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Rhythm2Recovery: A Model of Practice Combining Rhythmic Music with Cognitive Reflection for Social and Emotional Health within Trauma Recovery

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Rhythm pervades life in almost every context, from the smallest pulsating atom to the epic scale of our expanding universe. In our behaviour we are creatures of rhythm, following, initiating, and embedding patterns from the moment we are born, and within our physical anatomy rhythm is ever present, from our beating heart, through the rise and fall of our lungs and across the firing of our neurons. Healing traditions across all cultures invoke the rhythms of music, and the latest research from the field of neuro-biology into the way this element impacts the brain, reinforces this traditional knowledge and provides a new understanding of the real potential for rhythmic music to be utilised in therapy. This article details the use of rhythmic music in combination with cognitive behavioural therapy as a model for practitioners working with those recovering from trauma, and the supporting evidence validating this approach. Since 2003 this model has been utilised in diverse settings from behavioural centres for young people at risk to refugee trauma centres, forensic psychiatric wards in prisons, and child and adult mental health services. Currently over 4,000 professionals across 20 different countries have completed training in this model. Consistent feedback has highlighted the value of this model in engaging clients not readily engaged in 'talk-based' therapies, increasing social connection, and reducing psychological distress. The benefits of playing music socially with others, and of rhythmic music specifically, include increased levels of social integration, improvements in affect, mood stabilisation, reductions in anxiety and depression, and increases in self-esteem. When combined with exercises that draw attention and initiate reflection on important life issues, such as improving relationships and overcoming adversity, this has the added benefit of utilising the whole brain and embedding learning at a deeper level.

Keywords: rhythm, music, trauma, cognitive behavioural therapy, experiential therapy

Key Points

1. Music provides us with an avenue to engage those who would otherwise resist entering therapy.
2. Advances in neuroscience have highlighted the limitation of 'talk-based' therapies for those who have suffered from traumatic experiences.
3. As a language of emotion, music is an ideal tool to assist clients work through their feelings.
4. When we play music with others we build relationships and social connection in a very safe and empowering way.
5. Several significant research studies have showcased the potential of drumming to reduce psychological distress and improve overall wellbeing.

An increased awareness of the way trauma impacts the brain has led to a growing understanding of the limitations of cognitive-based therapies for a wide variety of individuals presenting for therapy (Van Der Kolk, 2014). As a therapist working in remote and regional Australia in the 1990s, where many residents were of Aboriginal

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descent, the training I had received in cognitive behavioural therapy (CBT) revealed its limitations very quickly. People who attended both my individual and group sessions were reluctant to talk, and when they did talk, their understanding and mine of what was said or implied often differed markedly.

Language presents a broad range of issues for those who have experienced trauma and many other population groups in need of support. Brain imaging studies have showcased a significant reduction in activity in regions associated with speech (Broca's area) for those experiencing traumatic events, as well as a general shut down of the left-hand side of the brain responsible for language and logic – putting words to feelings and experiences becomes highly challenging (Van Der Kolk, 2014). For other individuals the problem with 'talk-based' therapies stems from the trust that must be secured to allow for open and honest dialogue with a therapist or the shame of disclosing personal or family challenges to a stranger. Other populations simply have difficulties conversing in a language that is not their own.

For many people, music too is a language that is well outside their comfort zone, and its introduction into the therapeutic environment needs to be handled sensitively. Most people today participate in music as passive consumers, with a range of industries, including some specific health sectors, controlling our access to what in many circumstances has become a product (Small, 1996). The competitive nature of music instruction in schools and the concept of the elite musician have resulted in many internal dialogues that associate music making with fear and failure. Yet the benefits of participatory music making have been recognised for thousands of years and cover a broad range of psychological, physiological, and community areas (Hallam, 2010). Almost all indigenous societies utilise community music making, including rhythmic music, in their healing practices.

Access and Engagement

In terms of access, rhythmic music, created with drums and percussion instruments, is one of the most amenable music forms to those without a background in participatory music. Many clients come to therapy with low levels of self-confidence and a predilection to avoid new challenges as a way of safe-guarding their vulnerable self-image. When introduced appropriately, clients can have immediate success playing simple, yet powerful, rhythms on the drum, and this is a critical element in its usefulness as a clinical tool. In my early experience, as a non-musician, incorporating rhythmic exercises into my sessions, I often found the clients had more natural rhythm than myself and this in turn boosted their confidence and helped reduce the power differential between us. This same simplicity has also allowed thousands of therapists around the world to incorporate music into their practice who have no formal musical training.

The concept of safety is, of course, central to the issue of trauma recovery, as many trauma-inducing experiences leave people highly sensitised to perceptions of threat. Often this sensitivity relates to the way in which the trauma has impacted the primal areas of the brain that react subconsciously to ensure survival. When these areas become dysregulated they subsequently impact higher order brain functioning and further limit the effectiveness of cognitive interventions. These areas, the brainstem and diencephalon, have been shown to respond positively to rhythmic input and many leading trauma authorities are utilising sensory rhythmic activities

in their interventions in response to this research (Miranda et al., 1999). Brain stem neurons have been shown to fire synchronously with rhythmic tempo (Bernardi et al., 2009) and thus slower tempos can induce relaxation by reducing heart rate, blood pressure, and respiration levels whilst higher tempos can do the reverse (Griffiths et al., 2001).

In our work with rhythm we generally focus on these slower tempos, aligned to the tempo of the mother's heart beat under which this area of the brain was impacted during its formation in utero. Perry (2006) has suggested that these tempos (80–100 bpm) can assist those with brain-stem mediated hyper-vigilance, impulsivity, and anxiety because of this connection and the associations to security and comfort within the womb. At the same time the arousing nature of fast and loud drumming can be used to replicate the emotional intensity and lack of control often associated with the mobilisation of the fight or flight response initiated through the limbic brain (Van Der Kolk, 2014). This allows the therapist to offer exercises that help individuals learn to manage arousal and deescalate the intensity of their emotions.

As stated previously, my introduction to this work began as a strategy to combat the resistance many of my clients had to the 'talk-based' work I was doing. The drumming was initially presented as a hook to increase engagement, and it worked. Much of my work at that stage of my career was with 'high risk' adolescents and almost instantly their level of attendance increased as did their focus across the length of our sessions, both in group and individual work. Two key exercises that contributed to both the level of engagement and the therapeutic value of the process were the use of the drum as an alternative form of responding to questioning and as a form of expressing feelings. Questions that would have been met with silence if asked directly were answered through a response on the drum, and the question, 'How did that feel?' was much more likely to be answered honestly when substituted with 'Play how that felt.' For both of these exercises, no formal drumming skill was required.

Participatory Music and Healthy Relationships

Among the most devastating impacts of trauma are the toll it takes on relationships, as trust and confidence recede, social connection becomes much more difficult. Yet we know conclusively how important supportive relationships are to recovery (Benard, 2004). A critical challenge for therapists, then, becomes how best to help rebuild trust and overcome the fear and hurt associated with the traumatic experience. Introducing safe group music making can help – one of the most common experiences related by participants in the group drumming sessions is the sense of connection and belonging they feel as part of the group:

> Didn't used to connect to many people before just the Mrs and the kids. I had bad trust experience in the past . . . But learnt how to trust others, connect with others.
>
> (Prisoner, male – Martin, Wood, Tasker, & Coletsis, 2014)

Music has been used throughout history and across cultures to enhance social connection and some scholars believe this to be one of its evolutionary roles (Merker, 2000). Studies on the neurochemistry of synchronised musical activity have demonstrated increases in levels of oxytocin and other neural peptides (vasopressin & dopamine) associated with social bonding and increased levels of trust (Bartz, Zaki, Bolger, &

Ochsner, 2011; Chanda & Levitin, 2013). Group drumming connects people in an 'in the moment' experience and produces a form of entrainment synchronised through the rhythmic pulse. It allows people to connect in a safe way that avoids many of the misinterpretations and judgements of language.

Developing a Model of Practice

Initiated as a group intervention called DRUMBEAT in 2003 and primarily designed for supporting 'high risk' youth in school environments, the underlying Rhythm2Recovery model was expanded to accommodate the growing demand from other service providers looking for evidence-based alternatives to CBT (Faulkner, Wood, Ivery, & Donovan, 2012). The model aligns the benefits of rhythmic music and movement with cognitive awareness using analogies drawn from the drumming to prompt reflection. The theories of positive psychology and acceptance and commitment therapy (ACT) have also influenced the development of this work which has a strong focus on healthy relationships, value-driven behaviour, acceptance (through mindfulness practice), and a strength-based approach. The fact that rhythm or patterns play a significant role in all human behaviour allows analogies to be formed easily that draw attention to the impact of these rhythms on our lives. The use of analogy offers further protection from the sensitivities of direct questioning (see Figure 1).

Within the model there is significant flexibility for the therapist to adapt the relationship between the experiential and cognitive elements to the circumstances and needs of the client/s. In many situations the discussion or reflective element is minimised in the early sessions to promote trust and confidence and then increases in the latter stages of the therapeutic process, as the experiential learning is gradually connected to the real-life experiences faced by the client. This process of connecting the experiential to the lived lives of the client is a critical one in making the experience meaningful and not just something that is an isolated experience within the counselling room. Many exercises in the model combine experiential rhythm play with

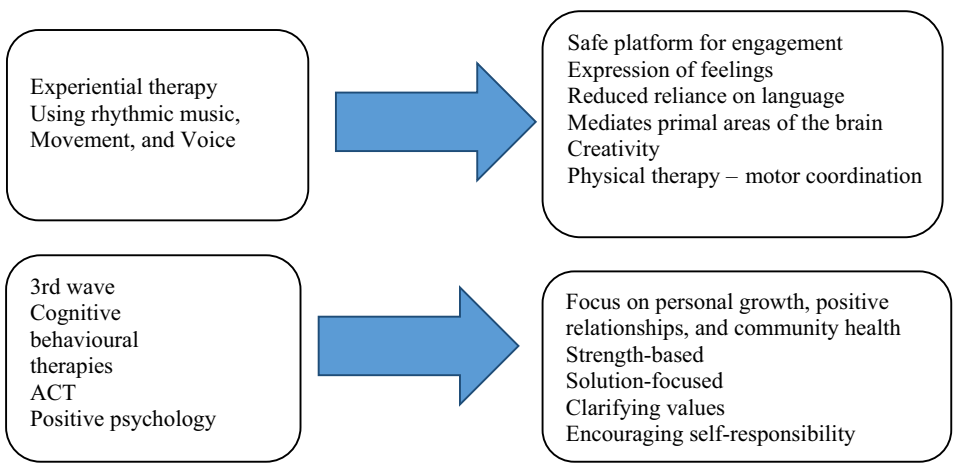

FIGURE 1

Rhythm2Recovery Model of Practice.

reflective awareness, particularly around affirmations, so that individuals can embed their learning rhythmically. Memory retention through music seems to be amongst the most enduring of all memory types (Halpern & Bartlett, 2010).

A Growing Evidence Base

Several significant studies have been published in relation to the impact of group drumming with individuals experiencing mental health challenges, including depression, anxiety, and general social functioning that have shown significant improvements, often above existing pharmacological treatment regimens for control groups (Fancourt et al., 2016; Martin et al., 2014; Wood, Ivery, Donovan, & Lambin, 2013). Importantly, in those studies that looked at the maintenance of improvements after 3 months, benefits had been preserved. In the Fancourt et al., (2016) study, biological markers were also tested that are able to identify changes in levels of the inflammatory immune response commonly associated with many mental health conditions. These levels were found to have shifted away from pro-inflammatory levels to anti-inflammatory levels over the course of drumming, showcasing positive biological changes from the intervention.

Rhythm as a Metaphor Across Our Lives

Drumming facilitated in a fun and empowering way opens doorways to engagement across a wide range of life areas. Once safety has been established, the therapist can introduce many fun exercises that showcase different social and emotional themes. In group work, individuals playing music together must utilise many of the same social skills required for general healthy relational connection and these can be highlighted and examined accordingly. Equally, issues that undermine relationship become evident in the way people play music together; power differentials are easily identified as are communication deficits.

One of the key communication exercises used in the Rhythm2Recovery model asks people (in pairs, one pair at a time) to dialogue with each other across the room

on their drum – from this simple exercise a range of elements around effective communication can be discussed. Additionally, this exercise can be extended by having one person play aggressively and the other answer assertively, helping people learn assertive communication techniques in a safe and fun way.

Probably the most critical exercises are those that draw on music's implicit relationship to emotion. Music is often referred to as a language of emotion and as such lends itself to helping people identify, express, and control their emotions. In working with therapists around the world using this medium we have received consistent feedback on the power of the instrument to assist them in working through these issues with those in their care. The use of the drum to help identify feelings has been critical, as so many clients impacted by trauma struggle with words in that area and words themselves can readily be used to disguise feelings. The impact of our feelings on others and vice versa can be examined through exercises where individuals play contrasting emotions on their drums aside each other. Equally the role of peer pressure in bending our emotional will, or triggering emotional arousal, can be replicated through individuals playing opposing rhythms and one person trying to hold their own rhythm steady against the undermining influence of the other part.

Drumming is a focused activity that is akin to mindfulness in its ability to relieve individuals of anxieties rooted in the past or future. In studies of individuals participating in a rhythm and reflection intervention within an inpatient psychiatric service, many participants experienced a reduction in hyper-vigilant thought patterns (Featherstone, 2008). Mindfulness practice focused on the deep bass pulse of the drum played at a rate of around 80 bpm, allows people to separate themselves from their feelings, recognising the transitory nature of their emotions and gaining some freedom from their influence. This level of control extends to a reduction in reactivity, and less activation of the flight or fight reflex (Van Der Kolk, 2014). Drumming at different tempos is also known to influence brain wave activity, and rhythm has been used in healing to increase theta wave production associated with calm and meditative states of consciousness (Grahn, 2009; Winkelman, 2003).

Motor Coordination

Playing rhythmic music has been shown to engage both the auditory and motor regions of the brain (Chen, Penhume, & Zatorre, 2018), and assisting those who have experienced trauma with grounding, balance, and motor coordination has been one of the additional beneficial outcomes associated with these types of interventions. Challenges with motor coordination and balance are also commonly found in individuals with sensory perception difficulties, including those with autism spectrum disorder (ASD). Temporal patterning is inherent in playing rhythmical music as the arms and body synchronise to maintain timing and as such can address significant impairment in these areas (Srinivasan & Bhat, 2013).

Music and Family Therapy

The musical exercises described in this article can provide an opportunity for engaging and observing families who would rarely enter a typical family therapy practice. The unique, non-judgmental nature of music, when utilised with sensitivity, can increase engagement and reduce the defensiveness that often occurs when discussions are used to examine family conflict. Observing musical interaction between family members can provide insight into family relationships, power dynamics, and communication patterns. The use of rhythmic music as an expression of emotion and as a form of communication often allows the family therapist to hear from those whose voice would otherwise remain silent.

In my work I often encounter dysfunctional family systems that are reflected in unhealthy power dynamics, problematic communication patterns, heightened emotional turmoil, and shifting boundaries. Engaging family members in rhythmical play has allowed me to monitor family relationship in a less invasive and non-confrontational manner that reduces self-consciousness. Power suctures are revealed through instrument choice and the directions, support, or blame members give each other. Exercises that recognise individuality by allowing people to improvise, yet focus on achieving group musical harmony, help family members appreciate each other's strengths whilst prioritising the need and rewards of collaboration within the family unit.

I have used a range of exercises to help increase attachment between parents and their children, including step-parents who struggle to develop respectful relationships with their step-children and end up competing with each other for the attention of the other parent or spouse. Playing music together can help bond people, with neurological research showing the way brain structures entrain and levels of trust and empathy rise (Nemesh, 2016). Playing improvised rhythmic music is used to highlight the need for compromise in relationships, as people adapt to each other's rhythms in order to find connection and harmony.

Other focuses for this work include using music to represent the discordant, and often chaotic, nature of existing family relationships, and then offer the challenge of bring this back to a place of harmony or calm. These exercises have been particularly successful in bridging differences and resolving conflict. Reflections on what skills were needed to transcend from one state to the other can be correlated to the steps needed to reconcile family tensions or disagreements. The success of the family in accomplishing this transformation in the musical context developed renewed confidence in their ability to work through their difficulties at home.

Another, increasingly common, area for this work has been in supporting parents re-establish bonds with their children, after periods of emotional neglect due to drug abuse. After a period of rehabilitation, and when no longer drug dependent, musical exercises pairing parents with their children have proved useful in reestablishing connection, increasing empathy, and reducing the stress many returning parents feel, which is exacerbated by guilt and low self-esteem (Jacobsen, McKinney, & Holek, 2014).

Mindfulness exercises that help families move on from conflicts and traumas of the past and develop new level of acceptance and empathy are also incorporated into the Rhythm2Recovery approach. The use of a rhythmical pulse, played on the Bass Drum at a tempo equivalent to the human heartbeat at rest (80–100bpm), provides a point of focus, calm, and grounding directly associated with the comfort of the womb. These exercises open doorways to change in family relationships by releasing some of the bonds connected to historical patterns of blame or other dysfunction (Lord, 2015). These and other exercises within the Rhythm2Recovery model lend themselves to a broad range of applications within an integrative therapeutic approach and broader psycho-education.

Conclusion

What began as a simple need to engage clients who would not attend my 'talk-orientated' counselling sessions, has developed into a medium that has allowed me, and many others working in the trauma field, to work to address a range of presenting issues in a fun and effective way. Sometimes because of the fun nature of this work it is dismissed as light and ineffectual, in much the same way as mindfulness was a generation ago. But the fun is a critical element in terms of engagement and safety and has a huge impact on mood and affect (Featherstone, 2008). My hope is that many more clinicians will look at incorporating rhythmic music into their practice, not as specialists, but in a very simple and accessible way, and thus continue to expand the reach of this work and the evidence behind its efficacy.

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