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DRUMMING AND MINDFULNESS INTEGRATIONS



## Drumming and Mindfulness Integrations into an Evidence-Based Group Intervention

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### ABSTRACT

Community mental health, to protect the integrity of service to a highly vulnerable population, has sought to increase the use of evidence-based practice. However, most evidence-based practices have a narrow scope challenging the breadth of effectiveness with consumers with higher levels of comorbidity. This article explores the use of mindfulness and drumming integrated into an evidence-based program: Seeking Safety. In response to the challenges of conducting a cognitive-focused intervention for members diagnosed with posttraumatic stress disorder, addictions, and co-occurring severe/persistent mental illness, mindfulness principles and drumming are used to help manage the emotional needs of group members. This article outlines the foundational principles supporting the group program.

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group intervention; trauma, comorbid conditions; drum circles; mindfulness

In the field of mental health, practitioners are challenged to provide effective service for people with severe, persistent, and comorbid mental illnesses. Past evidence in community mental health indicates that helping professionals often deliver ineffective services to these most challenging consumers (Happell et al., 2011; Hovmand & Gillespie, 2010). When service recipients are denied effective treatment, consumer outcomes are compromised. People with severe and persistent mental illnesses are consequently found to have a shorter life expectancy than peers not diagnosed with a mental illness (Colton & Manderscheid, 2006), making comprehensive and effective service a moral imperative.

In response to the lack of consistent efficacy, the mental health system has moved toward providing evidence-based practices. This has resulted in many focused practices that are cognitive or educational in nature (McKee, 2017; Quinn & Kolla, 2017). Such interventions are conducive to research protocols and demonstrate effectiveness with specific target populations, however, many of the research inclusion protocols screen out highly challenging client populations resulting in programs that require adaptation for client

populations with higher levels of comorbidity (McKee, 2017; O'Hara, Beaudreau, Gould, Froehlich, & Kraemer, 2017).

Perhaps the most difficult population to serve is people diagnosed with severe mental illness with co-occurring problems with addiction and trauma. This population is particularly challenging due to unique symptoms that interfere with emotional processing (Rodin et al., 2017; Schaefer & Nooner, 2017). Each of the three comorbid conditions have emotion-related ramifications:

- (1) Severe and persistent mental illness: Severe and persistent mental illnesses are associated with symptoms that interfere with emotional regulation (Brown, 2017).
- (2) Trauma: Untreated trauma promotes posttraumatic stress disorder (PTSD) complicating emotional regulation by diminishing theta wave responsiveness (Fitzgerald et al., 2016; Khanna et al., 2017). PTSD undermines brain functions necessary for interpreting situations and regulating the emotional response (Buchholz et al., 2016).
- (3) Addictions: Mental illness and PTSD are associated with higher levels of substance use (Ramos et al., 2017). Substance use is further associated with decreased emotional regulation due to heightened limbic system functioning activity and decreased ability for cognitive emotional control (Claisse et al., 2017; Crowell, Price, Puzia, Yaptangco, & Cheng, 2017; Russell, Heller, & Hutchison, 2017).

The emotional experience, in itself, complicates intervention. As the amygdala activates, critical thinking areas of the brain tend to deactivate as specific, emotion-related regions fire up to interpret the evocative situation (Morawetz, Alexandrowicz, & Heekeren, 2017). These regions of the prefrontal cortex assess the situation in terms of meaning for the individual and send messages to the amygdala to deactivate if the situation is assessed as minor (Ma, Abelson, Okada, Taylor, & Liberzon, 2017). If the situation requires a quick response, no signal is sent, allowing the limbic system to generate an automatic response (Frank et al., 2014; Ma et al., 2017). These neurological processes interact with the above comorbid conditions complicating the emotional responses.

### **The seeking safety program**

One of the most common evidence-based practices for intervening with mental illness, trauma, and co-occurring substance use problems is the Seeking Safety program (Najavits, 2002). The program covers 25 topics each covering a safety or substance-use remission skill. The program promotes safety as a guiding principle while working on trauma and substance use simultaneously, rebuilding ideals/values, teaching cognitive-behavioral concepts, and promoting interpersonal skills.

Findings on the Seeking Safety Program outcomes indicate that it is quite effective in diminishing trauma symptoms yet is often less robust in reducing substance use problems (Bougard et al., 2016; Hien et al., 2010). However, some studies found modest substance abuse reductions supporting the combined focus (Lenz, Henesy, & Callender, 2016). Additional research suggests that there is differential effectiveness depending on the type of substances used by the group members (Hien et al., 2010).

In general Seeking Safety is effective in decreasing trauma symptoms but is less powerful in the area of substance use remission particularly when group members are addicted to drugs (Benton, Deering, & Adamson, 2012; Boden et al., 2012; Hien et al., 2012). It is possible that the uneven results may be associated with the limbic system involvement that occurs with substance use. Given the structured and skills-based focus of the Seeking Safety Program, there is a relatively heavy cognitive load that is challenging for group members who have multiple comorbid conditions. Practitioners have consequently started to combine the Seeking Safety Program with other programs and interventions:

- Bougard et al. (2016) combined the program with the Skills Training in Affective and Interpersonal Regulation.
- Wolff et al., 2012 extended the length of the program, generating findings that PTSD outcomes were positive.
- Lange-Altman, Bergandi, Borders, and Frazier (2017) and Morgan-Lopez et al. (2014) combined the program with a 12-Step intervention to strengthen substance abuse outcomes. Morgan-Lopez et al., 2017 found that the program was stronger in decreasing alcohol use and less effective with cocaine.
- Marsh, Coholic, Cote-Meek, and Najavits (2015) adjusted the program by integrating First Nation concepts, history, and material.
- Brown, Gilman, Goodman, Adler-Tapia, and Freng (2015) combined the program with (EMDR) treatment finding that using the EMDR as an individual follow-up did better in their drug court program.

Additional findings indicate that group composition and dynamics influence Seeking Safety outcomes (Hien et al., 2012). These findings are supported by Seeking Safety participant feedback identifying a desire for activities that are more involving and participatory (Hartzler & Rabun, 2014). These findings indicate a potential need for supplementation in the Seeking Safety program to influence emotional processing elements and to more fully engage the group members. The development of the mindfulness and drumming adjunctive program was undertaken to enhance limbic system and group-level interventions while continuing to maintain fidelity to the basic Seeking Safety principles.

## Group program development

To increase the focus on emotional processes an adjunctive group program was developed parallel to the Seeking Safety group. Given that trauma, mental illness, and substance abuse all involve the limbic system (Carrigan & Barkus, 2016), managing the emotional load was considered the most critical function of the group. As part of the emotional engagement, the program was established around mutual aid principles because they reflected the self-help philosophies in the recovery movement guiding mental health practices in Michigan.

The adjunctive group program was established as open ended while remaining parallel to the Seeking Safety program. The open-ended approach was necessary because people with a severe mental illness tend to participate more fully in group programs than individual sessions (Hartzler & Rabun, 2014; Sripada et al., 2016). As such, a more fully engaging and participatory group program was identified as a critical element in retaining the members' participation in the agency's programming allowing for ongoing monitoring and support.

In planning the group program, there was minimal guidance in the literature because most evidence-based group programs focus on populations with mild to moderate levels of mental illness (Cheston & Ivanecka, 2017). Given the decision to use an complementary group approach with a focus on feelings, the program elected to employ a mindfulness and meditative-focused program. Mindfulness is an increasingly common complementary intervention approach for managing stress and emotion-based phenomenon in partnership with cognitive interventions (Kabat-Zinn, 2005; Segal, Williams, & Teasdale, 2002). Even with severe and persistent conditions, positive outcomes are identified with using mindfulness-based groups as an ancillary treatment (Wang, Chien, Yip, & Karatzias, 2016).

The promising elements inherent in mindfulness emerge from findings that meditation and mindfulness help to decrease emotional rumination (Marchand, 2012; Van Der Velden et al., 2015) while concurrently promoting emotional self-regulation and perspective taking (Shapiro, Carlson, Astin, & Freedman, 2006). These changes have been found to extend well beyond the duration of a group program (Costa & Barnhofer, 2016). As such, group planning sought to capitalize on adapting mindfulness approaches to focusing and managing emotional energy. With the Seeking Safety having a cognitive approach, the mindfulness elements were integrated with very little cognitive instruction allowing for active engagement and emotional involvement.

One challenge in developing the group program for people with severe and persistent mental illness is managing the threatening nature of having group members close their eyes and enter into deep relaxation. With the level of trauma, and at times, paranoid cognitive processing, there was a danger of triggering emotional reactivity in the group members. To manage this concern, the adjunctive group program was structured with three sessions of meditative

or mindfulness content followed by one session of drumming that though meditation allowed for increased physical activity.

Drumming was considered an ideal solution because it is used to treat PTSD symptoms (Bensimon, Amir, & Wolf, 2008), substance abuse (Dickerson, Venner, & Duran, 2014; Winkelman, 2003), and neurological symptoms (Carolan, 2016). Like mindfulness, drumming is frequently recommended as a complementary intervention in health and human services (Kjellgren & Eriksson, 2010; Venkit, Godse, & Godse, 2013; Wood, Ivery, Donovan, & Lambin, 2013) and has been found to promote emotional health (Fancourt, Perkins, Ascenso, Carvalho et al., 2016; Wood et al., 2013).

In practice drumming, like mindfulness, induces a trance state in the group members. However, they continue to remain active participants. While in the trance state, areas of the brain that reflect and attribute meaning become active (Hove et al., 2016; Kjellgren & Eriksson, 2010). Findings suggest that members of the group become less self-absorbed, experience increased pleasure, and increase their here-and-now focus (Winkelman, 2003). The rhythmic drumming also increases receptivity (Ivanov, Kvasovets, Ushakov, & Bubeev, 2013). Once implemented, the novelty of drumming concurrently enhanced participation in the group activities.

The power of rhythmic drumming is similar to the trance effects experienced by long distance runners as alpha and theta-wave production begins to modulate the brain's functioning (Dziembowska et al., 2016; Petersen, 2013). Theta waves appear to modulate the cortical functioning in the brain leading to increased openness, alertness, and enhanced feelings of reward (Fancourt, Perkins, Ascenso, Atkins, et al., 2016; Kokal, Engel, Kirschner, & Keysers, 2011; Lubeiro et al., 2017; Mungas & Silverman, 2014). The theta and alpha wave outcomes from drumming are similar to the effects sometimes sought through deep brain stimulation interventions (Wojtecki et al., 2014).

The modulation of brain functioning and enhanced openness, tends to produce a sense of emotional wellbeing (Fancourt, Perkins, Ascenso, Atkins, et al., 2016; Kokal et al., 2011; MacMillan, Maschi, & Tseng, 2012). Interpersonally, drumming groups are associated with increased social openness and interpersonal competence among the group members (Camilleri, 2002; Fancourt, Perkins, Ascenso, Carvalho, et al., 2016; Hannigan & McBride, 2011; Winkelman, 2003). These interpersonal outcomes emerge as members adjust their drumming to accommodate and integrate with the other members (Endedijk et al., 2015; Kokal et al., 2011; Large & Gray, 2015).

### **The drumming and mindfulness option**

The mindfulness and drumming program is an adjunctive program run parallel to the Seeking Safety program. Initially the members of the Seeking Safety program were invited. They in turn invited other members. Most of the

members had some past group experience as this program was developed. About 75% of the members were African American.

The program was designed around traditional group work principles and the recovery movement. Consistent with social work models of group work, this program retains an open and self-empowerment approach. Very early approaches to social work with groups adopted a club approach allowing for full democratic control by the members (Coyle, 1948; Wilson & Ryan, 1949), subsequent approaches retained member control, input, and mutual aid as critical elements while losing the club structures (Northen, 1969; Trecker, 1972). These principles of group decision making have long remained a principle in social work groups in multiple applications (Roy & Pullen-Sansaçon, 2016) and are central to the mainstream model of social work with groups (Papell & Rothman, 1980).

The social group work principle of member decision making is a critical concept and is applied in all areas of practice including child welfare, work with intellectual disabilities, and mental health practice (Carter, Munro, & Matin, 2013; Crampton & Natarajan, 2006; Svavarsdóttir, Ólafsdóttir, Sturludóttir, & Júlíusdóttir, 2012). These social group work traditions were maintained as a central element in the structure of the mindfulness and drumming program and were broadly promoted because of the strong fit with the recovery philosophy in mental health. Recover principles promote a process that includes a self-directed partnership between service recipients and providers along with empowered decision making and opportunities for mutual aid along with the provision of evidence-based practices and traditional interventions (Frese & Davis, 1997; O'Connor & Delaney, 2007).

The integration of democratic and recovery principles was accomplished by promoting member decision making at multiple levels in the program. First, members self-select into the program as group leaders use fliers and invitations as the main method of invitation. Although some members are verbally invited, efforts are made to highlight entry through invitation rather than entry through referral and screening. After members have elected to participate, they retain control of the nature of their participation. On a purely participatory level, the members decide on the meditation materials, music, chose their own drums, and retain control over their level of participation. For several meetings one member would select a drum and hold it in a tight hug for the duration of the session. After a couple of months he began drumming quickly becoming a very enthusiastic participant.

At a structural level, members also make decisions about group expectations. They established rules about the group norms and assumed responsibility for holding each other responsible. For example, the members deemed that it was not acceptable to use substances when attending a group session. They consequently confronted members when expectations were violated. Typically this involved identifying the transgression and asking the offending member to absent himself or herself from the session. The leader typically becomes active at these moments



to help the offending members understand the messages of support and at times helps the members to frame the messages while concurrently supporting the group's autonomy. When the offending or confronting members become upset, the leader often arranges for individual meetings between sessions to support and plan responses. These problems tend to surround confrontations when members have held each other accountable in a group session.

Within the group structure mutual aid is normative. Established members introduce incoming members to the structure and expectations and also help them learn how to handle and play the instruments. They explain the various drums and session related patterns as they orient each new member to the program. Members are helped to understand the general goal of using the program to manage the stresses and emotions associated with daily living while managing a mental illness, past traumas, and addictions. Members provide support for each other during and between sessions as the group operates as a longer-term support system.

### **Initial observations**

Currently there has been no rigorous research on this particular mindfulness and drumming program. As such, observations tend to be at the group and individual levels and are anecdotal in nature. Over the 3 years, the anecdotal observations have generated enthusiasm based on the group-level dynamics. Group-level observations focus on the development of closeness, cohesion, and interpersonal investment among the members resulting in a deeper commitment to the group.

### ***Closeness and cohesion***

When drumming and mindfulness were added to the Seeking Safety program cohesion became noticeable among the members who selected the mindfulness and drumming options. Leaders observed increased support among these members within the group and in their day-to-day activities. The level of caring was sometimes awkward because the level of intimacy evident in the drumming was nonverbal. At times it is important to talk about the here-and-now relationships and reactions to help the members verbally match the levels of openness and closeness achieved through drumming. This was particularly evident with members who used social distance as a mechanism for managing their symptoms. Members increasingly visited each other and provided support between sessions. The members knew each other's goals and tended to follow up to ensure that others were working on their recovery. Member comments that reflect this theme include, "I like the drum circle because it is relaxing I am doing something with other people at the same time I feel good inside" and "I don't trust people -that is all of the time; and when in group with the drum circle, I feel ok to be around people then."



### ***Interpersonal investment***

The group dynamics tend to reflect a strong investment among the members. In previous group programs the members seldom interacted, preferring to be isolated. They would also seek out individual sessions with the worker to debrief emotional reactions to the other members. As such, when emotional themes were evoked the members avoided self-responsibility by withdrawing rather than engaging with each other. With the addition of the mindfulness and drumming the members increasingly discussed emotional reactions and worked them out in the group. Even the knowledge of substance use among the members would be addressed within the group context as members increasingly held each other accountable. This decreased the need for individual sessions.

### ***Commitment to the group***

The group members tend to hold each other accountable in the group. Although these interactions typically begin with an individualized focus, the group is able to take ownership for the issues and work them out as a group. This is not to say that the mental illness, trauma, and substance abuse issues disappear, rather observations indicated that the members were able to interrupt isolationist tendencies eventually discussing concerns among the group membership. This is reflected in member comments such as “The drum circle gives me a sense of community. This amplifies the power of the group by showing everyone that they can become engaged in a common activity or goal” and “The drum circle makes me feel like my nerves feel good after and it relaxes me. Sometimes I wish we could have it two times a month instead of the one time each month because it makes me feel so good.”

### ***Feelings about symptoms***

Concurrent with the group-level observations, members identified individual changes that they attributed to their group experience. There were two areas of change identified by the members. First, many group members shared stories of a calmer tolerance of their symptoms. All of the members continued to experience the symptoms of mental illness and symptom management remained an ongoing challenge. In the group, the members were aware of each other's challenges and supported each other when symptoms were evident in the group. When speaking of the group experience, some members identified a change in their relationship with their symptoms, “The drum circle helps to release my anxiety and keeps the voices down inside of me and releases the pain I have sometimes and it helps me to get it together inside myself for the rest of the day” and “The drum circle helps me feel that I am doing something to make a difference in myself and my recovery.”

### **Emotional experience**

The final theme noted in the member feedback focused on changes in their emotional experience. Almost all members, at one point or another, volunteered observations about how the drumming group influenced their emotional experience. Although there is no indication that these experiences resulted in long-term emotional benefits, the members were enthusiastic about the perceived emotional benefits derived from their group experience. The following comments reflect some of this enthusiasm:

The drum circle causes me to be at peace with myself. I let go of anger, rage, and all the negative adjectives that I have in my life. I'm serene and happy when I leave. I can honestly feel joy.

"The drum circle relaxes me ... it eases my mind and helps me forget about being mad or hateful to someone and besides it is fun!" and "I feel the drum circle helps relieve tension and my frustration with life."

### **Conclusion**

Although anecdotal data is far from reliable, the members were very open about their perceptions of the group's value. They identified that the group is useful and indicated an eagerness to attend. In particular they liked the drumming and generally talk of how their experience in the group helps them stay calm and manage their symptoms. They also have forged ongoing relationships and support with the other members.

Within the larger organizational structure the ongoing adjunctive group program has yielded mixed responses. Although professionals committed to the recovery and empowerment philosophy express enthusiasm about the program, others with a more remedial approach, question the clinical efficacy of an open-ended approach that maximizes mutual aid and cohesion. Such responses can be expected given that most group programs are designed for consumers with lower levels of comorbidity and tend to be cognitive or psychoeducational allowing for clear start and end dates.

The organizational debate emerges partially because the drumming makes the program visible, or at least an auditory presence. Currently, there is an identified need for more rigorous assessment of outcomes. Although hospitalizations and daily symptoms appear to have decreased for the members, a more rigorous review of these types of outcome is planned to help identify the contribution of the complementary mindfulness and drumming components of the program.

### **Disclosure statement**

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the article.

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