

Empowering Through Embodied Awareness: Evaluation of a Peer-Facilitated Trauma-Informed Mindfulness Curriculum in a Woman's Prison

The Prison Journal

1–24

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DOI: 10.1177/0032885519860546

journals.sagepub.com/home/tpj



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Note: A video link is available for viewing the program highlights:
<https://youtu.be/B6P51HYnbyY>

Abstract

The cumulative effects of trauma, violence, and substance abuse both define women's pathways into the correctional system and contribute to their unique needs within it. This research offers a case study of the implementation of a gender-responsive, trauma-informed integrated mindfulness program within a women's prison. Applying a yoga-based psycho-educational approach, the manualized curriculum was presented in a 16-session, closed-group format with peer-facilitation and pre- and postprogramming assessments. Overall, outcomes of this study were promising. Program participants demonstrated improvements in the use of healthy coping skills, experience of traumatic stress, symptoms of anxiety and depression, self-compassion, sense of connection, ability to relate to others, emotional awareness, and self-regulation.

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Keywords

yoga, mindfulness, trauma, gender, women in prison

Introduction

The experience of women within the criminal justice system is unique and their pathways to justice involvement distinct. Since 1980, the rate of growth for number of individuals incarcerated in women's prisons has been twice as high as that of men (The Sentencing Project, 2017). Upon entering prison, individuals incarcerated in women's prisons bring distinct physical and mental health needs. According to a report on by the MacArthur Foundation and the Vera Institute, 86% of individuals incarcerated in women's prisons have experienced sexual assault, 32% have a serious mental illness, and 82% have a drug or alcohol dependence (Swavola, Riley, & Subramanian, 2016). The cumulative effects of trauma, violence, and substance abuse both define these individuals' pathways into the correctional system and contribute to their unique needs within it (Bloom, Owen, & Covington, 2003; Covington & Bloom, 2006, 2008; Green, Miranda, Daroowalla, & Siddique, 2005).

It is critical to develop trauma-sensitive systems of health care within women's prisons based on their unique needs. Maintaining an overall healthy sense of being requires attentiveness to both physiological and psychological health (Brown & Ryan, 2003). Currently, the correctional system offers a variety of mental health care options within women's prisons, including psychiatric medication as well as individual and group therapy. However, the availability of these options is only the first step; the programming implementation must be responsive to the dynamic needs of the women in these facilities. Therefore, resources for programming should be allocated based on the greatest areas of need—in the case of women's prisons, this being physiological and psychological distress resulting from experiences of trauma, violence, and substance dependence. Once those areas of need are identified and resources are appropriately allocated, programming must be delivered in a way that responds to the unique requirements and strengths of the inmates in attendance. For example, the experience of individuals likely to be housed within women's prisons—both for cisgender women and gender minorities—is different than that of individuals likely to be incarcerated within men's prisons. Effective programming acknowledges the significance of gender by considering how it has shaped individuals' life experiences, their sense of embodiment, and their likeliness to benefit from various forms of engagement. The delivery of programming is then adjusted accordingly. Thus, trauma-informed, gender-responsive programming seeks to not only identify

the greatest areas of need but also to tailor the way those needs are addressed in consideration of gender and how it shapes experiences, embodiment, and engagement.

Alternative and complementary treatment methods for mental health, including yoga and other mindfulness-based approaches, have recently been integrated into correctional practice. There is a growing body of evidence supporting the impact of mindfulness for an inmate population (Auty, Cope, & Liebling, 2015; Epstein & Gonzalez, 2017). Furthermore, in addition to being a generally effective treatment method within the context of incarceration, studies have also found that mindfulness-based approaches can be a valuable means of addressing specific health issues that are prevalent in women's prisons, such as posttraumatic stress disorder (PTSD; for a recent clinical study examining the benefits of yoga in a PTSD population see van der Kolk et al., 2014). Given such evidence, mindfulness-based treatment programs appear to be uniquely well-positioned to serve the health care needs of individuals incarcerated in women's prisons.

This research offers a case study of the implementation of a gender-responsive, trauma-informed integrated mindfulness program within a women's prison. The program represents a yoga-based psycho-educational approach to helping women understand and respond to the emotional and embodied physical impacts of trauma and traumatic stress. The current case study represents a manualized curriculum presented in a 16-session, closed-group format with peer-facilitated implementation.

Background

Women in the Prison System

Historically, since incarcerated women have made up such a small percentage of the overall prison population, their specific physical and mental health needs often receive less attention. That individuals incarcerated within women's prisons comprise only 7% of the total U.S. prison population does not serve as an accurate gauge for resource allocation. In comparison to those incarcerated in men's prisons, women in prison more often show significant signs of serious psychological distress and are more likely to have been diagnosed with a mental health disorder by a mental health professional (Bureau of Justice Statistics, 2017b, 2018). Specifically, imprisoned women show higher rates of physical and sexual abuse, display communicable diseases and ailments, more likely meet the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994) criteria for drug abuse or dependence, and have children to care for as

single parents (Bureau of Justice Statistics, 2017a; Swavola et al., 2016). Furthermore, female inmates experience a higher rate of mental disorders—mainly depression, PTSD and substance abuse—than females in the general population (Bloom et al., 2003). Therefore, individuals incarcerated in women's prisons demonstrate a greater need for health services—both generally and within specific facets of physical and mental health—than both women in the general population and men who are incarcerated.

Practitioners and researchers have developed a variety of trauma-informed programs to meet women's treatment needs. These programs are frequently psycho-educational and seek to provide empowerment through education and connection through group cohesion. A variety of reputable manual-based programs are currently in existence, and trauma-informed programming is being implemented in both prison settings and the community. Examples include Lisa Najavits's Seeking Safety, Maryland Mental Hygiene Administration's Trauma, Addiction, Mental Health, and Recovery (TAMAR) and Stephanie Covington's Beyond Trauma: A Healing Journey for Women (Covington, 2003/2016; Najavits, 2002; Substance Abuse Mental Health Services Administration, 2018). To date, there is a strong body of evidence demonstrating the positive impacts of these programs (Messina, Calhoun, & Braithwaite, 2014; Najavits & Hien, 2013; Oklahoma Department of Corrections, Evaluation and Analysis Unit, 2013; Sacks, 2004; Saxena, Messina, & Grella, 2014; Zlotnick, Najavits, & Rohsenow, 2003). Expanding the scope of gender-responsive trauma-informed treatment protocols to include alternative and complementary treatment approaches could provide additional benefit to women and gender minorities in the correctional setting.

Yoga as a Complementary Therapeutic Tool

Having origins in Indian philosophy, yoga and mindfulness programs have begun to receive attention and validation as legitimate therapeutic interventions (Salmon, Lush, Jablonski, & Sephton, 2009). Yoga has multiple health benefits, incorporating and improving both emotional and physical strengths (Garfinkel & Schumacher, 2000). Specifically in terms of psychological outcomes, yoga and mindfulness have been shown to reduce symptoms of PTSD (van der Kolk et al., 2014), anxiety (Smith, Hancock, Blake-Mortimer, & Eckert, 2007; Somerstein, 2010), depression (Cramer, Lauche, Langhorst, & Dobos, 2013; Pilkington, Kirkwood, Rampes, & Richardson, 2005), as well as to increase self-esteem and improve overall mental health and well-being (Baer, 2003; Carmody & Baer, 2008; Impett, Daubenmier, & Hirschman, 2006).

Yoga has proven to be an effective treatment for trauma-related illnesses and mental health disorders in a variety of populations, including *veterans* (Kearney, McDermott, Malte, Martinez, & Simpson, 2012; Stoller, Greuel, Cimini, Fowler, & Koomar, 2012) and *victims* of traumatic events (Telles, Singh, & Balkrishna, 2012). Within the correctional setting, people who are incarcerated have responded well to yoga and mindfulness-based therapies as a treatment method for trauma-related illnesses and mental health disorders (Bilderbeck, Farias, Brazil, Jakobowitz, & Wikholm, 2013; Danielly & Silverthorne, 2017; Duncombe, Komorosky, Wong-Kim, & Turner, 2005; Epstein & Gonzalez, 2017).

Several yoga programs have been implemented within the prison system. These programs include the Prison Yoga Project, Insight Prison Project, Yoga Behind Bars, Liberation Prison Yoga, and Yoga 4 Change. In 2017, the Yoga Service Council published the *Best Practice for Yoga in the Criminal Justice System* (Horton, 2017), which serves as a resource for the development and implementation of yoga programming in jails, prisons, youth detention centers, and court-ordered programs. The Prison Yoga Project recently reported positive results, indicating that yoga intervention has reduced self-reported levels of depression and stress, and improved self-control and self-awareness for female inmates (Danielly & Silverthorne, 2017). In addition, a qualitative study of former male inmates examined the same project and reported similar results: “positive psychological impact resulting in reduced depression and anxiety, a reduction of aggressive tendencies, a reduction of physical ailments including addictive behaviors, and an increase in social participation and dedication to community” (Viorst, 2017). In a mid-year evaluation of correctional programming, inmates participating in Yoga 4 Change’s 6-week curriculum reported significant improvements in their overall health, quality of sleep, use of coping skills, ability to regulate their emotions, and ability to manage their anger. Participants also demonstrated increased levels of forgiveness, self-compassion, and posttraumatic growth, as well as decreased frequency and intensity of anxiety (Rousseau, 2018).

Although studies evaluating the benefits of yoga and mindfulness programs in the context of incarceration are still relatively new, there is a growing body of evidence yielding data that supports their presence. Studies conducted in incarceration settings in India, Senegal, Great Britain, and the United States have shown positive results of a yoga or mindfulness practice on inmates, including decreased anxiety, decreased aggression, increased impulse control, overall improvement of total wellness (Ambhore & Joshi, 2009; Baskaran, 2015), increased mental and physical health, increased spiritual practice and prosocial behavior (Anklesaria & King, 2003), increased capacity for cognitive control (Bilderbeck et al., 2013), and an improved state

of mind (Duncombe et al., 2005). Globally, evaluations of yoga and mindfulness practices have produced positive findings across a variety of prison populations.

A recent meta-analysis of mindfulness programs in prison settings found that programming has positive benefits for both psychological well-being and behavioral functioning. This analysis showed that longer duration programs have a somewhat greater effect on behavioral functioning as compared with shorter more intensive programs (Auty et al., 2015). For individuals incarcerated in women's prisons specifically, mindfulness programming has indicated improvements in sleep, decreased guilt, and increased hopefulness (Sumter, Monk-Turner, & Turner, 2009). Additional studies have shown that yoga and mindfulness practices also help strengthen self-regulation, self-esteem, relationships, and parenting practices for inmates in women's prisons (Epstein & Gonzalez, 2017).

As discussed above, studies in gender-responsive therapies have shed light on individuals incarcerated in women's prisons, an often-overlooked population that experiences the impact of trauma-related illnesses and mental health disorders in a distinct way and at a uniquely high rate (Bloom et al., 2003; Keaveny & Zauszniewski, 1999; Teplin, Abram, & McClelland, 1996). Evidence suggests that the entry of women and gender minorities into the criminal justice system is a result of key impacting factors, including childhood victimization and intimate partner violence (Salisbury & van Voorhis, 2009). Thus, to be effective, programming should target trauma and provide specific tools for negotiating resilience in relationship with self and in connection with others. Based on this understanding, the population of incarcerated women and gender minorities would benefit from programming that targets self-inquiry and fosters positive self-connection through yoga and mindfulness.

Case Study Overview

This study explored the impact of a peer-facilitated embodied mindfulness curriculum for individuals who are incarcerated in women's prisons. This pilot study followed 12 women through participation in the program, assessing each participant both pre- and postprogramming. New alternative and complementary correctional interventions potentially benefit not only program participants but also others with a vested interest, including correctional mental health workers, prison administrators, and any group concerned with improving the health and well-being of incarcerated women. It is our hope that the program's outcomes will inform new and effective strategies for trauma-informed care and embodied wellness practices.

Method

Programming

The current study evaluated a mindfulness-based treatment protocol developed by the organization yogaHOPE (Trauma Informed Mind Body [TIMBo], 2013). YogaHOPE is a nonprofit organization dedicated to bringing rehabilitative trauma-informed mind-body programming to women internationally. YogaHOPE strives to lead women toward empowerment and recovery by cultivating mindfulness through yoga, meditation, and nonjudgmental self-inquiry.

The specific focus of this project includes evaluation of yogaHOPE's TIMBo program. Developed by yogaHOPE founder Sue Jones, TIMBo represents a manual-based curriculum rooted in trauma theory and an understanding of gender-responsive programming. The TIMBo program offers a deliverable, research-based curriculum addressing the ways in which mind-body practices allow for long-term traumatic stress recovery. TIMBo was developed specifically for women suffering from chronic trauma, addiction, and abuse. It offers women the tools needed to address the psycho-social, emotional, and physiological root causes of trauma, enabling them to seek healing and to improve emotional regulation. The program uses a strengths-based approach, encouraging female survivors to take an active role in their own recovery. The TIMBo program provides facilitators with a structured curriculum of 16 sessions that provide participants with tools to address their habituated patterns and symptoms that lead to relapse and entrapment in the cycle of trauma.

The TIMBo program allows women the space for self-discovery and personal empowerment. According to the curriculum manual, TIMBo seeks three primary objectives. The first and most concrete objective of this program is to give women simple, effective, and accessible tools to utilize as active coping strategies for self-regulation. These tools can be used anywhere, anytime and take just minutes to utilize. The second objective is to help women gain awareness of their bodies and their body sensations. The third and long-term objective is to help women renegotiate their self-belief through awareness of their inner experience and begin the process of transformation (TIMBo, 2013).

The TIMBo curriculum represents a closed-group program integrating psycho-education and mindfulness practices that is based on the theory that trauma-informed treatment components of the program provide for safety, predictability, structure, and repetition. Groups follow a similar structure with each session building on the former. Each session includes (a) group discussion, (b) pranayama (breath work) and asana (physical yoga practice),

and (c) meditation. Progressive psycho-educational discussions on the emotional and physical impact of trauma are paired with yoga and mindfulness practices. The curriculum progresses with the goal of building group cohesion and encouraging self-inquiry. Additional components, including an art-based project, are part of the program.

The TIMBo program was initially implemented within the correctional setting as part of a pilot program, which took place in late 2011 and early 2012. At such time, certified community-based TIMBo facilitators from yogaHOPE delivered the 16 sessions of curriculum to incarcerated women within the prison setting. Outcomes from the pilot TIMBo program in the prison indicated that the female participants experienced fewer physical symptoms after completing the TIMBo program and were more likely to use positive coping tools. There was also some evidence that women were less likely to experience stress symptoms and more likely to express greater awareness of how emotions show up in their bodies. All women reported sharing tools learned with other women in the institution. The beneficial impacts of the development of social connection among the group were evident (Rousseau & Jackson, 2012). With such initial success, it was hypothesized that not only would the institution benefit from ongoing programming but there could also be additional benefits derived from a peer-facilitated model in which trained facilitators, who were incarcerated women themselves, would lead the curriculum.

A “train the trainer” model was implemented in June of 2013. At this time, yogaHOPE conducted a 100-hr TIMBo certification training within the women’s prison for the 12 incarcerated women who had previously participated in the pilot TIMBo program offered by yogaHOPE. During the training, the women studied comprehensive theory, content and context of the TIMBo program, and practiced facilitating the TIMBo curriculum. Completion of the training and subsequent testing qualified participants to be certified TIMBo facilitators, setting up the initiation of a peer-facilitated model of program implementation.

Program Implementation

The TIMBo sessions were run 2 times per week for 8 weeks; each session was approximately 2 hr long. The first and last sessions were introduction and exit sessions, with the remaining 14 sessions focused on seven specific topics, which translated to one topic initial implementation of a peer-facilitated model of the program. The structure of each session included a 60-min group discussion, 20-min asana and pranayama practice (physical yoga and breath), and 10-min guided meditation. The curriculum was facilitated by

trained peer-facilitators (incarcerated women certified in the TIMBo program) with the support of a certified facilitator from yogaHOPE.

Participants

Twelve cisgender women took part in the pilot implementation of the peer-facilitated TIMBo program. Programming was delivered at a medium security women's facility, the only women's correctional facility in the state, housing individuals serving all level state sentences as well as county-level sentences. Participation was voluntary, and those who signed on came from the general population through word of mouth and advertisement through the mental health department (individuals serving sentences in the general population of the women's prison were eligible for the closed group, given that they had enough time left in their sentencing to complete the program). The recruits ranged in age from 20 to 49 years old, with all those in the pilot study identifying as White. Of this group, 83% had children. Half the women possessed some basic prior experience with yoga, and it should be noted that there is a general yoga class offered within the facility.

The program peer-facilitators were also from the general population. One facilitator was a White woman in her 20s serving a life sentence. Another was a Black woman in her 30s who would eventually be paroled. These women completed a 100-hr trauma-informed yoga and mindfulness training and had previously participated in the TIMBo program.

Study Design

Data were collected through voluntary, anonymous self-report survey assessments administered before and after program implementation. Assessments gave the 12 women the opportunity to provide qualitative feedback in addition to their responses on quantitative validated measures. All consented to engage in the study and completed the assessment at the beginning of programming and again after 8 weeks of curriculum, with curriculum implemented 2 times per week. Each assessment included a survey incorporating standardized and validated scales in addition to program-specific details and open-ended qualitative questions. The preassessment included demographic and baseline questions.

Four validated psychometric self-report scales were administered assessing levels of depression, anxiety, PTSD, and self-compassion. The Zung Self-Rating Depression Scale was administered to assess symptoms of depression (Carrol, Fielding, & Blashki, 1973; Gabrys & Peters, 1985; Zung, 1965), and the Zung Self-Rating Anxiety Scale (Olatunji, Deacon, Abramowitz, & Tolin,

2006; Zung, 1971) assessed symptoms of anxiety. The Zung Depression Scale represents a self-administered 20-item scale. Scale scores range from 25 to 100 (25-49 *normal range*, 50-59 *mildly depressed*, 60-69 *moderately depressed*, 70 and up *severely depressed*). The Zung Anxiety Scale is a 20-item scale with a possible score range of 20 to 80 (below 45 *within normal range*, 45-59 *minimal to moderate*, 60-74 *marked to severe*, 75 and up *most extreme anxiety*).

The PTSD Checklist–Civilian Version (PCL-C) was included to measure symptoms of PTSD (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). The PCL-C is a 17-item self-report measure designed for use in general, civilian populations. The total severity score range is 17 to 85.

The Self-Compassion Scale—Short Form (SCS-SF)—determined levels of self-compassion through assessment of how an individual acts or feels toward themselves during difficult times (Raes, Pommier, Neff, & Van Gucht, 2011). The short version scale represents a 12-item self-report measure and has been demonstrated to have near perfect correlation with the long version scale for overall self-compassion rating.

Gathering data from these measures supported analyses of psychological and behavioral changes that may result from program participation. That is, it is hypothesized that participation in the programming will increase positive coping strategies and self-perception and decrease negative psychological reactions to the experience of stress. To understand the traumatic history of this group, the Life Events Checklist was included in the pre-assessment. Postassessment measures were designed to document program impacts. A summary of the results from the pre- and postassessments follows. Consent was obtained and participation in assessment was completely voluntary.

Qualitative data were gathered through open-ended response questions, and data were compiled and analysis using grounded techniques (Morse et al., 2016). Qualitative outcomes were deidentified and compiled prior to coding. Participants shared experiences through the open-ended program-based questions, and the researchers coded the qualitative outcomes into themes and subthemes through an iterative process of analysis. Open-ended questions addressed programming impacts, utilization and benefits of program tools, experience in sharing tools, and overall program experience.

It was predicted that the utilization of a structured embodied mindfulness program would decrease the symptoms of traumatic stress including symptoms of depression, anxiety, and PTSD. It was also predicted that programming would increase self-compassion and improve participants' capacity to access positive coping strategies.

Results

Survey Scale Outcomes

Pretest assessment provided background information as well as baseline data for scale score. Of note is the significant level of trauma experienced by the women, specifically as related to physical and sexual abuse. Among prevalent events from the Life Events Checklist were other unwanted or uncomfortable sexual experience (75%, $n = 12$), physical assault (67%, $n = 12$), and sexual assault (50%, $n = 12$).

The women were asked to indicate the utilization of tools to manage their emotions, both before and after participation. Following programming, the group demonstrated increased access to mindfulness-based coping tools. In reporting which tools were used to manage emotions, yoga and self-talk were more likely to be utilized after the program than before. Prior to engaging in the TIMBo program, 66% reported using yoga as a tool to manage emotions. Following participation in the program, 100% reported using yoga as a tool to manage their emotions.

Study volunteers exhibited an average depression scale score (Zung Self-Rating Depression Scale) that fell within the normal range of depressive symptoms both prior to and following participation in the TIMBo program. On average, prior to participation, respondents received a score of 45.28 ($n = 7$). Following participation, the average depression score was 41.85 ($n = 7$). Scores for the scale range from 25 to 100, with a score in the range of 25 to 49 indicating a “normal” range, and suggesting that the individual was not experiencing clinical levels of depression. Their anxiety scores also fell within the normal range of symptoms of anxiety, both prior to and following participation in the TIMBo program. On average, prior to participation, respondents received a score of 35.5 ($n = 8$). Following participation, the average anxiety score was 31.88 ($n = 8$). Possible anxiety scale scores range from 25 to 80, with a score in the range of 20 to 44 indicating a “normal” range of symptoms. Although the women did not appear to experience clinical levels of depression or anxiety either before or after participation in programming, symptoms scores for both depression and anxiety did decrease somewhat after participation.

There was also improvement in the experience of traumatic stress symptoms for these women. On average, prior to participation, respondents received a PCL-C score of 42 ($n = 10$). Following participation, the average PTSD symptom score was 30.625 ($n = 10$). Accordingly, they demonstrated a significant decrease in their experience of PTSD symptoms following program participation.

SCS-SF scores of the group increased following their time in the TIMBo program. On average, prior to participation, respondents received a score of 32.1 ($n = 10$). Following participation, the average self-compassion score was 39.8 ($n = 10$). Self-compassion is defined as “the ability to hold one’s feelings of suffering with a sense of warmth, connection, and concern” (Raes et al., 2011, p. 250). An increase in the self-compassion score indicates a greater capacity for self-kindness, capability for recognizing a common humanity, and ability to engage in mindfulness. The construct of self-compassion is associated with psychological well-being and emotional resilience (Raes et al., 2011).

Overall, survey scale outcomes indicate positive changes post program participation, with changes occurring in the direction hypothesized. Scores indicate a decrease in the experience of symptoms of depression, anxiety and depression, while scores for self-compassion increased. Outcomes must be interpreted with caution, however, due to the small sample size and the pilot nature of this study.

Qualitative Outcomes

Qualitative survey outcomes were analyzed for common themes and sub-themes. Themes and subthemes were coded from responses and represent self-report of qualitative program experiences. Analysis of qualitative data fell in to three primary areas: (a) tool impact and utilization, (b) intention and experience of sharing program tools, and (c) program impacts. See Table 1 below for developed themes and subthemes.

Overall, the qualitative data on program experience indicated positive program impact. Participants discuss new positive coping tools and positive ways to understand and manage emotion and embodied sensation. They recognized the benefit of tools and wanting to share these tools with others. Furthermore, they noted specific positive impacts of program participation. We will discuss each of these individually.

Tool impact and utilization. Outcomes indicate access to tools for regulation as being a positive outcome of the program. Eleven of the 12 participants described using meditation, breath work, and yoga after completion of the program. All of the women reported using positive self-talk.

Tools as calming, grounding and centering. Participants discussed tools as being beneficial, and, more specifically, they described utilizing tools for calming, grounding, and centering, even within the often chaotic and stressful environment of the prison. The term “centering” was used frequently, and,

Table 1. Thematic Outcomes of Qualitative Data.

Theme
Subtheme
Tool impacts and utilization
<i>Tools as calming, grounding and centering</i>
<i>Using tools to manage emotion and sensation</i>
<i>Challenges to tool utilization</i>
Intention and experience of sharing tools
<i>Positive experience of sharing tools (Talking about program and program tools, encouraging others to engage in tools, benefits of sharing tools)</i>
<i>Sharing tools with family</i>
<i>Challenges sharing tools</i>
Impact of program
<i>Interoception/understanding embodied impacts of trauma</i>
<i>Emotional awareness and self-regulation</i>
<i>Self-compassion</i>
<i>Sense of connection</i>
<i>Improved capacity for relating to others</i>
<i>Challenges</i>

importantly, breath, yoga, and meditation were described as helping to calm and center. One participant stated, “Breathing helps calm me and keep me focused. Meditation is relaxin [sic], praying helps me to understand myself better and self-talk keeps me grounded.” Another stated, “These tools allow me to stay grounded and in touch with my emotions.”

Using tools to manage emotion and sensation. The women also discussed specifically utilizing tools learned to manage emotion as well as physical sensations in the body. One stated, “When I feel anxiety coming I breathe, when I do yoga or meditate my emotions are more in check.” Another remarked, “Since taking this program I use breath work in yoga and walking to release the charge of what I’m feeling. It helps me a lot!” They acknowledged using tools to calm sensations and to help control negative emotional states as well as to manage distressing situations.

The women did recognize some challenges to utilizing the tools in their current environment. One noted that in prison, “nothing is private.” Another stated that while she did not see specific obstacles to using the program tools, she just did not feel comfortable with the tools yet. It would be beneficial to explore additional ways to shape programming to be more accessible in correctional settings.

Intention and experience of sharing tools. Participants reported both the intention and practice of sharing tools learned in the program with others, and, in general, this was viewed positively. Eleven of the 12 women discussed sharing tools with other women, three shared tools with men, and four described sharing tools with their children, with this representing all of the women who felt the opportunity to share tools with their children was applicable to them.

Positive experience of sharing tools. The women noted feeling comfortable talking with others about the tools they had learned from the program. One woman described “telling women about my experience with yogaHOPE being mindful of your body and emotions.” Another stated, “I talk about breathing, just taking a time out to know where the sensations and emotions come from.” Yet, another woman said, “I’ve shared mostly how this has been so helpful gaining new tools to work with and help me grow as a person.” Participants discussed telling others in the institution about the benefits of meditation and yoga.

In addition to talk about the program tools, the women noted encouraging others to use the tools. This actual sharing of tools occurred with both other women in the facility as well as the women’s families. The group appeared open to teaching other women how to utilize the benefits of program tools, particularly for managing the stress and impacts of incarceration. One woman described, “I try to have other women breathe to calm themselves and to take space.” Another, “If someone is upset I encourage them to breath- talk it out, ask them where they feel it and by listening to them I notice where I feel it.” One woman, who was also a yoga teacher in the institution, told of incorporating the tools in her practice and sharing them with her students. Overall, there appeared to be benefit gained from sharing the tools with others. As one participant described, “Helping someone breathe when they was really upset helped not only them but me as well because I felt helpful and that was a good feeling.” Accordingly, it seems that program tools are not only of benefit to participants directly but there is secondary benefit in the experience of sharing tools with others.

Sharing tools with family. The participants specifically indicated sharing tools with their families. This included sharing tools with children for those women who had contact with children, as well as sharing tools with other family members, including their husbands and parents. The women described encouraging their children and family members to engage in yoga and meditation and also wanting to share the benefits of tools—particularly in regard to the capacity of these tools to improve relationships with family members. One stated, “The communication we share and the openness I’ve learned I

have been able to pass on to my boys.” Another, in commenting on sharing new tools with her mother, said, “She tends to get stressed talking about certain things so I just tell her to breathe it out. To acknowledge her feelings.”

Challenges to sharing tools. Challenges to sharing tools appeared to be most common in relation to sharing tools with family. Some women expressed resistance to the tools from their children. One woman described her children as “not always open to mom’s ‘energy stuff’ as teenagers,” but she also indicated that she did believe they took it in. Another communicated wanting to share tools with her daughter stating, “So far she isn’t SO interested. But maybe someday she will be.” Others described a general desire to share tools with family, indicating that they simply had not done so yet.

Impacts of program. Other themes explored the impacts of programming more generally. The women acknowledged being influenced by programming and described both intra- and interpersonal outcomes resulting from program participation.

Interoception/understanding embodied impacts of trauma. Qualitative program outcomes illustrated an increase in interoception, or awareness and understanding of the embodied impacts of trauma. Women described developing an awareness of how they experienced physical sensation in their bodies in reaction to stress and the effects of trauma. This awareness allowed them to create space and transform their specific reactions to stressors. One woman stated, “I am very much more aware of the sensations and emotions stored in different parts of my body.” Another stated, “I am more aware of what I am feeling and where in my body it is located.” Yet, another stated, “I feel more aware of how I feel and where I feel it.” Programming changed not only consciousness of embodied experience but participants’ capacity to react in a different way. One woman expressed, “I am able to process things a lot easier. I’m able to recognize how and why my body is feeling the way it does. I can walk away and breathe it out.” This perception is empowering and can be the foundation for change, particularly integration of positive coping strategies. With interoceptive awareness comes the capacity for greater self-awareness and embodied self-care.

Emotional awareness and self-regulation. Another outcome noted was development of emotional awareness and improved self-regulation. Participants described being more mindful of and in touch with their emotions. As one participant summarized, “I am more in touch with my feelings than I’ve ever been. I have learned to relax and actually enjoy the yoga part which I thought

I wouldn't be able to." Another stated, "I am more calm and more aware of my emotions and how they effect [*sic*] my body."

Participants also described an improved capacity for managing emotions. They cited being more positive as well as more patient. Many described the act of pausing to breathe before respond to a trigger or stressor; with this comes the capacity for an alternative response. Many described feeling more balanced and having the capacity to "work through" experiences instead of shutting down. One woman stated, "I feel like I've gained so much insight and awareness. I'm able to stop myself OFTEN before going into full blown reaction and understand what I'm feeling from understanding my feelings." Another said, "I haven't yelled at my kids as much, feel less explosive because more in touch with feelings and share them with others." The group described their reactions not only as more positive, but ultimately more effective. As one woman stated, "I've been able to take more grounded and effective action."

Self-compassion. In addition to impacting interactions with others, there was a perceived increase in each woman's self-compassion. As noted earlier, participants scored higher on a standardized measure of self-compassion upon completion of programming. This outcome is backed by qualitative data as the women appeared to develop an increased awareness that lead to improved kindness toward self and decreased self-judgment. As one women indicated, "I believe in myself more and know that I have tools I need to help me understand myself and other now better." Another described, "I feel a lot more compassion and kindness, toward myself and understand about WHY I am so reactive by understanding what I'm feeling and accepting my feelings, I'm able to calm down a lot quicker."

Sense of connection. Another perceived program result was an increased sense of connection and compassion through realization of a common human experience. Many responses included increased "compassion and understanding" and feeling that "everything makes more sense." As one women described, she gained a "deeper understanding of myself, deeper understanding of complexity of human experiences, and deeper knowing about how we are all alike." Another woman expressed, "Forgiveness and heart through community. Reinforced how similar we really are, despite differences." They appeared to gain the capacity to release judgment and to have greater compassion through the mindful realization that all people go through similar experiences—the understanding of our capacity to control how we respond to stressors appeared to be empowering. Furthermore, each benefited personally and gained perspective from the capacity

for connection developed in the program. As one woman shared, “hearing other women talk about their lives and their struggles helped me have a different view on my struggles.” Another observed, “I am seeing forgiveness as hope instead of fear.” This shift in perspective seems to be both an important as well as valuable tool.

Improved capacity for relating to others. In analyzing the qualitative data, it became evident that participants’ increased sense of connection also fostered a sense of improved capacity for relating to others. As the women become more aware of themselves and their reactions to the world around them, they became better able to relate to others. Increased interoception and self-awareness appeared to help in understanding and relating to others; self-compassion translated to compassion, with listening an apparent important component. As one woman saw it, “I feel like I’m a better, more grounded and compassionate listener.” Another said, “I’m quick to always give advice. Now I’m a better listener.” Reactions shifted. One member of the group pointed out that she had begun to see herself as “more gentle as I interact with more people.” Again, this is related to a connection through a shared emotional experience, as one woman recognized, “I’m not as quick to judge when someone is feeling something.” Connection was described more positively, with a focus on acceptance and awareness.

Challenges. Participation and implementation of the programming was, of course, not without challenge. For this population of women, professional applications of programming appeared to be the most challenging, or not currently applicable. Many women observed that they were not able to apply programming to their work, or that this aspect was not applicable to them. Two women did report using tools professionally. For example, one offered, “when I feel overwhelmed I take a few seconds to breathe and create space.” Another linked being able to use program tools to improve connection to others at work stating, “I am able to think more clearly and with confidence what the patron wants or is looking for.” Generally, however, most were not able to implement programming in this area.

It is also important to note that, overall, the program experience may be more impactful for some than for others, and, further, that impacts may take time. One woman believed that the program did not change her view of herself or others. In addition, some women felt they had more work to do in relation to program objectives and goals. For example, one woman shared that love, compassion, and forgiveness were still areas of progress for her. It certainly makes sense that this initial exposure to programming would represent the beginning of a journey, not completion. In learning new ways to

examine self and self in connection to other, certainly there will be challenges along the path to integration and changing relationships.

Discussion

Overall, participants benefited from the programming. As hypothesized, there was a decrease in the experience of negative symptoms including symptoms of depression, anxiety, and PTSD. There also appeared to be a significant increase in levels of self-compassion. And, as predicted, the women were found to access and utilize new positive coping strategies.

First, the TIMBo program was successful in meeting its three primary objectives: providing tools, helping women gain awareness, and encouraging a process of transformation. The women were provided with tools to utilize as active coping strategies, and, as cited, they showed higher usage of these tools following program participation. With successful completion of the curriculum, women were more likely to utilize meditation, yoga, and self-talk as active coping strategies in navigating their lives within the institution.

Second, with clear evidence of the positive program effects for these incarcerated women, the findings also document the potential for positive impacts beyond the program participants—notably, their sharing of program tools with fellow residents and family members.

Third, the women in the TIMBo program gained awareness of their bodies and their body sensations, equipped with tools to respond to the embodied experience of stress. This is a significant accomplishment of the program in this correctional setting, with the participants better able to respond to stress, regulate emotion, and self-regulate behavior.

Fourth, programming provided each woman with both a greater awareness of self (e.g., “I am more aware of what I’m feeling and where in my body it is located”) and an understanding of her connection to others (“deeper understanding of myself, deeper understanding of complexity of human experiences, deeper knowing about how we are all alike”). These insights appear to have had an effect on how the women interact with their environment. Program participation appears to have been both a psycho-educational and transformative process.

Finally, the women experienced a renegotiation of self-belief. Clearly, an important component of this transformation and renegotiation of self-belief came in the form of increased self-compassion. The findings illustrate a significant increase in self-compassion expressed both in standardized scale score outcomes and open-ended responses. Self-awareness, re-negotiations of self and connection appear to be key components of this program.

Conclusion

On the whole, the measures data results and qualitative responses reflect the achievement of the goals and objectives of the TIMBo program. Although the current work represents a pilot implementation of peer-facilitated mindfulness programming, the findings suggest that a mindfulness-based yoga program implemented in a women's prison can be successful and meet key objectives, including providing positive tools for coping and self-regulation, fostering embodied awareness, and renegotiating self-belief. The incarcerated women appeared to benefit from this type of programming, both psychologically and behaviorally.

Specific study limitations should be noted. First is the limited sample size. Although the sample size of 12 may be acceptable as a preliminary and exploratory examination of a pilot program, the small sample limits the analysis in diversity, scope, and generalizability. Furthermore, the potential for selection bias must also be acknowledged. Although the research design did not include a control group, this limitation is not uncommon in prison research, especially as applied to newly implemented programming in a correctional setting. Future exploration would benefit from a more comprehensive and expanded empirical design. It would also be interesting to explore peer-facilitated program delivery compared with the more formal outside program-facilitator-curriculum-delivery model.

In sum, outcomes of this pilot study were promising. It is important to continue research in this area given the documented benefits to incarcerated women. Taking what is learned from such explorations, it is important to develop and refine curricula that specifically address the unique needs and challenges of program implementation in correctional settings. Trauma-informed embodied mindfulness programs can constitute a positive complement to current, more traditional correctional programming. This pilot study demonstrates the value of further exploration in this area.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

References

- Ambhore, S., & Joshi, P. (2009). Effect of yogic practices performed on deviants aggression, anxiety and impulsiveness in prison: A Study. *Journal of Psychiatric Research, 4*, 137-149.

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Anklesaria, F. K., & King, M. (2003). The transcendental meditation program in the Senegalese penitentiary system. In C. N. Alexander, K. G. Walton, D. W. Orme-Johnson, R. S. Goodman, & N. J. Pallone (Eds.), *Transcendental meditation in criminal rehabilitation and crime prevention* (pp. 303-318). New York, NY: The Haworth Press.
- Auty, K. M., Cope, A., & Liebling, A. (2015). A systematic review and meta-analysis of yoga and mindfulness meditation in prison: Effects on psychological well-being and behavioural functioning. *International Journal of Offender Therapy and Comparative Criminology*, *61*, 689-710. doi:10.1177/0306624X15602514
- Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice*, *10*, 125-143. doi:10.1093/clipsy.bpg015
- Baskaran, U. (2015). Psycho physiological effect of Vethathiri Maarishi's Simplified Kundalini Yoga (SKY) among prison inmates. *International Journal of Education and Psychological Research*, *4*, 23-27.
- Bilderbeck, A. C., Farias, M., Brazil, I. A., Jakobowitz, S., & Wikholm, C. (2013). Participation in a 10-week course of yoga improves behavioral control and decreases psychological distress in a prison population. *Journal of Psychiatric Research*, *47*, 1438-1445. doi:10.1016/j.jpsychires.2013.06.014
- Blanchard, E. B., Jones-Alexander, J., Buckley, T. C., & Forneris, C. A. (1996). Psychometric properties of the PTSD Checklist (PCL). *Behaviour Research and Therapy*, *34*, 669-673.
- Bloom, B., Owen, B., & Covington, S. (2003). *Gender responsive strategies: Research, practice and guiding principles for women offenders*. Retrieved from <https://nicic.gov/gender-responsive-strategies-research-practice-and-guiding-principles-women-offenders>
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, *84*, 822-848. doi:10.1037/0022-3514.84.4.822
- Bureau of Justice Statistics. (2017a). *Drug use, dependence, and abuse among state prisoners and jail inmates, 2007-2009*. Retrieved from <https://www.bjs.gov/content/pub/pdf/dudaspij0709.pdf>
- Bureau of Justice Statistics. (2017b). *Indicators of mental health problems reported by prisoners and jail inmates, 2011-12*. Retrieved from <https://www.bjs.gov/index.cfm?ty=pbdetail&iid=5946>
- Bureau of Prisons Statistics. (2018). Retrieved from <http://www.bop.gov/about/statistics/>
- Carmody, J., & Baer, R. A. (2008). Relationships between mindfulness practice and levels of mindfulness, medical and psychological symptoms and well-being in a mindfulness-based stress reduction program. *Journal of Behavioral Medicine*, *31*, 23-33. doi:10.1007/s10865-007-9130-7
- Carroll, B. J., Fielding, J. M., & Blashki, T. G. (1973). Depression rating scales. A critical review. *Archives of General Psychiatry*, *28*(3), 361-6.

- Covington, S. S. (2016). *Beyond trauma: A healing journey for women*. Center City, MN: Hazelden Publishing. (Original work published 2003)
- Covington, S. S., & Bloom, B. E. (2006). Gender responsive treatment and services in correctional settings. *Women & Therapy, 29*, 9-33. doi:10.1300/J015v29n03_02
- Covington, S. S., & Bloom, S. E. (2008). Addressing the mental health needs of women offenders. In R. Gido & L. Dalley (Eds.), *Women's mental health issues across the criminal justice system* (pp.160-176). Columbus, OH: Prentice Hall.
- Cramer, H., Lauche, R., Langhorst, J., & Dobos, G. (2013). Yoga for depression: A systematic review and meta-analysis. *Depression and Anxiety, 30*, 1068-1083. doi:10.1002/da.22166
- Danielly, Y., & Silverthorne, C. (2017). Psychological benefits of yoga for female inmates. *International Journal of Yoga Therapy, 27*, 9-14. doi:10.4172/2167-1222.C1.003
- Duncombe, E. B., Komorosky, D., Wong-Kim, E., & Turner, W. (2005). Free inside: Study in the efficacy of a prison program to encourage self healing, inner peace, and compassion in inmates at Maui community correctional center. *Californian Journal of Health Promotion, 3*, 48-58.
- Epstein, R., & Gonzalez, T. (2017). *Gender & trauma—Somatic interventions for girls in juvenile justice: Implications for policy and practice*. Retrieved from <https://ssrn.com/abstract=2965674>
- Gabrys, J. B., & Peters, K. (1985). Reliability, discriminant and predictive validity of the Zung self-rating depression scale. *Psychological Reports, 57*, 1091-1096.
- Garfinkel, M., & Schumacher, H. R. Jr. (2000). Yoga. *Rheumatic Disease Clinics of North America, 26*, 125-132.
- Green, B. L., Miranda, J., Daroowalla, A., & Siddique, J. (2005). Trauma exposure, mental health functioning, and program needs of women in jail. *Crime & Delinquency, 51*, 133-151. doi:10.1177/0011128704267477
- Horton, C. (Ed.). (2017). *Best practices for yoga in the criminal justice system*. Atlanta, GA: YSC-Omega Publications.
- Impett, E. A., Daubenmier, J. J., & Hirschman, A. L. (2006). Minding the body: Yoga, embodiment, and well-being. *Sexuality Research & Social Policy, 3*, 39-48. doi:10.1525/srsp.2006.3.4.39
- Kearney, D. J., McDermott, K., Malte, C., Martinez, M., & Simpson, T. L. (2012). Association of participation in a mindfulness program with measures of PTSD, depression and quality of life in a veteran sample. *Journal of Clinical Psychology, 68*, 101-116. doi:10.1002/jclp.20853
- Keaveny, M. E., & Zauszniewski, J. A. (1999). Life events and psychological well-being in women sentenced to prison. *Issues in Mental Health Nursing, 20*, 73-89. doi:10.1080/016128499248790
- Messina, N. P., Calhoun, S., & Braithwaite, J. (2014). Trauma-informed treatment decreases posttraumatic stress disorder among women offenders. *Journal of Trauma & Dissociation, 15*, 6-23. doi:10.1016/j.drugalcdep.2014.02.416
- Morse, J. M., Stern, P. N., Corbin, J., Bowers, B., Charmaz, K., & Clarke, A. E. (2016). *Developing grounded theory: The second generation*. New York, NY: Routledge.

- Najavits, L. M. (2002). *Seeking safety: A treatment manual for PTSD and substance abuse*. New York, NY: Guilford Press.
- Najavits, L. M., & Hien, D. (2013). Helping vulnerable populations: A comprehensive review of the treatment outcome literature on substance use disorder and PTSD. *Journal of Clinical Psychology, 69*, 5433-5479. doi:10.1002/jclp.21980
- Oklahoma Department of Corrections, Evaluation and Analysis Unit. (2013). *Helping women recover/beyond trauma: Program effects on offender criminal thinking, psychological adjustment, and social functioning*. Retrieved from <https://www.centerforgenderandjustice.org/research-papers.php>
- Olatunji, B. O., Deacon, B. J., Abramowitz, J. S., & Tolin, D. F. (2006). Dimensionality of somatic complaints: Factor structure and psychometric properties of the Self-Rating Anxiety Scale. *Journal of Anxiety Disorders, 20*, 543-561. doi:10.1016/j.janxdis.2005.08.002
- Pilkington, K., Kirkwood, G., Rampes, H., & Richardson, J. (2005). Yoga for depression: The research evidence. *Journal of Affective Disorders, 89*, 13-24. doi:10.1016/j.jad.2005.08.013
- Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the self-compassion scale. *Clinical Psychology & Psychotherapy, 18*, 250-255. doi:10.1002/cpp.702
- Rousseau, D. (2018). *Yoga 4 Change correctional program evaluation: Chartrand fund preliminary findings, mid-year report*. Jacksonville, Florida. Unpublished Manuscript.
- Rousseau, D., & Jackson, E. (2012). *TIMBo Implementation in a women's correctional facility—MCI Framingham pilot*. Boston, Massachusetts. Unpublished Manuscript.
- Sacks, J. Y. (2004). Women with co-occurring substance use and mental disorders (COD) in the criminal justice system: A research review. *Behavioral Science & the Law, 22*, 449-466. doi:10.1002/bsl.597
- Salisbury, E., & van Voorhis, P. (2009). Gendered pathways: A quantitative investigation of women probationers' paths to incarceration. *Criminal Justice and Behavior, 36*, 541-566. doi:10.1177/0093854809334076
- Salmon, P., Lush, E., Jablonski, M., & Sephton, S. E. (2009). Yoga and mindfulness: Clinical aspects of an ancient mind/body practice. *Cognitive and Behavioral Practice, 16*, 59-72.
- Saxena, P., Messina, N. P., & Grella, C. E. (2014). Who benefits from gender-responsive treatment? Accounting for abuse history on longitudinal outcomes for women in prison. *Criminal Justice and Behavior, 41*, 417-432. doi:10.1177/0093854813514405
- The Sentencing Project. (2017). Retrieved from <https://www.sentencingproject.org/criminal-justice-facts/>
- Smith, C., Hancock, H., Blake-Mortimer, J., & Eckert, K. (2007). A randomized comparative trial of yoga and relaxation to reduce stress and anxiety. *Complementary Therapies in Medicine, 15*, 77-83. doi:10.1016/j.ctim.2006.05.001

- Somerstein, L. (2010). Together in a room to alleviate anxiety: Yoga breathing and psychotherapy. *Procedia—Social and Behavioral Sciences*, 5, 267-271. doi:10.1016/j.sbspro.2010.07.086
- Stoller, C. C., Greuel, J. H., Cimini, L. S., Fowler, M. S., & Koomar, J. A. (2012). Effects of Sensory-enhanced yoga on symptoms of combat stress in deployed military personnel. *American Journal of Occupational Therapy*, 66, 59-68. doi:10.5014/ajot.2012.001230
- Substance Abuse Mental Health Services Administration. (2018). Retrieved from www.samhsa.gov/nctic/trauma-interventions
- Sumter, M. T., Monk-Turner, E., & Turner, C. (2009). The benefits of meditation practice in the correctional setting. *Journal of Correctional Health Care*, 15, 47-57. doi:10.1177/1078345808326621
- Swavola, E., Riley, K., & Subramanian, R. (2016). *Overlooked: Women and jails in an era of reform*. Retrieved from <https://www.vera.org/publications/overlooked-women-and-jails-report>
- Telles, S., Singh, N., & Balkrishna, A. (2012). Managing mental health disorders resulting from trauma through yoga: A review. *Depression Research and Treatment*, 2012, Article 9. doi:10.1155/2012/401513
- Teplin, L. A., Abram, K. M., & McClelland, G. M. (1996). Prevalence of psychiatric disorders among incarcerated women: I. Pretrial jail detainees. *Archives of General Psychiatry*, 53, 505-512. doi:10.1001/archpsyc.1996.01830060047007
- Trauma Informed Mind Body. (2013). *Training manual*. Boston, MA: yogaHOPE. Retrieved from <https://www.yhtimbo.org/>.
- van der Kolk, B. A., Stone, L., West, J., Rhodes, A., Emerson, D., Suvak, M., & Spinazzola, J. (2014). Original research yoga as an adjunctive treatment for post-traumatic stress disorder: A randomized controlled trial. *The Journal of Clinical Psychiatry*, 75, e559-e565. doi:10.4088/JCP.13m08561
- Viorst, M. (2017). *Former inmates perceptions of the prison yoga project* (Undergraduate Honor Thesis). Retrieved from https://scholar.colorado.edu/honr_theses/1494/
- Zlotnick, C., Najavits, L. M., & Rohsenow, D. J. (2003). A cognitive-behavioral treatment for incarcerated women with substance use disorder and posttraumatic stress disorder: Findings from a pilot study. *The Journal of Substance Abuse Treatment*, 25, 99-105.
- Zung, W. W. (1965). A self-rating depression scale. *Archives of General Psychiatry*, 12, 63-70. doi:10.1001/archpsyc.1965.01720310065008
- Zung, W. W. (1971). A rating instrument for anxiety disorders. *Psychosomatics*, 12, 371-379. doi:10.1016/S0033-3182(71)71479-0

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