DURMS
Durham Undergraduate Research in Music & Science

Critical Evaluation of the Effectiveness of Music Therapy, Music Making and Music Medicine on Mental Health as Rehabilitation Therapy in Prisons

Hannah Cox
Durham University

1. OVERVIEW OF MUSIC THERAPY

Music therapy is deemed a form of therapy that has effective benefits proven to help many populations in society such as those with autism (Gattino et al., 2011), depression (Erkkilä & Gold, 2011), schizophrenia (Murow, 1997), dementia (Svansdottir & Snaedal, 2006) and physical disabilities (Ford, 1984). The use of sound and music has been shown to "bring out improvements in physical, mental, social, emotional and spiritual well-being" (Bunt, 1994). Music therapy has also been defined as "a systemic process of intervention where in the therapist helps the client to promote health, using music experiences and the relationships that develop through them as dynamic forces of change" (Bruscia, 1998). There is a wide range of approaches to music therapy across the world such as behavioural, psychoanalytic, educational or humanistic models. Although it has been suggested to have redeeming qualities, it is believed that music therapy in addition to standardised care, could improve patient's global state (Gold, Heldal, Dahle, & Wigram, 2005), suggesting that that those receiving music therapy benefit from additional care to improve a client or patient's condition. It is often perceived as a psychotherapeutic method in that it aids expression when it can be difficult, especially if clients have a severe language delay or supress emotional troubles from their past. It can also bypass social anxieties by using the music to interact and communicate with the therapist in order for the client to use the learnt social skills outside of the therapy room.

1.1 Music Therapy and Mental Illness.

Music therapy has shown to have benefitting factors for people suffering with enduring mental illness as it may bring out "improvements in social function, global state and mental state" (Grocke et al., 2008). The aim of music therapy according to Bunt (1994) is also "to help people with serious mental disorders to develop relationships and to address issues they may not be able to through the use of words alone". For example, those suffering with depression and anxiety can benefit from the effective use of music therapy "to release tension, to gain access to and express a wide range of emotions, and to boost self-esteem". Furthermore, Lin et al. (2010) reviewed almost 100 studies of music therapy and mental health and concluded that "music as used by music therapists result in clinical improvement". Moreover, music making research involving a professional musician, not necessarily with a trained music therapist, indicates that singing in groups and performing together can enhance self-esteem, social interaction and improve trust issues (Anshel & Kipper, 1988).

1.2 Mental Illness in Prisons.

Prisons have one of the fastest growing rates of mental health issues and suicide rates in comparison to that seen in the general population (Senior, 2013). Indeed, due to the growing population of prisons, there are now more people in prison with mental health problems than ever before (Bradley, 2009). A variety of studies have noted the harm caused by imprisonment (Bradley, 2009; Irwin & Owen, 2005; Liebling, 1992), noting that it is also likely that a great deal of physical and psychological harm was already apparent in many inmates upon arrival at prison. An early large-scale data collection study in prisons recognised that "nine out of ten prisoners had at least one psychiatric diagnosis, with rates of neurotic disorder, personality disorder, hazardous drinking and drug use" (Singleton, Meltzer & Gatward, 1998) which after 10 years, has still not improved: up to 90% of offenders in prison in the UK (with 95% of young offenders) have been diagnosed with a mental illness (Prison Reform Trust, 2011). Furthermore, the rates of serious mental illness were seen to be higher in female incarcerated prisoners (14%) than in male prisoners (7%) particularly in regard to psychosis (Singleton et al., 1998). In addition, a high number of prisoners will come to prison from highly disadvantaged backgrounds such as being homeless, undereducated, poor or unemployed, or all the above (Walsh, 2006) likely catalysing serious mental health issues. Therefore, there is an urgent need for rehabilitation attention to this particular population of society who continue to struggle with mental health issues behind bars. Inevitably, when considering the need for rehabilitation in prisons however, the continuing political debate of 'rehabilitation verses punishment' will likely be brought up. However, according to the population bulletin of prisons standing at just shy of 85,000 in the UK alone, action is urged to be taken to change this, which is further confirmed by Michael G. Santos in his book *Life Behind Bars in America* (2006). He argued that prisons are a "costly but effective design". But, as the ex-inmate continues, if the goal of the justice system of prisons is to prepare inmates to "live as law-abiding" and "contributing citizens", then the prison scheme fails their inmates and there is a pressing need of reconsideration. This is evidenced by the recidivism percentage of 59% in the UK of those whose first sentence was up to 12 months (http://open.justice.gov.uk/reoffending/prisons/). It is unsurprising that without rehabilitation consisting of education, support and guidance programmes, inmates return

to a life of crime and continually end up behind bars. Prime Minister David Cameron in 2010 announced plans to measure the nation's happiness, as the wellbeing of society is to become a political concern (BBC, 2010). However, when in consideration of what Russian novelist and philosopher Fyodor Dostoyevsky observed, "the degree of civilisation in a society can be judged by entering its prisons". A cause for concern therefore arises from Cameron's speech due to the increasing lack of funding and support for allowing rehabilitating and 'enriching' activities to continue.

1.3 Music in Prisons.

Prisons can be viewed as very harmful places for those suffering with mental health issues. Researchers have documented the way in which those occupying the institutions are affected by it (Cohen & Taylor, 1972; Crawley, 2004; Jewkes, 2005; Jewkes & Johnston, 2006; Liebling & Maruna 2005; Sapsford, 1983; Toch 1977). Due to the increasing and worrying level of mental health issues in prisons (Crewe, 2009), there is a need for more assistance in rehabilitating inmates for ease of transferring them back to the wider community. Various literature has shown that 'enrichment' activities such as music therapy and music making have enabled some prisoners to lessen the detrimental impact of their incarceration (Bunk 1987; Duncombe et al., 2005; Goorich, 2004; Wilson et al., 2009). However, in comparison with other therapies such as Cognitive-Behavioural Therapy (CBT), music therapy has not been an active therapy for many years despite it being delivered in correctional institutions dating back to the 1930s (Codding, 2002). But positive effects have been noted to those randomised to music therapy in populations outside of prisons as well as inside, particularly with those who have general symptoms of schizophrenia (Talwar et al., 2006).

Although this evaluation is specifically looking at music therapy and music making, music medicine, which can be recognised as listening to music (Gold, 2009; 2011), has also been used and proven to have beneficial effects as a technique of rehabilitation therapy in prisons. Models of music therapy tend to exclude music interventions at an "auxiliary level" (Bruscia, 1998) such as listening to music without a music therapist present. Music therapists are trained to understand how to engage clients in music and intervene within music (Gold, 2007). Thaut (1989, 1992) conducted two key studies that looked at music therapy and music making in prisons. Both emphasized that important goals for music therapists include reducing anxiety, stress, hostility, and combativeness when working in the correctional field. A correlation which some could argue should catalyse the need for further study and investigation is acknowledging the intentions of doing music therapy in all social areas of society and comparing it with the aims of rehabilitation in prisons. "Qualified music therapy practitioners work from the principle that centres personal well-being and the need for relating in meaningful contact with others" (Odell-Miller, 1995). In the past, rehabilitation was viewed as 'reforming the character' suggesting that there was a lack of contrastive and structural punishment. However, in modern day, the intentions of rehabilitating are much more focused on "preventing reoffending" (http://www.politics.co.uk/reference/prison-rehabilitation). This evaluation will outline studies that have taken place in prisons where a range of music therapy and music medicine is delivered in order to complement the intentions of rehabilitation.

1.3.1 Variations of music therapy in prisons. In prison, music therapists can work in three broad fields. First is the field of correctional psychiatry, where music therapists work with offenders who have been found guilty and sentenced by the courts who often have a psychiatric diagnosis. Another field is in forensic psychiatry, where music therapists work with forensic psychiatrists in the evaluation of people residing in prisons. The third area is the treatment of patients with a criminal record as well as those who have yet to have been found guilty of charge. In the latter case, the music therapist will often work in a different setting of a psychiatric ward of a prison rather than inside a prison unit itself (Daveson & Edwards, 2001). Techniques that music therapists have effectively used in prisons have included singing and instrumental playing, song selection and improvisation. It is believed the latter is spontaneously emotional, allowing the freedom of expression, presenting it as useful alternative non-verbal therapy to a course of verbal psychotherapy or counselling.

2. PRELIMINARY STUDIES OF MUSIC THERAPY AND MUSIC MAKING IN PRISONS

Offenders suffering from mental health problems have been described as "the unloved, unlovely and unlovable" members of society (Prins, 1993). The severity of mental illness in prisons continues to rise, which unfortunately is often disregarded when it comes to consideration of healthcare policies. Kupers (1996) suggests that in the US, correctional facilities generally have few opportunities for self-expression and prisoners are not being prepared to live on the other side of the bars once released. The latter can therefore result in stresses of loneliness, boredom, thwarted goals, discomfort and a tendency for inmates to see themselves as lacking self-value and self-worth (Sykes, 1958). Brewster (1983) investigated the outcomes of arts-based inmate education and rehabilitation. They reported a favourable parole outcome rate of 74.20% for inmates who participated in an arts-based educational programme in California in contrast to 49.50% favourable rate for those who did not participate in such education schemes. Furthermore, publications by Nolan (1983) and Cohen (1987) provided insight into the use of specific approaches including psychotherapy, supportive group music therapy, and guided imagery and music, in both the prison and psychiatry hospital settings. Promisingly, in the U.K a formal agreement was made between the NHS and Her Majesty's Prison Service to look ahead to changing the approach to prison service health care (HMPS & NHS Executive 1999).

2.1 Hoskyns (1988).

The aim of this observational study was to examine the development of music therapy particularly through the technique of instrumental improvisation and its effect on adult recidivist offenders. Three procedures of accessing qualitative feedback from staff members and those attending the music therapy sessions were taken at the Inner London Day Training Centre (DTC), an alternative custody for male and female offenders over the age of 21. The aim of the centre is to get the offenders attending the centre to take responsibility for their lives and realise that it is their choice to not reoffend. Music therapy sessions took place once place once a week over a 12-week period. Sessions involved improvising on a wide range of instruments. The first set of findings comprised comments from the DTC staff on the offenders' participation. Comments included "people being calmer after music therapy" and that socially the group felt much closer and were motived to seek achievement by the end of sessions.

The second procedure also showed that the 15 members of the group who chose to do music therapy found that the music therapy sessions helped them, through working in a group, thus increasing relaxation and increasing a sense of personal achievement.

The final procedure accessed responses through video material and commentary. The researcher proposed the idea that music therapy could change individuals' self-perception in response to them as individuals and their surroundings. As the responses to this section were much freer in comparison to simply answering 'yes' or 'no' in the previous procedures, there were varied responses in the amount of thoughts and emotions that were vocalised.

2.1.1 Discussion. Through qualitive results, the study demonstrated that music therapy has a range of positive outcomes, particularly relating to the social environment as this was a group music therapy project. Benefits included an increase in group encouragement and satisfaction and an increase in individual relaxation. A benefit of the model of the programme the researcher found was that it was instrumental based and that there was no pressure or need for the offenders to vocalise emotions or feelings during sessions, particularly as morning activities at DTC were compulsory verbal groups. The video commentary provided both positive and negative comments. They found that the video commentary encouraged an awareness of other participants and staff members in the group. However, the use of qualitative responses in the video commentary had mixed results in terms of the amount of responses provided. On one hand, this suggests that for those who did not respond as well vocally do benefit from a non-verbal form of therapy. On the other hand, however, self-evaluation could be a limitation in determining the effectiveness of music therapy and therefore a different response should be considered for future study.

3. CONTEMPORARY STUDIES OF MUSIC THERAPY AND MUSIC MAKING IN PRISONS

Despite the unsurprisingly high rate of serious mental health issues in prisons, the prison-based mental health care response is relatively poor and has been criticised historically as "ineffective, reflective of neither current best practise nor actual clinical need, delivered by inadequately qualified staff in unsuitable physical environments, yet at a high cost than services to the wider community" (Birmingham, 2003), despite the partnership made between the NHS and Her Majesty's Prison Service created in 1999. A study of in-reach services took place to examine the effectiveness of in-reach care in prisons. Although the initiative of having mental health nurses and supporting health care professionals was supported, there were difficulties found in the delivery modern mental healthcare practices used outside of prison (i.e. the NHS) in the prison environment. The evaluation suggested that care delivery was faulted by the struggles of staff recruitment and possibly related to facility limitations in that there are no prison hospitals but only in-patient beds, as well as retention difficulties due to the potential clash in "punitive prison vales and modern healthcare with an ethos of promoting personal autonomy and choice" (Senior et al., 2013). It is at this point where the employment of music therapy and music making would be extremely positive in prisons and incarceration centres as a parallel can be noted in the comparison of ethos in the discipline of prison rehabilitation and music therapy; both the ethos of prisons and music therapy put the well-being of the patient or client at the forefront.

3.1 Daveson & Edwards (2001).

Daveson & Edwards (2001) investigated the effectiveness of music therapy on five female prisoners housed in minimum, medium and maximum-security quarters in one all-female correctional facility. Although the participant sample was small, this study suggests music therapy managed to have a positive effect on the incarcerated prisoners. Twelve sessions were employed at a psychiatric wing of an all-female prison over a twelve-week period of one session per week. Five out of a possible seven attended all twelve sessions. It is suggested that low levels of self-esteem and self-worth and "feelings of alienation were influential factor as to why one participant elected not to continue with the program". However, the self-report measures from those who did participate indicated that music therapy assisted the attendees in achieving increased levels of relaxation, a reduction in stress and an increase in self-expression. Every participant agreed that they found the music therapy sessions "helpful" and "enjoyable". Successful techniques of music therapy included song writing and song parody (substituting lyrics to pre-composed material). Self-expression was permitted while listening to music being played and sung to the attendees, which further aided relaxation and reduced levels of anger and frustration. Interestingly, the therapist noted that on occasion when there was a decrease in the number of participants

during sessions, there was an increase in the amount of personal information shared about the participants' pasts relating to physical, emotion, sexual and substance abuse, as well as 'here and now' concerns regarding their feelings towards being imprisoned and missing freedom.

3.1.1 Discussion. Music therapy literature such as Wardle (1979) (which was also based in a female institution) and results in the above study suggest that music therapy can be effectively used in a correctional and psychiatric setting to reduce tensions and anxiety while increasing motivation and engagement with the outside. However, the external validity of this particular study is limited due to the small participant sample. It is hard to apply the findings to other offenders as this is only representative of a small number of offenders who are female.

3.2 Cohen (2009).

Music making in prisons is one of the earliest forms of music therapy-type activities to be documented. Van de Wall (1936) believed that singing in a choir endorses a sense of belonging in a group, loyalty, friendship building and "shifts destructive habits into constructive ones" after working in an adolescent and adult reformatory program. Cohen (2009) investigated the well-being of prison inmates in relation to choral singing in two settings. The aim of the study was to compare the well-being of inmates who did not participate in the choirs and a) inmates who sang in a prisoner-only choir and b) inmates who sang with community volunteers in a joint prisoner-volunteer choir. The Friedman Well-Being Scale, a twenty-item semantic differential scale was used as a pre-post assessment to determine the well-being states of the participants including emotional stability, sociability, joviality, self-esteem and happiness (Friedman, 1994). The study found that there was not a significant difference in scores between the therapeutic inmate choir and the control group of non-chorister inmates. However, a significant increase between pre- and post-intervention composite well-being scores for both groups was found (F (1, 18) = 9.8999, p = 0.006), as well as a substantial increase in reports of joviality (F (1, 18) = 9.889, p = 0.006) and emotional stability (F (1, 18) = 5, 761, p = 0.027). The second procedure with the joint inmate-volunteer choir with repeated measures also showed no significant difference between the control group and the experimental choir in well-being. But there was a significant increase between the two groups from pre- to post-intervention scores (F (1, 18) = 11.872, p = 0.003). In addition, all participants were required to complete written responses across nine weeks of "How are you feeling today?" were which analysed and categorized into two exclusive categories a) choir-related or b) non-choir related.

3.2.1 Discussion. The inter-reliability of the study was 100%. Both the quantitative and nominal date from this study indicate that choral singing may enhance inmate well-being. It is noted that the social aspects of a public concert played an important role in the improvement in the offenders' well-being. The inmates in the joint volunteer-inmate choir left the facilities to perform in a public space. They had the opportunity to speak with the singing volunteers and those attending the concert once the performance had finished. They also ate together, which as a social experience has proved to have many benefits (Danesi, 2017). Comments included "The warmth of the people after the concert was overwhelming" and that the evening was "the most wonderful time I had in about 8 years". As this study revealed findings of improved well-being in the short term after the performances, the approach warrants further research for investigating long-term outcomes.

3.3 Bensimon et al. (2015).

Listening to music that does not require the presence of a music therapist has been sometimes categorised as music medicine and can service as a good alternative to certain types of therapy that require patients to speak about their experiences and emotions (Bensimon et al., 2015). This study examined the effect of relaxing music on male prisoners through self-reported levels of anxiety and anger in a non-music therapy setting. What allows this study to stand out from other studies is that it takes ethnicity into consideration. When relaxing music was played, it took into consideration the ethnic differences of those in the institution. 48 male adult prisoners from the Ela medium-security prison facility in Israel were the participants for this study. Two self-report questionnaires known as the State-Trait Anxiety Inventory (STAI, Spielberg, 1983) and the State-Trait Anger Expression Inventory (STAXI, Spielberg, 1988) were given to the incarcerated participants to complete "in the moment" in regards to their feelings of anxiety and anger. The findings fulfilled the first hypothesis of the study that state anxiety measurements reduced significantly for the treatment group (Wing 1) in comparison to the control group (Wing 2) after measurements were taken one week prior to the 3-week exposure to music and one post-manipulation. The latter is in line with findings of music reducing anxiety in hospitalised patients in perioperative settings (Smolen, Topp & Singer, 2002). Furthermore, findings were in line with the second hypothesis that predicted that there would be a decrease in anger after listening to relaxing music. This bears some similarity to the findings from another study of a decrease in anger in preadolescent children with emotional, learning and behavioural disorders (Montello & Coons 1998). However, the difference for anger was not as much as that seen for anxiety.

3.3.1 Discussion. It is not entirely clear as to why there was a larger reduction in anxiety than anger and therefore there is a need for more research in this area. However, notably from this study is that relaxing music can have a lasting effect one week after the exposure to the music. It is argued that choosing the music wisely is important for future study, as music that inmates may deem as offensive could influence their feeling of anger. As mentioned above, this is one of the first studies of music-related tasks in prison to consider cultural differences. A slow tempo and a quiet dynamic may be deemed as relaxing in one culture; it could be completely different in another. A criticism of the research paper is that the music chosen for this study was not revealed, which could

have assisted in determining the uncertainty of the higher reduction of anxiety over anger. Overall, further research is required on the effect of music medicine on prisoners.

4. DISCUSSION

It is clear from the research outlined above that there are positive effects shown from the delivery of music therapy for incarcerated inmates. However, many limitations also counteract the positive effects.

Firstly, a limitation that is considered across these studies is that the samples of participants used in the studies tend to be small samples and therefore it is difficult to draw conclusions regarding the effectiveness of music therapy on prisoners. This could be due to a lack of commitment from prisoners or that their sentences are shorter than the schedule programme. Furthermore, the time duration of the studies mentioned with music programmes are also relatively short, averaging around 3-4 months. Therefore, it is hard to generalise and apply the findings from most of these studies in relation to the effectiveness of music therapy because they do not indicate lasting effects. This suggests there is further need for research and programmes to be initiated that last for a longer duration of time. However, one key study contrasting this limitation was conducted by Cooke and Cooke (1982), who considered the overall effect of music therapy in an integrated rehabilitation programme for 117 mentally ill incarcerated prisoners over a duration of 40 months. The researchers describe the music therapy programme as being "very successful and popular" and further show positive and lasting effects of music therapy, as there was an increased number of prisoners released before their maximum sentence and these offenders settled into their community well.

Some believe that before being sent to prison, prisoners' use of non-routine healthcare such as accident and emergency units are relatively high and therefore when there is a need for healthcare, it is crisis-driven. Although music therapy is not viewed a crisis therapy or an immediate resolution to crisis like that proved in biological therapies, it could be suggested that music therapy can offer rehabilitation success and could be used for prevention of other mental health issues occurring in future. Future research needs to investigate whether inmates or released prisoners feel there is a lack of accessibility to general practitioners because they are ex-offenders. It is often found that while policy dictates that health care for offenders should be 'equivalent' to their peers in the wider community, equivalence could be viewed as misjudgement in that there is a greater need for offenders due to the significantly increased levels of all types of mental health issues and suicide rates. In 2016/2017, there were 748 deaths of offenders in England and Wales, which is an increase of 7% from 2015-2017. 233 of the deaths were self-inflicted (Minster of Justice Annual Statistics Bulletin, 2017). Therefore, there is a need for services inside and outside of prisons to respond in a way that is "inclusive, flexible and, importantly, holistic, addressing both discrete health issues and wider social care needs" (Senior, 2013). As mentioned before, Michael G. Santos wrote a book, *Life behind Bars in America* (2006), and argues that American correctional facilities are just "temporary human warehouses" and there were faults in the model of rehabilitation in the prison sector. Therefore, a limitation for determining the effectiveness of music therapy with incarcerated people heavily depends on funding, on whether institutions can afford to take on a music therapist and see projects through which need to take place long enough to have lasting effects. A further limitation in regard to the effectiveness of music therapy in prisons is suggested by Pratt (2005), who argued that a limitation for allowing the delivery of 'enrichment' rehabilitator activities could be due to the public taxpayer anxiety towards crime, coupled with the hostile media coverage towards anything deemed liberal and 'soft'. This could lead to an infiltration of policy development in cutting funding and allowance for arts-based rehabilitation therapies. As mentioned before, it is likely that the debate of whether the justice system should rehabilitate or punish the prisoners is likely to also influence policy devising. This is not to paint a role reversal of public verses prisoners; the good verses the bad, but when considering the intentions of rehabilitation in prisons to allow a smooth transition of prisoners, who will be "our future neighbours" (James, 2013), back into society, it is not to be ignored that music therapy has very similar intentions in line with the intentions of prison rehabilitation (Osment, 2010; Trévien, 2010).

Interestingly, a criticism observed by Thaut (1992) is that a limitation to the efficacy of music therapy may not be that the use of music itself is what limits the benefitting factors of the therapy, but that it is the therapist that can influence the positive outcomes due to the way they deliver the therapy. They argued that music therapists themselves can experience ambivalent feelings such as cynicism and overwhelming empathy and punitive attitudes towards the incarcerated participants in their programmes. Many obstacles can get in the way of effective delivery and, therefore, a strategy to further establish the effectiveness of music therapy is to employ therapy sessions for the music therapists in order to sustain effective delivery and to avoid negative experiences impacting on the therapeutic process. Furthermore, it could be argued that there is a lack of effectiveness in group music therapy sessions in prisons because of the severity of some of the depressingly low levels of self-worth and esteem. Such participants may benefit from a more personal, one-on-one session, particularly noting when there were fewer participants attending a session, more personal information was shared. Nevertheless, due to ethics and security, it is naturally very difficult to arrange individual music therapy sessions with prison inmates in order to consider the safety of the music therapist.

Lin et al. (2010) reviewed almost 100 studies of music therapy and mental health and concluded that "music as used by music therapists result in clinical improvement. We found no demonstrable evidence that simply listening to music had the same type of result". Although some could argue that music making and music medicine programmes in prisons may not be deemed to be as structured as music therapy projects delivered by a trained professional music therapist, Bensimon et al. (2015) heavily contradicts Lin et al.'s (2010) suggestion

that simply listening to music does not have "demonstrable evidence" that is as effective as music therapy. Bensimon et al. (2015) demonstrated that listening can have positive effects on mental health symptoms by reducing anxiety and anger and helping prisoners channel their emotions positively.

Despite the lack of funding and equality in health policies, music therapy and music making have shown to be very effective for prisoners suffering from mental illness by teaching the clients how to channel their emotions positively rather than exposing them through self-harm or through being violent to others (Chen et al., 2016). It also enables clients to build positive relationships and trust (Wilson et al. 2015), which prisoners are able to transfer to the outside world after being released. Thaut (1989, 1992) also highlighted this point, stating that it is possible for inmates with a psychiatric diagnosis to create and sustain emotional ties when exposed to music therapy. In addition, a qualitative study that collected views from creative arts therapists working with criminals found music therapy to be the therapy that focused most on positive developmental goals such as coping skills and emotion regulation (Smeijsters, 2011). Furthermore, Stanley (2009) and Keeler (2010) suggested that cognitive-behavioural techniques (CBT) have been unable to provide clear evidence in reducing recidivism, thus suggesting that there is a need for rehabilitation therapies such as music therapy which have high benefitting factors in order for the standard therapies such as CBT and biological therapies (drugs) to be effective. A positive correlation has been found between offenders participating in music programs for longer and a lower recidivism rate. According to Mathiti (2002), young offenders who participated in a Diversion in Music Education (DIME) percussion programme had a near 10% recidivism rate six months after participation which later dropped to 0% after one year of participation, further suggesting that there are positive effects of music therapy on prisoners.

5. CONCLUSIONS

Overall, the studies suggest that there are many positive effects of music therapy and music making on prisoners suffering with mental health issues. Although more research is needed in this area of the population and in music therapy in general, there is great potential for the future of music therapy and music making in prisons as a rehabilitation therapy.

REFERENCES

Anshel, A & Kipper, D. (1988). The influence of group singing on trust and cooperation. *Journal of Music Therapy, 25*(3), 145-155.

Bensimon, M., Einat, T., & Gilboa, A. (2015). The impact of relaxing music on prisoners' levels of anxiety and anger. *International Journal of Offender Therapy and Comparative Criminology,* 59(4), 406-423.

Birmingham, L. (2003). The mental health of prisoners. *Advanced Psychiatry Treatment*, 9, 191-201.

Bradley K. (2009). The Bradley Report: Lord Bradley's review of people with mental health problems or learning disabilities in the criminal justice system. London: Department of Health. http://webarchive.nationalarchives.gov.uk/20130105193845/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_098698.pdf

Brewster, L. (1983). *A cost benefit analysis of the California Department of Corrections Arts in Corrections Program.* Santa Cruz, CA: William James Association.

Bruscia, KE. (1998). *Defining music therapy.* 2nd Edition. Gilsum, NH: Barcelona Publishers.

Bunk, B. E. (1978). *Effects of hatha yoga and mantra meditation on the psychological health and behaviour of incarcerated males,* PhD Thesis. Texas: University of Texas.

Bunt, L. (1994) *Music Therapy: An Art Beyond Words.* London.

Cooke, M. K & Cooke, G. (1982). An integrated treatment program for mentally ill offenders: Description and evaluation. *Internal Journal of Offender Therapy and Comparative Criminology, 26*(1), 53-61.

Chen, X. L., Leith, H., Aaro, L. E. & Gold, C. (2016). Music therapy for improving mental health problems of offenders in correctional settings: Systematic review and meta-analysis. *Journal of Experimental Criminology, 12*(2). DOI 10.1007/s11292-015-9250-y

Codding, P. (2002). A comprehensive survey of music therapists participating in correctional psychiatry: Demographics, conditions of employment, service provision, assessment, therapeutic objectives, and related values of the therapist. *Music Therapy Perspectives, 20*(1), 56-68.

Cohen, M, L. (2009). Choral singing and prison inmates: Influences of performing in a prison choir. *Journal of Correctional Education, 60*(1), 52-65.

Crewe, B. (2009). *Power, adaptation, and the social world of an English prison.* Oxford: Oxford University Press.

Danesi, G. (2017). A cross cultural approach to eating together: practises of commensality moung French, German and Spanish young adults. *Social Science Information, 57*(1), 99-120.

Daveson, B. A. & Edwards, J. (2002). A descriptive study exploring the role of music therapy in prisons. *The Arts in Psychotherapy*, *28*, 137-141.

Duncombe, E., Komorosky, D., Wong-Kim, E. & Turner, W. (2005). Free Inside: A program to help inmates cope with life in prison at Maui community correctional centre. C*alifornian Journal of Health Promotion, 3*(4), 45-58.

Erkkilä, J., Punkanen, M., Fachner, J., Ala-Ruona, E., Pöntiö, I., Tervaniemi, M., Vanhala, M., & Gold, C. (2011). Individual music therapy for depression: Randomised controlled trial. *The British Journal of Psychiatry, 199,* 132-139.

Friedman, P. (1994). *Friedman well-being scale and professional manual.* Redwood City, CA: Mind Garden.

Ford, S. C. (1984). Music therapy for cerebral palsied children. *Music Therapy Perspectives,)*, 8-13.

Gattino, G., Riesgo, R., Longo, D., Leite, J., C., Schüler, S., F. (2011). Effects of relational music therapy on communication of children with autism: A randomized controlled study. *Nordic Journal of Music Therapy, 20*(2), 145-154.

Gold, C., Heldal, T., Dahle, T., & Wigram, T. (2005). Music therapy for schizophrenia or schizophrenia-like illnesses. *The Cochrane Database for Systematic Reviews, 2.* Art no.: CD004025, doi: 10.1102/14651858.CD004025.pub2

Goodrich, K. (2004). *The means of production: A qualitive evaluation of a long-term drama residency facilitated by Rideout (Creative Arts for Rehabilitation) in HMP Dovegate therapeutic community 2003-2004.* Stoke-on-Trent: Rideout.

Grocke, D., Bloch, S., & Castle, D. (2008). Is there a role for music therapy in the care of the severely mentally ill? *Australian Psychiatry, 16*, 442-445.

Her Majesty's Prison Service and HNS Executive. (1999). *The Future organisation of prison healthcare.* London: Department of Health.

Irwin, J. & Owen, B. (2005). Harm and the contemporary prison. In A. Liebling & S. Maruna (Eds.), *The Effects of Imprisonment* (pp. 94-117). Cullompton: Willan Publishing.

James, E. (2013). Prisoners are our future neighbours. So is rehabilitation such a dangerous idea? *The Guardian.*https://www.theguardian.com/commentisfree/2013/nov/01/prisoners-are-our-future-neighbours-so-is-rehabilitation-such-a-dangerous-idea

Kupers. T. A. (1996). Trauma and its sequelae in male prisoners: Effects of confinement, overcrowding and diminished services. *American Journal of Orthopsychiatry, 66*(2), 189-196.

Liebling, A. & Maruna, S. (Eds.) (2005). *The Effects of Imprisonment.* Cullompton: Willan Publishing.

Minster of Justice (2017).*Deaths of Offenders in the Community 16/17.* Annual Statistics Bulletin England and Wales. Oct-2017. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/654856/deaths-of-offenders-in-the-community-2016-17.pdf

Montello, L. M., & Coons, E. E. (1998). Effects of active versus passive group music therapy on preadolescents with emotional, learning and behavioural disorders. *Journal of Music Therapy, 35,* 49-67.

Murow, E., & Unikel, C. (1997). Music therapy and body expression therapy in the rehabilitation of patients with chronic schizophrenia. *Salud Mental, 20*(3), 35-40.

Odell-Miller, H. (1995). Why provide Music Therapy in the community for adults with mental health problems? *British Journal of Music Therapy, 9,* 4-11.

Osment, P. (2010). *Inside track on the growing local arts closures.* Guardian, Tuesday 9 November.

Prins, H. (1993). Offending patients: The people nobody owns. In W. Watson & A. Grounds (Eds.). *The mentally disordered offender in an era of community care.* Cambridge: Cambridge University Press.

Prison Rehabilitation: http://www.politics.co.uk/reference/prison-rehabilitation

Prison Trust Reform: http://www.prisonreformtrust.org.uk/

Senior, J., Birmingham, L., & Harty, M. A. (2013). Identification and management of prisoners with severe psychiatric illness by specialist mental health services. *Psychological Medicine,*; 43, 1511-1520.

Singleton, N., Meltzer, H., & Gatward, R. (1998). *Survey of psychiatric morbidity among prisoners in England and Wales.* London: Office for National Statistics.

Smeijsters, H. (2012). Analogy and metaphor in music therapy: Theory and practice. *Nordic Jounral of Music Therapy, 21*(3), 227-249.

Smolen, D., Topp, R., & Singer, L. (2202). The effect of self-selected music during colonoscopy on anxiety, heart rate, and blood pressure. *Applied Nursing Research, 15,* 126-136.

Speilberger,C. D. (1983). *Manual for the State-Train Anxiety Inventory: STAI.* Palo Alto, CA: Consulting Psychologists Press.

Speilberger, C.D. (1988). *Manual for the State-Trait Anger Expression Inventory (STAXI).* Odessa, FL: Psychological Assessment Resources.

Svansdottir, H., & Snaedal, J. (2006). Music therapy in moderate and severe dementia of Alzheimer's type: A case–control study. *International Psychogeriatric, 18*(4), 613-621. doi:10.1017/S1041610206003206

Sykes, G. M. (1958). *The Society of Captives*. Princeton, NJ: Princeton University Press.

Talwar, N., Crawford, M. J., Maratos, A., Nur, U., McDermott, O., & Procter, S. (2006). Music therapy for in-patients with schizophrenia. *British Journal of Psychiatry, 189*, 405409.

Thaut, M. (1987). A new challenge for music therapy: The correction setting. *Music Therapy Perspectives*, *4*, 44-50.

Thaut, M. (1992). Music therapy in a correctional psychiatry. In W. Davis, K. Gfeller & M. Thaut (Eds.), *An Introduction to music thearapy: Theory and practise* (pp. 273-284). Dubuque, IA: Wm, C. Brown Publishers.

Trévien, C. (2010). Is theatre still allowed to inspire the insides of prisons? *Arts Professional* 229. Cambridge: Arts Intelligence Ltd.

Walsh, T. (2006). Is corrections correcting? An examination of prisoner rehabilitation policy and practise in Queensland. *Australian and New-Zealand Journal of Criminology, 39,* 109-133.

Wardle, M. (1979). Music therapy in a women's prison. Part 1: the old prison. *British Journal of Music Therapy, 10*, 11-14.

Wilson, D., Caulfield, L. & Atherton, S. (2009). Good vibrations: The long-term impact of a prison-based music project. *Prison Service Journal,* 182, 27-32.

Van de Wall, W. (1936). *Music in institutions.* New York: Russell Sage Foundation.