T. (2000). PAIR item booklet. Minneapolis, MN: Life Innovations, Inc..
- Osterhout, R. E., Frame, L. E., & Johnson, M. D. (2011). Maladaptive attributions and dyadic behavior are associated in engaged couples. *Journal of Social and Clinical Psychology*, 30, 787–818.
- Pew Center on the States. (March, 2009). The long reach of American corrections: Kentucky, the Pew charitable trusts. Washington, DC: The Pew Charitable Trusts.
- Pew Center on the States. (October, 2010). A data-driven effort to protect public safety and control corrections spending, public safety performance project issue brief. Washington, DC: The Pew Charitable Trusts.
- Popenoe, D., & Whitehead, R. D. (2010). The state of our unions 2010. Piscataway, NJ: Rutgers University.
- Raudenbush, S. W., Brennan, R. T., & Barnett, R. C. (1995). A multivariate hierarchical model for studying psychological change within married couples. *Journal of Family Psychology*, 9, 161–174.

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Raudenbush, S. W., & Bryk, A. (2002). Hierarchical linear models (2nd ed.). Thousand Oaks, CA: Sage.

- Rhoades, G., Stanley, S., & Markman, H. (2012). A longitudinal investigation of commitment dynamics in cohabiting relationships. *Journal of Family Issues*, 33, 369–390.
- Rusbult, C. E. (1980). Commitment and satisfaction in romantic associations: A Test of The Investment Model. Journal of Experimental Social Psychology, 16, 172–186.
- Slaght, E. (1999). Focusing on the family in the treatment of substance abusing criminal offenders. Journal of Drug Education, 29, 53-62.
- Stanley, S. M., Ragan, E. P., Rhoades, G. K., & Markman, H. J. (2012). Examining changes in relationship adjustment and life satisfaction in marriage. *Journal of Family Psychology*, 26, 165–170.
- Strader, T. N., Collins, D. A., & Noe, T. (2000). Building healthy individuals, families, and communities: Creating lasting connections. New York: Kluwer Academic/Plenum.
- Strader, T., & Noe, T. (1998a). Creating lasting family connections: Developing independence and responsibility manual. Louisville, KY: Council on Prevention and Education: Substances.
- Strader, T., & Noe, T. (1998b). Creating lasting family connections: Developing a positive response manual. Louisville, KY: Council on Prevention and Education: Substances.
- Strader, T., & Noe, T. (1998c). Creating lasting family connections: Developing positive parental influences manual. Louisville, KY: Council on Prevention and Education: Substances.
- Strader, T., & Noe, T. (1998d). Creating lasting family connections: Raising resilient youth manual. Louisville, KY: Council on Prevention and Education: Substances.
- Strader, T., Noe, T., & Crawford-Mann, W. (1998). Creating lasting family connections: Getting real manual. Louisville, KY: Council on Prevention and Education: Substances.
- Sullivan, K. T., Pasch, L. A., Johnson, M. D., & Bradbury, T. N. (2010). Social support, problem solving, and the longitudinal course of newlywed marriage. *Journal of Personality and Social Psychology*, 98, 631–644.
- Whishman, M. A. (1999). Marital dissatisfaction and psychiatric disorders: Results from the national comorbidity survey. Journal of Abnormal Psychology, 108, 701–706.
- Winterfield, L., & Castro, J. (2005). Matching drug treatment to those in need: An analysis of correctional service delivery in Illinois and Ohio. Justice Research & Policy, 7, 4.
- Wright, K. N., & Wright, K. E. (September, 1992). Does getting married reduce the likelihood of criminality? A review of the literature. *Federal Probation*, 56, 50–56.

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