International Journal of Offender Therapy and Comparative Criminology
Volume 54 Number 5
October 2010 743-755

10.1177/0306624X09344840
http://ijo.sagepub.com
hosted at
http://online.sagepub.com

Effects of Individual and Group Cognitive–Behavioral Therapy for Male Prisoners in Iran

Mohammad Khodayarifard
Mohsen Shokoohi-Yekta
University of Tehran, Iran
Gregory E. Hamot
University of Iowa, Iowa City

This study investigates individual and group cognitive–behavioral interventions in decreasing psychological symptoms and enhancing the psychological status of Iranian prison inmates. A random sample of 180 males is placed in three equal groups: an individual cognitive–behavioral therapy (CBT) group, an individual and group CBT group, and a control group. General Health Questionnaire, Symptom Checklist-90–Revised, and diagnostic interviews based on the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.) are used before and after intervention. MANOVA indicates that both methods improve the psychological status of the inmates and reduce their symptoms, but the combined treatment is more efficient than the individual therapy. In a 1-year follow-up after inmate release, recidivism in the individual and combined therapy groups is zero. The return rate of participants in the control group is 15%. Results of the study demonstrate that both individual and group CBT are effective in reducing psychological symptoms. However, the impact of combined therapy is stronger than individual CBT.

Keywords: *cognitive–behavioral intervention; individual therapy; group therapy; prisoner; psychological state*

A major topic of recent discussion among psychologists, lawyers, and penologists is whether imprisonment can reduce criminal activity. This question is at the core of a hotly contested social issue with passionate voices on both sides (Danesh, 1995).

Authors' Note: Please address correspondence to Gregory E. Hamot, Department of Teaching and Learning, College of Education, The University of Iowa, 283 Lindquist Center North, Iowa City, IA 52242-1529; e-mail: gregory-hamot@uiowa.edu

Experimental data show high rates of mental disorders among criminals, causing the legal and corrective systems in most countries to focus on this issue (Andersen, Sestof, Lillebeak, Gabrielsem, & Kemp, 1996; Birmingham, Mason, & Grubin, 1996; Brook, Taylor, Gunn, & Maden, 1996; Cooke, 1994; Jordan, Schlenger, Fairbank, & Cadell, 1996; Smith, O'Neill, Tobin, Walshe, & Dooley, 1996; Teplin, Abram, & McClelland, 1996). In addition, cognitive, behavioral, and moral inefficiencies are common among criminals. Of these, the most prevalent are a lack of self-control and empathy; deficiencies in interpersonal problem solving, critical thinking, moral reasoning, social cognition, social problem solving, and social understanding; as well as a distorted cognitive style (Ross & Fabiano, 1985) and a lack of logical decision-making skills (Cornish & Clarke, 1986). These problems may lead to a lack of proper social skills and encourage criminal behavior. According to the existing evidence, crime commitment is related to mental disorders and cognitive, behavioral, and moral deficits, which signify that these individuals need psychological services.

This study seeks to examine the effect of individual therapy, individual and group combined therapy, and no therapy on inmates in an Iranian prison. Two experimental groups and one control group served to inform the penal system on the value of such therapeutic approaches.

Therapeutic Intervention Options

The assumed relationship between criminal behavior and mental disorders and cognitive, behavioral, and moral inefficiencies led to therapies based on psychological principles that adopt various approaches. Many societies use these approaches to ameliorate mental disorders among criminals (Ayllon & Azrin, 1968; Feindler, Marriott, & Iwata, 1984; Henggeler, 1997; Liddle & Dakof, 1995; Novaco, Ramm, & Black, 2004).

Recent meta-analytical studies (Andrews et al., 1990; Izzo & Ross, 1990; Lipsey, 1995; Lösel, 1995) have shown that cognitive–behavioral intervention methods are the most efficient for inmates. Therefore, there has been a rapid growth in intervention programs for criminal behavior in prisons in recent years. Such programs include Enhanced Thinking Skills, Reasoning and Rehabilitation (R&R), Sex Offender Treatment Program, Controlling Anger and Learning to Manage It, and the Cognitive Self-Change Program (Willmot, 2003). Studies show a meaningful relationship between reduction in the rates of repeated crimes and participation in these programs. In England, the belief in such rehabilitation programs is so strong that large budgets have been devoted to their development and implementation; every year, about £10 million is spent on providing psychological services to inmates (Towl, 2003).

One of these programs, R&R, is a widespread corrective intervention program offered in a number of countries and under various conditions and settings. Since the mid-1980s, the program has been implemented widely throughout the United States,

Canada, England, Scotland, Scandinavia, Spain, the Canary Islands, Germany, Australia, and New Zealand (Hollin, 2004). The main objective of the R&R program, which involves 36 2-hr sessions, is to establish and develop thinking and cognitive skills in a progressive (accelerated) manner (Robinson & Porporino, 2003).

Ross, Fabiano, and Ewles (1988) compared the effectiveness of this treatment among three groups of criminals who had been released conditionally: one group that had been through an R&R program, another group that had been given life skills trainings, and a third group that had not received any training. The results showed that only 18.1% of the criminals in the R&R program committed another crime, whereas the rates of recidivism were 47.5% and 69.5% in the second and the third groups, respectively. Furthermore, none of the R&R offenders returned to prison, whereas 11% of the life skills group and 30% of the control groups did. Fabiano, Robinson, and Porporino (1990) also demonstrated the positive impact of this therapy on criminals. Their study showed a 36.4% reduction in recidivism as a result of the R&R program during a 19-month follow-up.

The largest-scale research to examine the effect of the R&R program was conducted between 1989 and 1994 on a sample of 4,000 offenders (Robinson, 1995). The results illustrated the effectiveness of the R&R program. Raynor and Vanstone (1996) also found that the adult offenders who had received R&R training demonstrated lower rates of recidivism in a 12-month follow-up, compared with another group that had gone through a different training.

Garrido and Sanchis (1991) showed the efficiency of the R&R program for juvenile offenders. The R&R experimental group showed improvements in some areas, such as role-playing and problem solving. According to the authors, the staff of the juvenile detention center also confirmed and reported the improvements.

The R&R program has been mostly used for treating offenders with mental disorders. The program was, for instance, administered in Germany and in New York State for mentally disordered criminals. Most patients believed that the program was fun and easy to understand, and they recommended it to other patients. Yet the effect of the program on this type of offenders calls for more experimental research (Robinson & Porporino, 2003). In view of this call for further research, the present study was designed to investigate the effectiveness of psychotherapy and rehabilitation in reducing mental disorders among inmates when using a variation of R&R in both individual and group therapy as compared to only individual and no group therapy.

Method

Participants

This study follows a pretest–posttest experimental design involving a control group. The participants were selected through systematic random sampling from

2,811 male offenders in Rajaee Shahr Prison in Tehran province, who had to spend at least another 6 months in prison when the study started and whose minimum level of education was ninth grade. The rationale for using these two criteria was to have enough time for implementing the intervention program and to make sure the participants were able to understand the questions and the program content used in the study. The sample, finalized after negotiations with prison officials, included 6% ($N = 180$) of the inmates, allocated in three groups of 60 participants each; one of every three participants was assigned randomly to each group. The first group took part, on average, in 8 1-hr weekly individual psychotherapy sessions that used cognitive–behavioral techniques (individual therapy group). The second group took part in 16 2-hr weekly group therapy sessions in subgroups of 15. The participants in the second group simultaneously attended 8 1-hr individual psychotherapy sessions held once a week (combined therapy group). The third group consisted of inmates who were placed on a waiting list for individual counseling (control group). By the time the interventions concluded, 48 of the participants in the individual therapy group and 46 in the combined therapy group had attended a minimum of 12 sessions of intervention. In the control group, 40 participants took part in the posttest.

This study used a package similar to the R&R program and contained the program's major components and intervention techniques. The package included the following topics: the factors affecting healthy life, self-esteem and self-respect, behavior analysis skill (antecedent–behavior–consequence [A-B-C]), instruction of interpersonal problem solving, stress-coping skills, anger control, appropriate interpersonal and social coping skills, risk-taking skills, positive thinking, identifying strengths in oneself and in others, communication skills, and self-protection against stress (Khodayarifard et al., 2007).

Instruments

The instruments used for assessing the clients' psychological state included the General Health Questionnaire (GHQ-28), Symptom Checklist-90–Revised (SCL-90-R), diagnostic interview, and a demographic questionnaire prepared by the researchers. These instruments were administered twice for each participant. The participants in the individual and combined therapy groups were given tests once before the intervention and once immediately after. The participants in the control group were also given the test together with the other groups.

The GHQ-28 is a self-report questionnaire that is used in clinical settings to diagnose individuals with a mental disorder (Goldberg, 1972). The present study used the 28-item version of the questionnaire. This version of the GHQ-28 contains four subscales: somatic symptoms, anxiety, social dysfunction, and depression. Taghavi (2001) examined the reliability of the GHQ-28 through the test–retest, split-half, and Cronbach's alpha methods. The reliability coefficients were .70, .93, and .90, respectively. For the subscales of somatic symptoms, anxiety, social dysfunction,

and depression, the Cronbach's alphas were .83, .89, .75, and .91, respectively. The correlation coefficient calculated through the split-half method for the subscales of the GHQ-28 ranged from .74 to .95. The construct and concurrent validities of this instrument were also reported as satisfactory (Hooman, 1997; Taghavi, 2001).

The SCL-90-R is a diagnostic and screening test used for mental patients and drug addicts and alcoholics (Mirzaei, 1980). It consists of 90 items and nine dimensions that measure an individual's different psychological aspects, including somatization, obsessive–compulsive traits, interpersonal sensitivity, depression, anxiety, hostility, phobic, paranoid thinking, and psychoticism.

Using Cronbach's alpha coefficient, Mirzaei (1980) reported the reliability of the SCL-90-R as .70 and its concurrent validity with the Minnesota Multiphasic Personality Inventory as .51. According to Hooman (1997), the internal consistency coefficients of this instrument's subscales, which range from .69 to .88, are acceptable. The construct validity and concurrent validity of this instrument are also acceptable according to Hooman and Najarian and Davoodi (2001). In the present study, the Cronbach's alpha coefficient was .97 for the whole test, and ranged from .74 to .87 in the subtests. The correlation between the two halves of the test was .89.

In this study, a psychiatrist conducted clinical interviews with 40 randomly selected participants based on the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.) (American Psychiatric Association, 2000) structured questionnaire to examine the validity of the GHQ-28 and SCL-90-R questionnaires. The correlation coefficients between the diagnosis of the psychiatrist with GHQ-28 and SCL-90-R were .78 and .83, respectively.

The tailored questionnaire contained questions about each client's age, education, marital status, residence, source of income prior to imprisonment, age at first conviction, length of present sentence, number of convictions, conviction type, and drug abuse history.

Findings

Demographic findings, using self-report and the information presented by prison officials, showed that the mean age of the clients in the sample group, the mean age of their first conviction, and the mean length of their present sentences were 48.23, 22.12, and 11.21 years, respectively. The mean number of convictions (1.64) demonstrated the rate of recommitment. The crimes ranged from robbery (32.7%) to assault and battery (23/6%), murder (19.2%), fraud (8.7%), rape (8%), and drug dealing (7.8%).

The findings also showed that more than 1/2 of the clients in the sample group had not completed high school (51%), approximately 2/3rd were single (64%), most of them were born in rural areas (79%), and many were self-employed before conviction (59.06%) or had illegal income (17.16%). Nearly 1/2 of them (49.25%) had a history of drug abuse, and approximately 1/3rd (38.06%) had mental disorders prior to conviction; however, only 1/10th (10.45%) had received psychological and psychiatric services.

Table 1
Descriptive Findings of Mean Changes of Participants' Scores on the GHQ-28 and SCL-90-R in Three Intervention Settings (N = 134)

	Combined			Individual			Control		
Subscale	*M*	*SD*	*SEM*	*M*	*SD*	*SEM*	*M*	*SD*	*SEM*
General Health Questionnaire									
Somatic symptoms	5.20	4.46	0.66	0.23	4.30	0.62	0.08	4.86	0.77
Anxiety	6.26	3.99	0.59	2.77	4.82	0.70	0.78	4.96	0.78
Social dysfunction	3.96	3.62	0.53	3.40	5.77	0.83	1.03	4.35	0.69
Depression	5.91	4.25	0.77	0.19	7.44	1.07	1.00	7.96	1.25
General symptom index	5.22	3.26	0.49	1.61	4.31	0.62	0.65	4.43	0.70
SCL-90-R									
Somatization	−1.31	0.94	0.14	−0.42	1.06	0.16	0.37	1.05	0.17
Obsessive–compulsive	−0.94	0.76	0.11	−0.22	0.97	0.14	−0.06	0.94	0.15
Interpersonal sensitivity	−1.05	0.80	0.12	−0.20	0.99	0.15	−0.02	0.83	0.13
Depression	−1.22	0.99	0.15	−0.19	1.13	0.16	0.39	1.01	0.16
Anxiety	−1.22	1.00	0.11	−0.41	0.91	0.13	0.21	1.09	0.17
Hostility	−1.20	1.03	0.15	−0.42	1.11	0.16	0.20	1.10	0.17
Phobic	−0.87	0.84	0.12	−0.22	0.83	0.12	0.16	0.82	0.13
Paranoid thinking	−0.34	0.90	0.13	−0.19	0.93	0.13	0.77	1.35	0.21
Psychosis	−0.98	0.82	0.12	−0.17	0.66	0.09	0.20	1.00	0.16
General index	−1.00	0.68	0.10	−0.31	0.73	0.10	0.24	0.65	0.10

Note: GHQ-28 = General Health Questionnaire; SCL-90-R = Symptom Checklist-90-Revised.

The results of the GHQ-28 and SCL-90-R, prior to intervention, showed that the three groups were at similar levels regarding the number of mental disorder diagnoses. Overall, the percentages of participants receiving scores at a pathological level on the GHQ-28 were 67%, 72%, and 65%, and on the SCL-90-R were 78%, 78%, and 80% for the combined, individual, and control groups, respectively. Before studying the differences between the groups in the posttest stage, it was necessary to make sure that there was no difference between them before the interventions in the pretest stage. The overall indices of the GHQ-28 ($F = 2.29$, $p > .05$) and those of the SCL-90-R ($F = 1.09$, $p > .05$) showed no differences between the three groups (individual therapy, combined therapy, and control groups) in the pretest stage. Consequently, with regard to these indices, the three groups can be considered homogeneous.

The results of comparing the three groups in terms of mean changes in the subscales and the general index of the GHQ-28 appear in Tables 1 and 2. The results of GHQ-28 presented in Table 1 indicate that mean variation in the subscales of the sample group at the pre- and posttest stages was higher in the combined therapy

Table 2
Between-Subject Effects for Mean Changes of Participants' Scores on the GHQ-28 in Three Intervention Settings (N = 134)

Variable	Type III sum of squares	*df*	Mean squares	*F* ratio	*p*
Somatic symptoms	608.42	2	300.71	15.17	.001
Anxiety	553.25	2	276.62	12.81	.001
Social dysfunction	129.87	2	64.93	3.48	.030
Depression	174.04	2	453.02	9.41	.001
General symptom index	447.99	2	223.99	14.25	.001

Note: GHQ-28 = General Health Questionnaire.

group than in the other two groups. The individual therapy group also showed more variation in some aspects than the control group. To compare any differences between the mean variations in the subscales of the three groups, MANOVA was run. It was of particular importance to test the assumptions before carrying out the MANOVA procedure. Two fundamental assumptions of this analysis were M Box's test to examine any differences between the covariance matrixes and Levene's test to examine the error variance of the dependent scores. Hence, it seemed reasonable to use MANOVA on these data. Further analysis demonstrated that not only the profile of the subscales' changes varied but the changes in all of the subscales also suggested significant variations between the groups in these three treatment settings (see Table 2).

Comparison of the clients through a post hoc Bonferroni test of general health in the three intervention settings showed that the subscales' mean changes and the general index of this questionnaire were higher for inmates in the combined and individual therapy settings than in the control setting. This finding suggests that individual and combined interventions reduced the subscales' means of the experimental groups and brought about a reduction in the offenders' symptoms. The comparison of the mean changes in the combined and individual intervention settings also shows that the clients who were assigned to the combined setting exhibited more changes, which proves greater efficiency of this method of intervention compared with individual therapy and no therapy at all.

The results of comparing the three groups in terms of mean changes in the subscales and the general index of the SCL-90-R are presented in Tables 1 and 3. The results of SCL-90-R presented in Table 1 indicate that mean variation in the subscales of the sample group at the pre- and posttest stages was higher in the combined therapy group than in the other two groups. The individual therapy group also showed more variation in some aspects than the control group. To compare any differences between the mean variations in the subscales of the three groups, MANOVA was used. Fundamental assumptions for this analysis were examined and it was demonstrated

Table 3
Between-Subject Effects for Mean Changes of Participants' Scores on the SCL-90-R in Three Intervention Settings (N = 134)

Variable	Type III sum of squares	*df*	Mean squares	*F* ratio	*p*
Somatization	60.78	2	30.44	29.04	.001
Obsessive–compulsive	19.28	2	9.64	11.97	.001
Interpersonal Sensitivity	26.80	2	13.40	17.22	.001
Depression	55.40	2	27.70	25.33	.001
Anxiety	44.18	2	22.09	22.00	.001
Hostility	42.50	2	21.24	18.25	.001
Phobic	24.25	2	12.12	17.54	.001
Paranoid thinking	30.67	2	15.34	13.42	.001
Psychosis	31.85	2	15.93	23.17	.001
General index	33.37	2	16.68	35.22	.001

Note: SCL-90-R = Symptom Checklist-90–Revised.

that not only the profiles of the SCL-90-R mean changes in the three settings differ significantly from each other but also there are significant differences between these settings in all the subscales and the general index (see Table 3).

To find out which intervention settings showed differences in the subscales, the post hoc Bonferroni test was administered based on the subscales and the general index scores. The results revealed that combined interventions were efficient enough to produce significant differences in all the subscales as compared to the control group setting. A close look at mean changes of the intervention settings shows that the changes in combined settings have been in line with reduction of clients' symptoms and their health problems. Table 3 also depicts significant differences between individual and combined intervention settings, not only in the paranoia subscale but also in other subscales' mean changes, which are higher in the combined treatment settings. Comparison of the individual treatment group and the control group also reveals that the treatment setting has made a significant difference in the somatization, depression, anxiety, hostility, and paranoia subscales and the general index of the SCL-90-R.

Many studies conducted in prisons aim to reduce recidivism. This issue was considered in the present study, and recidivism rates were analyzed for inmates who were released following intervention (n = 96). The means of release duration for individual, combined, and control groups were 11.8, 12.3, and 12.3 months, respectively. No recidivism was observed in the individual and combined treatment groups in any of the prisons in the country, whereas approximately 15% of the participants in the control group returned to prison.

Discussion and Conclusion

The purpose of the present study was to investigate the efficacy of cognitive–behavioral therapy (CBT) among prisoners in the Rajaee Shahr Prison in the city of Karaj, Iran. The participants were assigned to three settings (individual CBT, combined CBT, and control groups).

The results of applying the individual and group (combined) cognitive–behavioral intervention showed improvement in the psychological well-being of the prisoners. In other words, the intervention succeeded in lowering all the means of the GHQ-28 subscales in the participants. As for the mean difference of the SCL-90-R subscale scores, similar results were obtained in this group, that is, all the mean differences on the subscales of the instrument declined, which reflects a reduction of symptoms in the combined therapy group.

The individual and combined CBT groups demonstrated that both individual and combined interventions reduced symptoms as measured by the GHQ-28 subscales and the general index scores when compared to the control group. Comparison of the three groups' efficiency in terms of the findings obtained from the SCL-90-R showed that compared with the control group, combined treatment and the individual treatment groups were efficient enough on all the subscales, and the participants had substantially reduced symptoms. Comparison of the individual treatment group and the control group also revealed differences in the changes they underwent in the somatization, depression, anxiety, hostility, and paranoia subscales and the general index of the checklist at the time of the intervention.

Comparison of the combined and individual treatment methods on the basis of the checklist showed that except for the paranoia subscale, the efficacy of the combined treatment was the same on all the subscales of the checklist. In other words, these two methods had equal treatment efficacy for the participants on most of the subscales. In general, it can be argued, however, that the combined treatment method was more efficient. This finding is consistent with the results of other studies (e.g., Fabiano et al., 1990; Ireland, 2004; Murphy & Bauer, 1996; Towl, 2003).

Robinson (1995) studied a sample of inmates who took part in an R&R group cognitive–behavioral program during their incarceration. His findings showed that they possessed cognitive skills and enjoyed a better psychological state after release and had lower recidivism rates (10%) compared with the control group.

Friendship, Blud, Erikson, and Thorton (2003) investigated the efficacy of group cognitive–behavioral programs in reducing psychological symptoms and recommitment rates among inmates. They found that after intervention, the inmates who had attended the cognitive–behavioral group treatment sessions enjoyed better psychological states and had lower reconviction rates than those in the control group. The results of Ovaert, Cashel, and Sewell's (2003) study also revealed that group cognitive–behavioral intervention had an effective role in improving the inmates' psychological states.

Williams (2005) believes that lack of cognitive skills and inefficiency in self-control, critical thinking, and interpersonal problem solving are the main causes of offense among inmates. Providing prisoners with individual or group life-skills training can therefore solve these problems and reduce the likelihood of recommitment of crimes.

There are also a number of studies (e.g., Flashaw et al., 2004; Pullen, 1996) whose findings are incompatible with those of the present study. Flashaw and associates examined the efficiency of group cognitive–behavioral skills training among inmates in U.K. prisons in reducing the rate of reconviction. Their findings showed that the group of inmates who attended cognitive skills training programs had lower reconviction rates than the control group, but the difference was not significant. In a study assessing the efficiency of the R&R program, Pullen (1996) reported that the intervention created no significant difference in the cognitive skills and psychological state of teenage participants. Flashaw et al. (2004) believed that the failure of the program might have been due to lack of expertise on the part of the people who administered the program.

Findings of this study demonstrate that cognitive–behavioral therapies are effective in reducing clients' mental health problems. Through replacing the unfavorable patterns with adaptive cognitive and behavioral ones, these interventions enable the individual to make use of a richer behavioral repertoire in dealing with people and problems and to plan their actions. Generalizing this ability through practice and using it in various situations will help reduce tension and impulsiveness throughout life. The outcome of this process will be appropriate decision making, which will ultimately lead to avoidance of crime.

Perhaps the most important finding is that in many instances, combined cognitive–behavioral and individual interventions demonstrated different degrees of efficiency as compared to the control group. A possible reason for this might be the use of both treatments in the combined therapy group. By attending group therapy sessions and being exposed to other participants' experiences and contributions to group dynamics, the inmates started to analyze and scrutinize their own problems. In addition, the participants in this group might have benefited from individual therapy, which provided an opportunity for them to discuss the problems and issues that they could not discuss in group settings.

This study indicates a significant impact on the reduction of recidivism and recommitment of crimes. The follow-up study showed that until nearly 12 months after release, none of the participants who received individual or combined interventions returned to any of the prisons throughout the country, whereas 15% of the control group returned to jail. This is an indication of the efficacy of the interventions. In other words, these interventions were successful in reducing the probability of occurrence of social and judicial problems and preventing violations of the law. These findings reflect those of other studies indicating that cognitive–behavioral interventions reduce the rate of recidivism (Fabiano et al., 1990; Robinson, 1995; Robinson & Porporino, 2003; Ross et al., 1988).

The results of this study show that psychological interventions, especially combined interventions, can reduce mental health problems among inmates. It is therefore suggested that to improve inmates' mental health, individual and group counseling and psychotherapy be provided in all prisons throughout the country to help those in need of psychotherapy services.

Research shows that the changes brought about by psychotherapy and its maintenance relate directly to the length of treatment and the relationship between the client and the therapist. Hence, it is recommended that aftercare centers be better equipped to be able to provide services to such clients.

As suggested by the descriptive demographic findings, inmates in Rajaee Shahr Prison had histories of committing serious crimes. The interventions designed for and implemented in this study might work better for inmates with minor offenses or those with no or low rates of recidivism. Therefore, further research on interventions for minor offenders in other prisons is necessary.

Acknowledgments

This Project was supported by the University of Tehran and Prisons Organization in Iran. The authors would like to thank Saeed Akbari Zardkhaneh, PhD student, for his assistance in statistical analysis and literature review. In addition, we would like to acknowledge the insights of our project consultants Faramarz Sohrabi, PhD; Bager Ghobari Bonab, PhD; Ahmad Behpajooh, PhD; Ali Naghi Faghihi, PhD; Yasamin Abedini, PhD; Ali Asghar Ahmadi, PhD; Iraj Esmaili, MD; Mohammad Ali Besharat, PhD; Reza Rostami, PhD; Morteza Motavalli Khameneh, MD; and Jalal Younesi, PhD.

References

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) Washington, DC: Author.

Andersen, H., Sestof, D., Lillebeak, T., Gabrielsem, G., & Kemp, P. (1996). Prevalence of ICD-10 psychiatric morbidity in random sample of prisoners on remand. *International Journal of Law and Psychiatry, 19*, 61-74.

Andrews, D. A., Zinger, I., Hoge, R., Bonta, J., Gendreau, P., & Cullen, F. T. (1990). Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis. *Criminology, 28*, 369-404.

Ayllon, T., & Azrin, N. (1968). *The token economy: A motivational system for therapy and rehabilitation*. New York: Appleton-Century-Crofts.

Birmingham, L., Mason, D., & Grubin, D. (1996). Prevalence of mental disorders in remand prisoners: Consecutive case study. *British Medical Journal, 313*, 1521-1524.

Brook, D., Taylor, C., Gunn, J., & Maden, A. (1996). Point prevalence of mental disorder in unconvicted male prisoners in England and Wales. *British Medical Journal, 313*, 1524-1527.

Cooke, D. Y. (1994). *Psychological disturbance in the Scottish prison system: Prevalence, precipitants and policy* (Rep. No. 3.). Scotland: Scottish Prison Service Occasional Papers.

Cornish, K. B., & Clarke, R. V. G. (Eds.). (1986). *The reasoning criminal: Rational choice perspective on crime*. New York: Spring-Verlag.

Danesh, T. (1995). *Who is the offender? What is criminology*. Tehran, Iran: Keyhan.

Fabiano, E., Robinson, D., & Porporino, F. (1990). *A preliminary assessment of the cognitive skills training programme: A component of living skills programming*. Programme description, research findings and implementation strategy. Ottawa: Correctional Service Canada.

Feindler, E. L., Marriott, A., & Iwata, M. (1984). Group anger control training for junior high school delinquents. *Cognitive Therapy and Research, 8*, 299-311.

Flashaw, L., Bates, A., Pate, A., Pate, V., Corbet, C., & Friendship, C. (2004). Assessing reconviction, reoffending and recidivism in a sample of UK sexual offenders. *Legal and Criminological Psychology, 8*, 207-215.

Friendship, C., Blud, L., Erikson, M., & Thorton, D. (2003). Cognitive-behavioral treatment for imprisoned offenders: An evaluation of HM prisons service's cognitive skills programmes. *Legal and Criminological Psychology, 8*, 103-117.

Garrido, V., & Sanchis, J. R. (1991). The cognitive model in the treatment of Spanish offenders: Theory and practice. *Journal of Correctional Education, 42*, 111-118.

Goldberg, D. P. (1972). *The detection of psychiatric illness by questionnaire*. Maudsley Monograph, No. 21. Oxford, UK: Oxford University Press.

Henggeler, S. W. (1997). *Multisystemic therapy with serious juvenile offenders and their families: Program design, implementation and outcomes.* Unpublished manuscript.

Hollin, C. R. (2004). To treat or not treat? An historical perspective. In C. R. Hollin (Eds.), *The essential handbook of offender assessment and treatment* (pp. 1-16). Chichester, UK: Wiley.

Hooman, A. (1997). *Standardization of General Health Questionnaire (GHQ) among undergraduate students of Tarbiyat Moallem University*. Tehran, Iran: Research Institute of Tarbiyat Moallem University.

Ireland, J. L. (2004). Anger management therapy with young male offenders. *Aggressive Behavior, 30*, 174-185.

Izzo, R. L., & Ross, R. R. (1990). Meta-analysis of rehabilitation programmes for juvenile delinquents: A brief report. *Criminal Justice and Behavior, 17*, 134-142.

Jordan, B., Schlenger, W., Fairbank, J., & Cadell, J. (1996). Prevalence of psychiatric disorders among incarcerated women: Felons entering prison. *Archives of General Psychiatry, 53*, 513-519.

Khodayarifard, M., Sohrabi, F., Shokoohi-Yekta, M., Ghobari Bonab, B., Behpajooh, A., Faghihi, A. N., et al. (2007). *Psychotherapy and rehabilitation of prisoners in Rajaei-Shahr Prison: A study of effectiveness*. Tehran, Iran: Prisons Organization of Tehran Province.

Liddle, H. A., & Dakof, G. A. (1995). Efficacy of family therapy for drug abuse: Promising but not definitive. *Journal of Marital and Family Therapy, 21*, 511-543.

Lipsey, M. W. (1995). What do we learn from 400 research studies on the effectiveness of treatment with juvenile delinquents? In J. McGuire (Ed.), *What works: Reducing reoffending—Guidelines from research and practice* (pp. 63-78). Chichester, UK: Wiley.

Lösel, F. (1995). Increasing consensus in the evaluation of offender rehabilitation: Lessons from recent research syntheses. *Psychology, Crime, and Law, 2*, 19-39.

Mirzaei, R. (1980). *The study of psychometric properties of Symptom CheckList-90 (SCL-90)*. Unpublished master's thesis, University of Tehran, Iran.

Murphy, R., & Bauer, R. (1996). *Evaluating the effectiveness of a cognitive skills training program for juvenile delinquents*. Unpublished manuscript, Valdosta State University, GA.

Najarian, B., & Davoodi, I. (2001). Preparation and validation of SCL-25 (short form of SCL-90-R). *Journal of Psychology, 18*, 250- 261.

Novaco, R. W., Ramm, M., & Black, L. (2004). Anger treatment with offenders. In C. R. Hollin (Ed.), *The essential handbook of offenders assessment and treatment* (pp. 129-144). New York: John Wiley.

Ovaert, L. B., Cashel, M. L., & Sewell, K. W. (2003). Structured group therapy for posttraumatic stress disorders in incarcerated male juveniles. *American Journal of Orthopsychiatry, 73*, 151-162.

Pullen, S. (1996). *Evaluation of the reasoning and rehabilitation cognitive skills development program as implemented in juvenile ISP in Colorado*. Denver: Colorado Division of Criminal Justice.

Raynor, P., & Vanstone, M. (1996). Reasoning and rehabilitation in Britain. *International Journal of Offender Therapy and Comparative Criminology, 40*, 272-284.

Robinson, D. (1995). *The impact of cognitive skills training on post- release recidivism among Canadian federal offenders* (Report No. R. 41). Ottawa: Correctional Service of Canada Office of Correctional Research and Development.

Robinson, D., & Porporino, F. J. (2003). Programming in cognitive skills: The Reasoning and Rehabilitation programme. In C. R. Hollin (Ed.), *The essential handbook of offender assessment and treatment* (pp. 63-78). Chichester, UK: Wiley.

Ross, R. R., & Fabiano, E. A. (1985). *Time to think: A cognitive model of delinquency prevention and offender rehabilitation*. Johnson City, TN: Institute of Social Sciences and Arts.

Ross, R. R., Fabiano, E. A., & Ewles, C. D. (1988). Reasoning and rehabilitation. *International Journal of Offender Therapy and Comparative Criminology, 2*, 29-36.

Smith, C., O'Neill, H., Tobin, J., Walshe, D., & Dooley, E. (1996). Mental disorders detected in an Irish prison sample. *Criminal Behaviour and Mental Health, 6*, 177-183.

Taghavi, M. R. (2001). The study of validity and reliability of General Health Questionnaire (GHQ). *Journal of Psychology, 20*, 381-394.

Teplin, L., Abram, K., & McClelland, G. (1996). Prevalence of psychiatric disorders among incarcerated women: Pretrial jail detainees. *Archives of General Psychiatry, 53*, 505-512.

Towl, G. (Ed.). (2003). *Psychology in prisons*. Oxford, UK: Blackwell.

Williams, A. (2005). Group work-based interventions. In D. Creighton & G. Towl (Eds.), *Psychology in probation services* (pp. 82-90). Oxford, UK: Blackwell.

Willmot, P. (2003). Applying the research on reducing recidivism to prison regimes. In G. Towl (Ed.), *Psychology in prisons* (pp. 35-51). Oxford, UK: Blackwell.