

## **AN EMOTIONAL LITERACY INTERVENTION WITH INCARCERATED INDIVIDUALS**

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*This article presents the results of an intervention program intended to teach emotional literacy skills to male prisoners currently incarcerated in the Massachusetts prison system. Emotional literacy in this context is the ability to perceive, understand, and communicate emotions within oneself and toward others. Emotional literacy is also consistent with the concept of emotional intelligence introduced by Salovey and Meyer, “Emotional intelligence refers to the ability to monitor one’s feelings and emotions, and to use that information to guide one’s thinking and actions” (1); and popularized by Goleman (2). The authors present their analyses of both psychological and behavioral effects of this intervention and discuss possible implications of these findings.*

In her text, *Houses of Healing* (3), Casarjian presents an emotional literacy program specifically designed for and previously utilized in the prison setting. This work indicates—both through observational data and subjective reports from prisoners themselves—that these programs are associated with significant personal transformations in emotional maturity, hopefulness, and sense of moral responsibility among participating prisoners. Prisoners nationwide who have used the *Houses of Healing* text alone report that they feel better able to maintain successful relationships with both fellow inmates and family members. Furthermore, these prisoners report increased confidence in their ability to guide themselves through future difficulties and to create more positive outcomes both while in prison and after their release.

Both observation and personal reports provided tentative support for the fundamental hypothesis of the present study, namely, that increased emotional literacy will lead to higher self-regard, increased self-control, and greater moral and spiritual sensibility. According to this hypothesis, individuals who become more aware and respectful of themselves will be better able to demonstrate that

they value and respect others. This self-valuation will further lead to demonstration of greater responsibility, accountability, and empathy in their daily lives. Inmates will thus be able to deal more effectively with the day-to-day realities of prison life and, in turn, be prepared to make a more positive post-prison adjustment upon their release. The implications of these findings are considerable.

### **THE INTERVENTION PROGRAM**

The intervention program consisted of participation in a 12-session course that met in the prison once a week for approximately two hours each session. The group process was rooted in the construction of a cohesive group community, characterized by emotional safety and confidentiality. Each session included both didactic and experiential components.

This 12-week program is based on the book *Houses of Healing: A Prisoner's Guide to Inner Power and Freedom* (3), which is now being used as a model for prison-based discussion groups and facilitator-led classes in prisons throughout the United States. Self-reports from inmates and statements from correctional staff indicate that this program has had a positive impact on participants. The current study, however, has gone a step further to systematically evaluate the program using both quantitative psychological measures and comprehensive individual self-report.

#### **Key Components of the Program**

- Central to the program was the construction of a cohesive group community and an emotionally safe environment within which group members could participate in experiential exercises and discussions.
- Participants were taught self-awareness, self-regulation, and stress-management techniques and encouraged to make a commitment to practicing these techniques in their daily lives.
- Participants were taught cognitive-behavioral reframing techniques and given opportunities to practice rational, non-aggressive responses to challenging situations. They were taught ways to transform anger, resentment, and unhealthy guilt and shame into more constructive responses. As

participants' self-awareness and awareness of unhealthy emotional responses and behaviors increased, they were given the opportunity to learn and practice new responses. The course encouraged forgiveness of both self and others as an avenue to emotional maturity. A key distinction was made between "healthy guilt" (which requires a sense of accountability and responsibility for acts that are hurtful and lack integrity) and "unhealthy guilt" (which contributes to the development of low self-esteem and a pervasive sense of shame and unworthiness).

- Participants were encouraged to acknowledge and increase their awareness of grief, loss, and childhood trauma and to explore and discuss the impact that each of these had on their present lives. Through reading, writing, group discussion, and facilitator-led experiential exercises, course participants were assisted in addressing, integrating, and resolving past abuses and traumas. Personal history was often linked to present relationship difficulties, violence, addiction, and criminal activities.

- At the beginning of the program, each participant was given a copy of the book, *Houses of Healing: A Prisoner's Guide to Inner Power and Freedom*. At the end of every session, participants were given a weekly "self-work" assignment.

### **Hypotheses**

The first hypothesis of the study was that participation in the intervention program would be positively correlated with emotional literacy, as demonstrated by increases in self-esteem, moral maturity, and spiritual consciousness, as well as by decreases in hostility, depression, and alexithymia (emotional numbness or inability to describe one's emotions).

A further hypothesis was that an increase in emotional literacy would be associated with positive behavioral changes, characterized by improved self-control, particularly of impulsive and aggressive behaviors as indicated through a decrease in number of disciplinary reports and decreased conflict with the law once released from prison.

### **Participants**

The population participating in the study included 70 male inmates incarcerated within two medium security facilities in Massachusetts, at M.C.I. Shirley and M.C.I. Gardner. The racial and ethnic composition of the sample included 36% Caucasian, 39% African-American, 22% Hispanic, 2% Asian, and 1% Native American. They ranged in age from 20 to 63, and 50% were under the age of 30.

The inmates were incarcerated for a wide range of criminal activity from nonviolent offenses to homicide. 82% had been incarcerated at least twice previously, and 50% had served at least one year of time. 50% had received sentences of at least 7.5 years.

Participants were selected from the general prison population who met the following criteria: 1) the individual would remain in prison a minimum of eight months (the length of the program and four-month post program follow-up) and 2) the individual was able to demonstrate at least a 5th grade reading ability. The nature of the crime was not used in determining participation. Participation in the program was entirely voluntary.

### **Methodology**

A total of five groups were evaluated as part of the present study. Two of the groups, whose program took place between the months of April and July, were made up of participants from M.C.I. Shirley. The other three groups' programs took place from September through December and January. One of these groups was made up of participants from MCI Shirley, while the other two were made up of participants from M.C.I. Gardner.

This article utilizes a combination of qualitative and quantitative measures to determine effects and outcomes of the previously described intervention program. The experimenters tested their hypotheses in a number of different ways. First, they used a battery of self-administered psychological tests, given to participants both before and after the intervention. Second, they analyzed subjective, narrative reports from the participants themselves. Third, they collected information about the participants' disciplinary records for the four

months prior to and following the intervention and looked for any changes in the number of reports.

### **Quantitative Measures**

A series of psychological tests were administered to participants. These objective measures, chosen for their reliability and validity in measuring change in “emotional literacy,” were administered one week before the start of the 12-week “Emotional Awareness” course and one week after the conclusion of the course.

The two groups that began in April were given the following four measures: the Beck Depression Inventory (BDI) (4), the Cook and Medley Hostility Scale (5), the PsychoMatrix Spirituality Inventory (6) and the Rosenberg Self-Esteem Scale (RSES) (7).

The two groups that began in September were given the following three measures: the Beck Depression Inventory (BDI) (4), the Cook and Medley Hostility Scale (5) and the Toronto Alexithymia Scale (TAS) (8).

The experimenters also collected information about the participants’ disciplinary records for the four months prior to and following the intervention, and looked for any changes in the number of these reports.

### **Qualitative Measures**

From these five groups, 20 participants were selected for extended audiotape interviews. The men interviewed were representative of the larger sample in terms of age, ethnicity, and race. They were also chosen because of their ability and willingness to express their knowledge, experiences, and views in private conversations. Interview participants were ensured confidentiality and anonymity.

Those topics covered in the interview included the following: 1) Childhood and family history, focusing on early role models, the formation of early beliefs and values, and experiences with abuse, neglect, or violence; 2) The development and expression of manhood within the family, peer group, and community; 3) Experiences with school, sports, and peer groups; 4) Criminal history and history of addiction; 5) Sociocultural rules and roles within the

prison environment as well as an exploration of challenging events and crises in the prison experiences, including fighting and violence; 6) An in-depth exploration of the impact, if any, of the 12-week emotional literacy program upon the daily lives of participants, with particular emphasis on incidents of actual or potential conflict, conflict avoidance, and/or conflict resolution; 7) An in-depth exploration of moods, attitudes, and behavioral strategies underlying adaptation to daily life in prison, including questions regarding the continued use of skills and techniques learned in the 12-week program.

The structured interviews gave subjective depth and meaning to the aggregate data from the psychological measures and discipline reports. They provided an opportunity to examine, through first-hand personal accounts and vignettes, the impact a treatment program has upon this population.

## **RESULTS**

### **Program Impact**

By testing group participants at the beginning and again at the end of the 12-week intervention, it was possible to demonstrate in a prison population the occurrence of psychological change at a statistically significant level within the time parameters of the program. While we cannot definitively say that the program caused the psychological change, we can say that the change occurred in conjunction with the program. The statistical analysis of the data indicates that it is highly unlikely that such change could be attributed to chance alone.

Administering all of the chosen scales to each participant proved unfeasible because of logistical pressures on the participants. The reported findings for several of the tests are therefore based on a partial sample of participants. (When this is the case, the number of participants included in analysis is indicated as such in Tables 1-5). Also, in an effort to reduce the burden of testing requirements on participants, one group received the PsychoMatrix Spirituality Inventory, while the other received the Toronto Alexithymia Scale, thus resulting in a smaller sample size for each of these measures.

**Table 1. Beck Depression Inventory: Mean Scores for Each Group**

	N	Mean	Std. Dev.	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
Group 1	53	15.6415	8.5330	1.1721	13.2895	17.9935	0.00	36.00
Group 2	64	10.5625	6.7398	0.8425	8.8790	12.2460	1.00	33.00
Total	117	12.8632	7.9848	0.7382	11.4021	14.3253	0.00	36.00

**Beck Depression Inventory: Analysis of Variance**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	747.873	1	747.873	12.937	0.000
Within Groups	6647.939	115	57.808		
Total	7395.812	116			

**GRAPH 1**

*Beck Depression Scale.* Participants showed a decrease in depression scores between pre-testing (M = 15.6415, SD = 8.5330) and post-testing (M = 10.5625, SD = 6.7398). ANOVA indicated that this change was statistically significant (p = 0.0001). (See Table 1 and Graph 1.)

**Table 2. Hostility Scale: Mean Scores for Each Group**

	N	Mean	Std. Dev.	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
Group 1	69	26.8696	7.9741	0.9600	24.9540	28.7851	6.00	48.00
Group 2	69	23.6667	8.7307	1.0511	21.5693	25.7640	6.00	45.00
Total	138	25.2681	8.4840	0.7222	23.8400	26.6962	6.00	48.00

**Hostility Scale: Analysis of Variance**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	353.920	1	353.920	5.063	0.026
Within Groups	9507.159	136	69.906		

Total	9861.080	137			
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## GRAPH 2

*Cook and Medley Hostility Scale.* Participants showed a decrease in hostility scores between pre-testing (M = 26.8696, SD = 7.9741) and post-testing (M = 23.6667, SD = 8.7307). ANOVA demonstrated that this decrease was statistically significant (p = 0.026). (See Table 2 and Graph 2.)

*The Toronto Alexithymia Scale.* Participants' scores on the alexithymia scale decreased between pre-testing (M = 61.5625, SD = 10.7938) and post-testing (M = 57.4375, SD 9.7061). ANOVA indicates that this decrease was statistically significant (p = 0.052). (See Table 3 and Graph 3.)

*Psychomatrix Spirituality Inventory.* Participants' scores on the PSI show statistically significant changes on two relevant factors: Mindfulness and Community.

Participants' scores increased in the Mindfulness Factor from pre-test (M = 2.6076, SD = 0.5475) to post-test (M = 3.0027, SD = 0.4411). ANOVA demonstrated that this increase was statistically significant (p = 0.001). (See Table 4 and Graph 4.)

**Table 3. Alexithymia Scale: Mean Scores for Each Group**

	N	Mean	Std. Dev.	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
Group 1	48	61.5625	10.7938	1.5580	58.4283	64.6967	43.00	90.00
Group 2	48	57.4375	9.7061	1.4010	54.6191	60.2559	43.00	83.00
Total	96	59.4186	10.4186	1.0644	57.3890	61.6110	43.00	90.00

### Alexithymia Scale: Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	408.357	1	408.375	3.876	0.052
Within Groups	9903.625	94	105.358		
Total	10312.000	95			

### GRAPH 3

**Table 4. PsychoMatrix Spirituality Inventory, Factor III: Mindfulness: Mean Scores for Each Group**

	N	Mean	Std. Dev.	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
Group 1	42	2.6076	0.5475	0.08449	2.4369	2.7782	1.92	3.89
Group 2	40	3.0027	0.4411	0.06974	2.8617	3.1438	2.10	3.67
Total	82	2.8003	0.05895	0.05895	2.6830	2.9176	1.92	3.89

**PsychoMatrix Spirituality Inventory, Factor III: Mindfulness  
Analysis of Variance**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.199	1	3.199	12.876	0.001
Within Groups	19.879	80	0.248		
Total	23.079	81			

### GRAPH 4

Participants' scores on the Community Factor also increased from pre-test (M = 1.9531, SD = 0.6644) to post-test (M = 2.2741, SD = 0.6580). ANOVA demonstrated that this increase was also statistically significant ( $p = 0.031$ ). (See Table 5 and Graph 5.)

**Table 5. PsychoMatrix Spirituality Inventory, Factor IV: Community Mean Scores for Each Group**

	N	Mean	Std. Dev.	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
Group 1	42	1.9531	0.6644	0.1025	1.7461	2.1602	1.13	3.29
Group 2	40	2.2741	0.6580	0.1040	2.0637	2.4845	1.25	3.50
Total	82	2.1097	0.6767	0.0743	1.9610	2.2584	1.13	3.50

**PsychoMatrix Spirituality Inventory, Factor IV: Community Analysis of Variance**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.111	1	2.111	4.827	0.031
Within Groups	34.984	80	0.437		
Total	37.905	81			

## GRAPH 5

*Rosenberg Self-Esteem.* Participants' scores on the self-esteem scale did not show any statistically significant variance from pre-test to post-test.

## OUTCOME MEASURES

### Disciplinary Reports

Pre-existing disciplinary report records were used as an indicator of prison adjustment. While these reports are only one measure of such adjustment, the conditions of prison life made them the most practical to use in this study. Records for the treatment group during the four-month period immediately preceding the first session were compared to those from the four-month period immediately following completion of the 12th and final session. Changes in the number of disciplinary reports pre- and post-testing appeared to be statistically

insignificant. It is important to note, however, participants had, on average, received a low number of disciplinary reports prior to the intervention.

## **RESULTS OF QUALITATIVE ANALYSIS**

### **Structured Interviews**

Almost all of the participants who were interviewed stressed the fact that they had found the program to be an important and useful experience. The 20 interviews provided the following additional insights:

1) *Prison intensifies the enactment of manhood-enhancing behaviors.* The interviewees described their perceived need to maintain and defend their image as strong men who were able to defend themselves at all times in any situations, whether real or potential. They feared giving the impression that they were weak or could have things taken from them. The younger men in particular felt the imperative need to demonstrate a readiness to fight. Groups of inmates form associations for the purpose of demonstrating collective strength and solidarity against attack. They strive to build honor and respect inside prison by projecting an image of being a “stand up” man. These findings corroborate those of Phillips (9), in which the author presents a model of manhood in the prison context, based upon extensive observation of men in prison as well as extended interviews with inmates.

2) *Prison provides an opportunity for personal growth and the development of “emotional literacy.”* While the prison environment is one of stress, loss, and separation from the outside world, it also provides an opportunity for change. The 12-week program became an opportunity to confront the rigid masculine model of fighting, strength, and emotional numbness (alexithymia), and to build a group community based on the recognition of one’s own emotions and the emotions of others. The Houses of Healing program has the potential to provide a safe container for personal change and the building of positive relationships. It is unlikely that, outside of prison, participants would have been able to achieve the same level of intensity and commitment toward change and growth that was observed in the prison classroom. Due to the curtailment of outside influences and distractions, men in

prison are faced with the unique opportunity for potential transformation. In the context of a cohesive group program, these men demonstrated a readiness to acknowledge and explore their traumatic and criminal histories.

3) *The success of a prison-based emotional literacy program presupposes strong group leadership and a healthy group process.* The presence of “older guys” (or “O.G.s”), who strongly identified with the program and supported the personal work of others, proved to be a powerful influence on group safety and cohesion, an observation which was strongly supported by the interviews. Groups that included participants with a strong pre-established reputation as “stand up” men who ratified the principles of the program and did the personal work themselves, had the highest level of overall group commitment to the goals of the program. The O.G.s’ participation seemed to sanction the program and allow younger and/or less secure men to commit to the group. This group bonding around sharing personal histories and emotions promoted the acceleration of change within individual group members.

#### **CASE VIGNETTE**

George is a 34-year-old African-American man with an extensive history of drug dealing and violence. His early history is characterized by loss, dislocation, and family violence. He describes his childhood as one of loneliness and multiple incidents of being bullied. He was raised by his mother and an older female cousin, and said he never learned to associate with other boys. In high school, he readily became drawn into gang life, and became involved in criminal activities, which led to violence and culminated in a homicide.

In prison, George continued to foster a reputation as a “stand up” man who, “if pushed,” would fight. He held in his emotions until “they hit the boiling point,” and he often began to fight without even being aware that he was striking out. At times, he found himself so ready to explode with emotions that he reported he “lost all hearing.” He spent his free time in prison in the gym, the weight room, and playing on organized sports teams.

In the Houses of Healing group, George showed a readiness to speak up, share his history, and engage other group members in discussion, and his openness clearly paved the way for others. George began to meditate on a daily basis, and at the time of the interview several months after the conclusion of the program, George continued to practice meditation.

As a part of the “inner child” exercise, in which each participant writes a letter to himself as a child or young man, George enthusiastically wrote a letter entitled, “Dear Little Georgie,” and read it to the group, even allowing himself to display strong emotions as he read about his loneliness, sadness, and fear of bullies. At the end of the letter, group members clapped and cheered for George, and soon after that, many group members were willing to read their letters and show emotions to the group.

At the end of the interview, George confided that writing and then reading his “inner child” letter had been a turning point for him. He still reads that letter frequently and says that the exercise allowed him to see, for the first time, the impact of his childhood trauma upon his development as a man and a member of a violent gang. The unfolding of George’s emotional literacy, his readiness both to do the work and to openly share the work, fostered the cohesion of the entire group.

#### **DISCUSSION AND IMPLICATIONS FOR FUTURE RESEARCH**

The results of this study suggest that the implementation of a 12-week emotional literacy program may produce positive psychological and spiritual changes within a prison population. Participants in the program showed significant positive changes on previously validated scales of depression, hostility, spirituality (specifically mindfulness and community), and alexithymia (emotional numbness). The change in participants’ results on these scales suggests that positive psychological changes occurred over the course of the 12-week program. While these findings do not necessarily indicate that the changes were a result of participation in the program, they do indicate that participation was concurrent with significant positive change.

#### **Beck Depression Inventory**

Significant decreases in participants' scores on the Beck Depression Inventory suggest that those inmates who participated in the program experienced a decrease in the number of symptoms of depression, as it is defined by the BDI, considered to be one of the most reliable measures of depression. These results do not imply whether or not participants might have been diagnosed with clinical depression either prior to or after their participation in the program. They merely indicate that, on average, these inmates experienced a decrease in the number or severity of symptoms associated with depression. Other studies (10-12) have found indications of a relationship between depression and antisocial behavior, and some (10) have found evidence that this relationship is both reciprocal and causal. A program that produces significant decreases in depression, therefore, has definite implications regarding the future criminal behavior of participants.

#### **Cook and Medley Hostility Scale**

Significant decreases in participants' scores on the hostility scale indicate that participation in the program was associated with a corresponding decrease in hostility, as would be expected from the aforementioned studies. While we cannot infer that participation in the program caused such a decrease, we can infer that the change coincided with participation. This result, therefore, seems to indicate that participants were able to acquire skills of self-regulation and that they learned to channel negative emotions into more constructive responses. As many other studies have shown a clear relationship between hostility and antisocial behavior, this finding has clear implications in the context of the prison system. With recidivism rates as high as they are, it therefore seems likely that programs such as this one, which may be able to help participants decrease their levels of hostility, could effectively teach participants to rely on more constructive, positive ways of responding once they are no longer in prison. Hopefully, such learning would decrease the likelihood of further disruptive behavior and thus result in a decrease in recidivism rates.

#### **Toronto Alexithymia Scale**

Significant decrease in participants' scores on the Toronto Alexithymia Scale indicate that participation in the program was associated with a decrease in emotional numbness and, therefore, a corresponding increase in healthy emotional experience and emotional awareness. As in the case of the other scales, we cannot assume that the program necessarily caused this change, however, the change coincided with participation. Thus, the results seem to suggest that, throughout the course of the program, participants developed emotional awareness and the ability to experience their emotions in more mature, constructive, and healthy ways. Because emotional awareness presumably would allow individuals to better regulate their emotions, it is, therefore, likely that increases in emotional awareness would be the first step in learning emotional regulation, which in turn could lead to healthier responses and possibly decreased levels of antisocial behavior.

### **PsychoMatrix Spirituality Inventory**

Significant increases in participants' scores on the PsychoMatrix Spirituality Inventory (PSI)—namely on the Factors of Mindfulness and Community—suggest that those inmates who participated in the program acquired or at least were attempting to acquire skills of mindfulness including, but not limited to, meditation, relaxation techniques, and self-awareness. Increases on the Mindfulness Factor indicate that participants learned and chose to utilize such techniques, and to depend upon and value them. The application of these techniques would likely help participants recognize, control, and express in healthy and productive ways their own anger, anxiety, and fear, as well as other strong negative emotions. This ability to recognize and control negative emotions would likely be a strong first step toward healthy and productive relationships and interactions in the future.

Increases in participants' scores on the Community Factor of the PSI indicate that participants came to place more importance on their interactions with their communities, and that they came to derive value and meaning from their interactions and contributions to their communities. Furthermore, an increase in this factor also demonstrates increased participation in community activities and interactions. Such changes have clear implications in the case of

prison inmates. The ability to derive value from one's community and the desire to be a part of, and have a positive effect on one's peers and neighbors, seems likely to lead to behavior that is conscientious and takes the well-being of others as well as oneself into account. Furthermore, the desire to seek pleasure in one's community may give participants more opportunities to participate in meaningful activities that give them a sense of accomplishment and responsibility.

The five other factors of the PSI—Intellectuality, Divinity, Childhood Spirituality, Extrasensory Phenomenon, and Trauma—were not found to be significantly changed from the pre-test to the post-test. Because of the focus of the program, however—the development of emotional literacy—changes in the Mindfulness and Community Factors should be more expected than changes in the other factors. We would not necessarily expect participants' scores on the Intellectuality Factor to change, for example, because such a change would indicate either an increase or decrease in the extent to which individuals experience their spirituality in an intellectual manner, through reading and discussing sacred or philosophical texts. Such a change does not seem necessarily related to the focus of the intervention program, and would therefore not be predicted.

Similarly, we would not expect to see a change in participants' scores on the Childhood Spirituality Factor, which explores the individual's experience of spirituality as a child. While scores on this factor could change over time in cases where an individual's memory of his or her childhood experience is altered or in cases where individuals come to place emphasis on different parts of these memories, changes in this factor would not be expected in the case of this study, as the participants' childhood experiences themselves could not be affected by their participation in the program, and it seems rather unlikely that their memories of such experiences would change as well.

We would also expect no change in participants' scores on the Extrasensory Phenomenon Factor, which explores experiences of extrasensory perception or

“sixth sense.” Experiences of this sort seem unlikely to have a relationship with the content of the program.

Change in participants’ scores in the Divinity Factor would be similarly unexpected, as this factor deals with an individual’s beliefs and experience of a divine or higher source. It seems unlikely that such beliefs or experiences would be affected by the intervention program.

Finally, the Trauma Factor, which explores crises and traumatic events in an individual’s life that may lead to or enhance the individual’s spiritual experience, does not seem to be necessarily linked to any aspect of the program, and thus a change in scores on this factor would be unexpected. While participants in the program were encouraged to discuss their own traumas and explore and share their feelings about these experiences, their scores on this factor of the PSI would not be likely to change due to such discussions. Most of the questions which have bearing on this factor ask about the extent to which the individual has experienced various forms of trauma, rather than asking about their current views about these experiences or other thoughts or feelings that could have been affected by the experience in the program.

#### **Rosenberg Self-Esteem Measure**

No significant change was found in participants’ self-esteem, as demonstrated by the Rosenberg Self-Esteem Measure, indicating that participants’ scores on this measure did not show any significant correlation with their participation in the program. If there were changes in participants’ self-esteem, this measure was not sensitive enough to pick up on them.

It should also be kept in mind, however, that these changes—or lack of changes—have not been compared to those of a control group. Because such qualities as self-esteem were measured only once before and once after the duration of the program, there is no indication of whether there were changes in self-esteem prior to participation. It is conceivable, for instance, that prisoners experience changes in self-esteem over the course of their time in prison, regardless of their participation. If that were the case and a control

group within the prison was found to experience negative changes in self-esteem during this period, for example, no change in the participants' self-esteem would be a significant finding. Similarly, on others of the scales used in this study, change or lack of change in a control group could indicate either that a significant change is likely to be due to some other factor than the program itself or, on the other hand, that the effect we have noticed is greater than we first thought. The present article indicates significant change in a number of areas, using each subject as his own control in a pre-post design. The extent and significance of this change, however, can be more thoroughly understood when examined in the context of an independent control group. The authors hope to include such comparisons in future studies.

### **Subjective Reports**

The interviews indicate that participants considered the program to be both helpful and important in producing positive change in their lives. In discussing their subjective experiences of the program, participants identified factors that may contribute to its effectiveness. They emphasized the need to confront the central issues of masculinity that frequently becomes accentuated in prison. They also shed light on social patterns and cultural rules in prisons as well as the influence of a group program upon these rules and practices.

There appeared to be no significant change in the number of disciplinary reports before and after participation in the program. As mentioned previously, however, no control group was used, thus leaving open the possibility that no change is an improvement over negative change. Furthermore, this analysis only took into account the number of disciplinary reports, not the type or severity of the misconduct.

A comparative measure of disciplinary reports using a control group within the institution was considered in the original proposal for this study. Because there was no change on this measure—positive or negative—in the treatment group, however, a comparison with a control group was not done. Upon further consideration, the researchers acknowledge that such a comparison may have been fruitful, as no change in the treatment group would be a significant finding

if the control group showed an increase in disciplinary reports. Again, future studies should take this possibility into account and include such comparisons.

The results of the study are quite encouraging insofar as they show, above all, that it is possible to empirically demonstrate psychological changes in a prison population with the kinds of measures that we used; namely, measures of mood (depression and hostility), cognition (alexithymia), and spiritual consciousness (mindfulness and community). It should be noted that two factors of the PSI are exactly the dimensions of change one would hope for in relation to an emotional literacy program; namely, an increase in self-reflection and awareness, and an increase in the feeling of connection with others.

Because the participants were tested at the beginning of the Emotional Literacy Intervention and again at the end, the results indicate that the changes occurred within the time parameters of the program. As previously mentioned, while these findings do not necessarily indicate that the intervention caused the changes in the participants, they do show that the changes occurred in conjunction with the program, thereby lending support to the hypotheses that a) changes can occur, and b) these changes can occur in the predicted direction and in conjunction with the intervention program. The experimenters hope to pursue this area of research in more depth in the future, testing the hypothesis that the Program on Emotional Literacy is a powerful stimulant for emotional, psychological, and spiritual change to occur with incarcerated individuals.

This study has a number of other implications for future research. First, it would be fruitful to further refine and focus the battery of psychological measures. As mentioned, it would also be useful to use a matched control group, as doing so would increase confidence in the implications of psychological change within the groups receiving the intervention. Also relevant would be a study of the extent to which these positive psychological changes are maintained over time, as indicated by retesting at later dates and after release from prison.

Also important to note is the fact that participants decided to take part in the program voluntarily. The population under examination was, therefore,

necessarily self-selecting. Including individuals who have not chosen to take part in the program voluntarily has obvious ethical complications. Furthermore, such non-voluntary participants might take the measures less seriously, thus making their results less reliable indicators of actual change or lack thereof. It should be kept in mind, however, that there may be significant differences between the men who chose to participate in the program and those who opted not to participate. It seems likely that those who chose to participate did so because they were hopeful that the program would be a positive experience and that it would help them. Such an attitude may be an important factor in facilitating the changes observed. Therefore, the results of this study are inconclusive as to the effect of such programs if they were to be made mandatory in prisons. Taking into account the ethical issues at hand, it would be useful if future studies could explore the program's effectiveness with a less self-selective group of participants.

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