

**The effect of dance movement therapy on the self-esteem
and state of hostility of sexually abused adolescents at a
Children's Home**

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Abstract

The research aimed to establish the effect of dance movement therapy on self-esteem and level of hostility in an adolescent population at a children's home. A quantitative study, using quasi-experimental design, was carried out in the form of standardised questionnaires. The qualitative data was used to investigate the Rosenberg Self-Esteem Scale and Cook-Medley Hostility Scale. A total of 18 participants participated in the research of which eight were assigned to the experimental group and ten to the control group. A between-group comparison was done for both questionnaires on the results of the pre- and post-test of both groups. All 18 participants completed the two questionnaires (pre-test) and thereafter the experimental group were subjected to the six-week dance movement therapy programme. Again, the 18 participants completed both the questionnaires (post-test). Non-parametric statistics was used to determine whether a difference existed between the experimental- and control group. It appears that the experimental group did not show statistical significant difference between the pre- and post-test in both variables. However, possible explanations for the lack of statistical significant results are discussed. Further research, especially conducted on a South African population, is necessary to establish the role of dance movement therapy on sexual abuse victims.

Key Words

Adolescent, children's home, dance movement therapy, dance movement therapy programme, level of hostility, self-esteem, sexual abuse.

1. Introduction

Child sexual abuse is a widely researched topic (Fergusson, Boden, & Horwood, 2008; Noll, 2008; Pereda, Guilera, Forn, & Gómez-Benito, 2009; Senn, Carey, & Venable, 2008; Whitaker et al., 2008) together with the potential ways to alleviate the trauma (Leserman, 2005; Malchiodi, 2013; Pretorius & Pfeifer, 2010). Dance movement therapy is a topic that has been researched for its effectiveness and applicability across various populations (Harris, 2007; Ho, Lo, & Luk, 2016; Karkou & Meekums, 2014; Wilbur et al., 2015; Winters, 2008). Yet, the possibility of using dance movement therapy to relieve the body trauma caused by sexual abuse is limited, especially in the South African population. Furthermore, no research was found that measures both the self-esteem and level of hostility of adolescent victims of sexual abuse who participated in a dance movement therapy programme. Such an investigation would be theoretically informative and would aid in our understanding of the applicability and effectiveness of dance movement therapy, especially in a South African population. However, as this research was done on a small sample and should be seen as a pilot study, the results should not be used for generalisation.

South Africa is confronted with a major problem concerning abuse against women and children (DSD, DWCPD, & UNICEF, 2012; Vetten, Jewkes, & Christofides, 2008). Globally, 7–36% of females and 5–10% of males are subjected to sexual abuse (Callender & Dartnall, 2010; Finkelhor, 1994; Jewkes, Penn-Kekana, & Rose-Junius, 2005). As estimated by Solidarity’s Helping Hand (n.d.), in South Africa a child is raped every three minutes and over sixty cases of child rape are reported every day. However, in South Africa the exact number of incidences is unknown because of the under-reporting of rape. It is therefore pivotal to find alternative ways to deal with the trauma related to sexual abuse that are both effective and affordable. Therefore, a dance movement therapy programme provides a therapeutic technique that can effectively be utilised within a group. This is important in South Africa because of the lack of resources available and with the high poverty rate. However, dance movement therapy is poorly examined with regard to its effectiveness within sexual abuse trauma, especially within a South African population. Dance movement therapy is proven to be a helpful technique dealing with mental health and related trauma (Bräuningner, 2012; Devereaux, 2008; Harris, 2007; Mala, Karkou, & Meekums, 2012; Ho, 2005; Wilbur et al., 2015).

In most sexual abuse cases, the child or adolescent knows the perpetrator (Makoae, Warria, Bower, Ward, Loffel, Dawes, 2009; Olafson, 2011; Sadock & Sadock, 2014). The perpetrator forces these children and adolescents to keep the abuse a secret, by threatening either the child or other family members (Murphy, 2008; Sadock & Sadock, 2014). Dance movement therapy is a less intimidating way of expressing emotions and actions that victims have been exposed to and have had to deal with than its ‘talk therapy’ counterpart (Murphy, 2008). This type of therapy provides a fun way of expressing deep unconscious and forbidden thoughts, feelings and experiences.

The long-term consequences of sexual abuse in childhood are plentiful and are often only observed and/or awoken in adolescence or young adulthood (Abrahams, Jewkes, Laubscher, 2006; DSD, DWCPD, & UNICEF, 2012; Fergusson, et al., 2008; Maniglio, 2009; Noll, 2008; Senn et al., 2008). They could include low self-esteem, feelings of worthlessness, powerlessness, mistrust in others, suicidal ideation and behaviour, depressive symptoms, anxiety and post-traumatic stress disorder (Fergusson, et al., 2008; Newcomb, Munoz, & Carmona, 2009; Pereda, *et al.*, 2009; Senn et al., 2008). Senn et al. (2008) state that child sexual abuse (CSA) can increase sexual risk behaviour such as frequent unprotected sexual activities, engaging in sex work, use of alcohol or drugs with sex and promiscuity. The adolescent usually employs unhealthy coping mechanisms such as substance abuse, risky sexual behaviour and aggression (DSD, DWCPD, & UNICEF, 2012). For this reason it is necessary to address the sexual trauma.

This mini-dissertation discusses the outcome of the results obtained from a six-week dance movement therapy programme implemented for adolescent sexual abuse victims in children’s home. The main objective of the research was to determine whether dance movement therapy could be effective in increasing self-esteem and decreasing the level of hostility in the adolescent population at a children’s home. The hypothesis stated that if the self-esteem and level of hostility changed after the dance movement therapy programme, it can be deduced that there is a potential correlation between dance movement therapy and self-esteem and level of hostility. This would then determine whether there is a cause-and-effect relationship between dance movement therapy and self-esteem and level of hostility. The results will be analysed to determine whether the outcome is in the right direction and whether it is significant. If the null hypotheses are rejected, the results will demonstrate that dance movement therapy could be

effective as an alternative therapeutic technique for adolescent sexual abuse victims within South Africa.

The adolescent participants took part in six-dance movement therapy sessions that focussed on enhancing self-esteem and possibly lowering level of hostility. This was done by expressing their trauma through body movements. The experimental group participated in the dance movement therapy programme. The opportunity was offered for the control group to receive the dance movement therapy programme after the data had been collected but unfortunately, due to other obligations at the children's home, it was not possible. The self-esteem of the adolescents was measured using the Rosenberg Self-Esteem Scale together with the Cook-Medley Hostility Scale to measure the level of hostility. Both the experimental group and control group completed the two questionnaires before the dance movement therapy programme (pre-test) and after the six-week dance movement therapy programme (post-test).

Before discussing the results of the study, a comprehensive literature review will be presented in Chapter Two. Chapter Two is dedicated to explain the origins of dance movement therapy and the physical, psychological and social benefits of dance movement therapy on different populations. Thereafter, the effect of sexual trauma on the body and brain will be discussed. The methodology used in this study will be discussed in Chapter Three, which will illuminate the chosen methodology and practical application thereof. Further, the chapter will explain the different ways the variables will be measured and which threats to validity could alter the results. The detail of the intervention programme, with its goals and justifications, is discussed in Chapter Four. Chapters Five and Six provide a detailed description of the results obtained from the application of the dance movement therapy programme and its possible effect on self-esteem and level of hostility. Lastly, recommendations and limitations of the study are discussed in Chapter Seven

1.1 Definitions

To efficiently understand the study, it is important to clarify the following concepts used throughout the literature review and throughout the study:

- **Dance movement therapy:** A form of art therapy that uses different variations of body movement as a form of expression. Dance movement therapy is often used as an

alternative and/or complementary therapy to psychotherapy. Dance movement therapy is part of the broader category of the creative art therapies.

- **Dance movement intervention programme:** A programme developed for a specific population that incorporates the principles of dance movement therapy.
- **Sexually abused children:** An intentional sexual act or attempt of a sexual act against a minor or without their consent. (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002)
- **Adolescents:** Individuals between the ages of 11 and 21 (Louw & Louw, 2007). In the context of this study, adolescents were restricted to ages between 11 and 18 years, as the researcher made use of school-based adolescents.
- **Self-esteem** The belief and attitude towards oneself and one's abilities (Rosenberg, 1956). It is not something that one is born with, but something that grows and develops throughout the individual's life. Self-esteem is a belief about your own personal value and is affected by social acceptance and rejection (Patchin & Hinduja, 2010).
- **Hostility:** The attitude of an individual that has a cognitive tendency to interpret the actions of others as aggressive. According to Goodyear-Brown (2011), hostile individuals have a mind-set of interpersonal distrust and suspicion about human nature.

2. Literature Review

2.1 Introduction

Individual counselling and support groups have been documented as effective methods of addressing psychological problems and trauma. However, there is a need for alternative techniques in psychology to address various emotional problems. Dance movement therapy (DMT) is an alternative or complementary psychotherapy that affects an individual on an emotional, social and physical level (Payne, 1993).

This literature review firstly encompasses an explanation of the effect of DMT on various populations and mental illnesses. Thereafter, a discussion will follow on the origin, theoretical approaches and benefits of DMT. Lastly, the impact of trauma on the body and brain is explained in order to understand the influence that DMT has on trauma, which in turn affects the body.

2.2 Creative Expressive Therapies

Expressive therapy is the umbrella term for various forms of creative alternative therapies used in conjunction with psychological intervention (Smeijsters & Cleven, 2006). Within this domain exists drama, art, music and DMT. Expressive therapy is a group of therapies that allows the individual to express their unconscious and repressed emotions in a non-directive and creative way. While talk therapy is still dominant, some therapists believe that people have different expressive styles (Malchiodi, 2005). This means that some people may be more visual and others more tactile. These therapists therefore believe that the inclusion of expressive capacities in therapy could enhance the client's therapy process and make it more applicable to the needs and style of the client (Malchiodi, 2005).

Malchiodi (2005) state that each form of expressive therapy has its own unique properties. For example, DMT incorporates action and movement. It can be performed in groups and can subsequently assist in forming relationships while creating opportunities for interaction.

Expressive therapy is adjustable to different environments and can for this reason be performed in hospitals, hospices, private practices and other healthcare institutions (Meekums, Karkou, & Nelson, 2012; Pratt, 2004). It can be administered collectively or individually.

Art therapy, especially the drawing of pictures, is a form of assessment and intervention that has been used to identify and treat sexually molested children for the past few years (Murphy, 1998; Pifalo, 2002; 2006). The main reason for art therapists' belief in the efficiency of art therapy is the quality it has of allowing a less threatening and intimidating opportunity to express their unconscious emotions (Murphy, 1998; Pifalo & Charlestion, 2002; Pifalo, 2006; Pratt, 2004). Expressive therapy also allows for the discharge of tension and it minimises anxiety levels (Pretorius & Pfeifer, 2010). Subsequently, working through the problem could lead to greater understanding. Children do not always possess the vocabulary to express their emotions and can therefore feel intimidated by verbal expression (Malchiodi, 2005). Therefore, art therapy provides an excellent creative opportunity for this population group to express themselves (Pifalo, 2002; 2006; Pretorius & Pfeifer, 2010; Waller, 2006).

Levy (2014) emphasises that dance movement therapists take on various roles depending on the needs of the client. Some therapists take on a non-directive role by being empathic observers, while others move with their clients in a supportive and mirroring manner. However, Murphy (1998) states that it is important for the therapist to take on a non-directive role during expressive therapy, as expressive therapy offers the opportunity for sexually abused children to take control and make their own choices. This control is important, as most sexually abused children have been robbed of control over their bodies and lives by the perpetrator (Draucker & Martsof, 2009; Sanderson, 2006). Sexual abuse affects the body in an intimate way and creates long-lasting and devastating consequences for the victims (Brooke, 2007; Sanderson, 2006). The experience affects how victims relate both inwardly and to the outside world. DMT, which is a psychotherapy that focusses on the body, can address these consequences and subsequently empower the victim's relationship and compassion with their body (Brooke, 2007).

2.3 Dance Movement Therapy

2.3.1 Defining dance movement therapy

Levy (1988) defines DMT as a psychotherapeutic tool that assists the client to reflect their inner emotional state through various body movements. The changes in movement behaviour could subsequently cause changes in the psyche that will promote health and growth.

Therefore, DMT is not the same as teaching a dance. The therapist is an ally in the process and not a teacher (Corteville, 2009). The therapist follows the client while promoting a safe environment characterised by empathy and a non-judgmental atmosphere. According to Corteville (2009) DMT promotes body awareness and provides an opportunity for the healthy development of a personal relationship.

DMT is an alternative technique that combines body movement with the internal expression of feelings and thoughts (Wennerstrand, 2008). DMT has been incorporated as a therapy or as a complementary approach to other intervention programmes, which include the treatment of cancer patients, stress-related problems, mental disorders, trauma therapy and sexually abused children (Bräuninger, 2012; Koch, Morlinghaus, & Fuchs, 2007; Lundy & McGuffin, 2005; Mills & Daniluk, 2002; Van der Merwe, 2010; Young, 1992). DMT uses movement of the body together with counselling skills to integrate emotional, cognitive, social and physical aspects of the individual.

2.3.2 Brief history and theoretical perspective on DMT

Dance as a form of healing is an ancient practice. Across different cultures, dance rituals mostly accompany major life changes and therefore present the integration of something into the individual's life (Levy, 1988; Corteville, 2009).

The idea that psychotherapy can be performed as a more active, spontaneous and expressive type of therapy has led to the growing interest in DMT in the 1940s and 1950s (Levy, 2014). The idea was to break away from the rigid impersonal forms of therapy to a more natural and expressive therapy, hence the development of DMT (Levy, 1988).

DMT began when accomplished modern dancers realised the potential psychological, physical and social benefits that dance and movement can offer (to be discussed later). The revolution of dance as a form of psychotherapy developed in an era where ideas and innovations from different disciplines spilled over, thus creating a change of mutual influence and inspiration from different disciplines (Levy, 1988). Psychoanalytic thought was also gaining more acceptances in this era. This school of thought emphasised the expression of unconscious material through a verbal form. DMT is similar to this as it also encourages the expression of

unconscious thoughts, but through the use of various dance movements rather than through verbal material.

DMT was first implemented with psychiatric patients by Marian Chace. Although DMT has evolved over the years, some of the original techniques are still employed today (Corteville, 2009). There are several prominent figures in the development and establishment of DMT as well as different movement and theoretical perspectives within this type of psychotherapy. The theoretical approaches of DMT are based on existing psychotherapy theories. Generally, the approaches in DMT can be divided between east coast approaches implemented by Marian Chace and Blanch Even and west coast approaches proposed by Mary Whitehouse and Trudi Schoop (Corteville, 2009).

Marian Chace developed *active mirroring* of movements and *circular formation*, which are still used in DMT groups today (Levy, 1992; Meekums et al., 2012). Chace was intrigued by the manner in which humans are able to communicate and express their feelings through dance (Corteville, 2009; Levy, 1988). Most of her methods are based on Harry Stack Sullivan's theories which address the needs and rights of clients by creating an atmosphere of acceptance, empathy and non-judgment (Corteville, 2009). Sullivan divided her sessions in three parts: a warm-up, theme development and closure. As mentioned above, active mirroring is a technique still used today and refers to the ability to kinaesthetically experience what the client is communicating; empathy is reflected through movement (Corteville, 2009; Levy, 1988).

Blanche Evan's approach is based on the work of Adler, Freud and Rank (Levy, 1988). Evan believed that dance provides the 'most direct and complete connection to psyche' (Levy, 1988, p46). She wanted to bridge the gap between the psyche and soma to help what is being repressed in the body come back to life through body movement.

Whitehouse developed *authentic movement* which is still used today. Her approach is based on Jungian psychology (Karkou & Sanderson, 2006; Meekums et al., 2012; Whitehouse, 1979). Her main focus was to make the unconscious conscious again through movement. She highlighted that this can only be done in a supportive environment (Corteville, 2009). What makes her different from other dance movement therapists is that she has included both directive and non-directive styles, depending on the needs of the client. She would therefore provide some

movement ideas to help the client and believed that this would provide the client with a movement vocabulary and self-confidence (Levy, 1988).

Trudi Schoop started her career as a mime (Corteville, 2009; Levy, 1998). With her great sense of humour, she used a very playful and interactive approach with her clients. Her approach was based on the idea that the way an individual uses their body posture and muscles illustrates their mental and emotional state. She focussed on increasing body image and self-esteem (Levy, 1988). Important to note is that she believed that one needs to become aware of and understand the emotions before one can really explore them (Levy, 1988).

Therapist Meekums used a behaviourist approach together with attachment theory in her DMT work with mothers and children (Meekums, 1992; 2012).

2.4 Effect of Dance Movement on Different Populations

DMT is a therapy that can be adjusted to help people with different mental problems, needs, psychological and/or physical problems. The following demonstrates the wide range that DMT has been incorporated in.

Ho (2005) highlights that DMT has recently been used to help a variety of stress and anxiety problems associated with chronic disease and cancer. DMT is based on the belief that these body-based interventions can affect or alter an individual's psychological state. The most problematic part for cancer patients is the treatment procedure, for example the nausea, hair loss, fatigue and internal physical pain and suffering caused from the chemotherapy and radiography (Ho, 2005). Ho argues that DMT, which directly addresses the body, could be effective in the cancer patient's healing. Therefore, Ho (2005) argues that DMT could improve the quality of life, increase energy and also reduce fatigue in breast cancer patients.

Ho (2005) highlights that previous studies (Dibbel-Hope, 2000; Serlin, Claasen, Frances, & Angell, 2000) have demonstrated the effective use of DMT in creating an increased sense of hope, strength and social support with a decrease in stress, anxiety and fatigue. The efficacy of DMT on cancer patients is due to its beneficial effect on stress-related hormones. For this reason, DMT is effective in addressing stress-related physiology in cancer patients (Ho, 2005).

The aim of this study was to help cancer patients regain a sense of comfort and pleasure with their bodies as well as provide them the opportunity to express their feelings more openly (Ho, 2005). The challenge Ho (2005) faced with DMT with a Chinese population was their strong self-discipline and the need for immediate and practical solutions. As mentioned above, DMT is flexible and can be adjusted according to the client's needs. Ho (2005) adjusted the programme by first teaching dance and steps which subsequently evolved into more spontaneous movement and improvisation which DMT requires. Ho (2005) hypothesised that both self-esteem and stress would improve after the cancer patients have been exposed to a DMT programme. The study used the Perceived Stress Scale before and after each session to test the level of stress reduction. The Rosenberg Self-Esteem Scale was implemented to test whether there is an improvement in the self-esteem after exposure to the DMT programme.

The results of the DMT programme demonstrated that DMT was beneficial for Chinese cancer patients as it decreased perceived stress and resulted in a positive change in self-esteem. Furthermore, the study achieved both its aims by helping patients to express themselves more openly and enjoy their bodies (Ho, 2005). According to Ho (2005) the participants found that the DMT programme was helpful and that it enabled them to re-connect with their bodies. This is important as cancer traumatises the body and therefore the re-connection with the body helped them to regain a sense of control. The principle that DMT helps the client to gain control over their body is important to note for the current study.

Devereaux (2008) states that domestic violence affects not only the victim but also the family as a whole and therefore DMT should be applied on all members of the family in such a situation. Traditional treatment approaches for domestic violence focus on crisis intervention and on assisting with practical issues, for example safety, building social support and breaking secrecy. However, Devereaux (2008) states that when domestic violence occurs, the dynamics of the family shift and therefore need to be addressed because families may have a difficult time readjusting to a new environment. DMT can re-orientate families to adjust to new roles and shifts within the family. Domestic violence influences the environment and bodily safety of the individual and research has demonstrated that bodily work needs to be included in trauma therapy (to be discussed later) and therefore in DMT (Devereaux, 2008). Devereaux (2008) highlights that the 'primary caregiver serves as a psychobiological regulator for the developing

child' (Schoore, 2001; 2009; Devereaux, 2008, p58). In this sense, the caregiver helps the child to learn how to control their levels of arousal; both behavioural and physiological rhythms. The internal worlds between two people can resonate when their emotional energy is exchanged. Thus, the mother's good responses to the child's internal and external worlds will be observable to the child and the child will learn to mirror these responses by creating a similar response. In contrast, when there is misattunement between child and mother, the child becomes insecurely attached. Bowlby (1969) explains that a child forms either secure or insecure attachments, depending on early patterns of caregiving. If a child develops a secure attachment, they will feel secure enough to venture out to explore and feel comfortable enough to come back during presence of danger (Devereaux, 2009). However, children exposed to domestic violence usually do not have a safety presence in their home environment. Therefore, an insecure attachment could develop when domestic violence is present. Within the study, the researcher used DMT to help mother and child regulate their internal and external worlds. DMT is used within this context as it works mainly on a non-verbal level. Within this shared experience of mutual regulation, the initial bond between mother and child can develop (Devereaux, 2008). Devereaux (2008) states that attunement between child and mother is communication to the child that their facial expressions, bodily movements and needs are significant and observed. The results of the research demonstrated that DMT helped the family to communicate effectively because DMT improved their non-verbal communication. Furthermore, there was a significant increase in empathic attuned communication patterns.

2.5 The Benefits of Dance Movement Therapy

The following research studies demonstrate the psychological, physical and social benefits that DMT had on various populations with health or mental illnesses.

2.5.1 Psychological benefits of DMT

Research by Van der Merwe (2010) focuses on the effect of dance and movement on the perceived emotional wellbeing and self-esteem of a clinical population at Weskoppies Hospital in Pretoria, South Africa. Four in-patients participated in a two-week, twelve-session programme and were measured with pre- and post-tests for changes in emotional wellbeing and self-esteem. The limitation of the study, as in most other research regarding DMT (Ritter & Low, 1996), was

the small sample size. On account of the small sample size, Van der Merwe (2010) could not find statistical support for her hypothesis that dance and movement would lead to an increase in emotional wellbeing and self-esteem. The researcher wishes to address this issue in the study by ensuring a significant amount of participants to participate to ensure that the study could be generalisable and/or statistically significant.

Bräuninger's (2012) research provides evidence of the short-term effect (ten sessions) and long-term effect (after six months) of DMT on the improvement of quality of life. Participants of DMT often report that they feel energised and emotionally and physically more relaxed after a DMT session. The term 'quality of life' refers to the individual's perception of their position in life in terms of their own value system and culture in relation to their expectations and goals (Bräuninger, 2012). Bräuninger's (2012) aim was to provide evidence that DMT could potentially improve the quality of life of the research participants. The quality of life was tested by providing pre-test and post-test questionnaires to the research participants. The first hypothesis in Bräuninger's (2012) research, that DMT will improve quality of life from pre-test to post-test, was confirmed since physical and psychological health, social life and general life significantly had improved. Furthermore, there is evidence that DMT is better than non-treatment, hence the wait-listed group. There was a difference in the quality of life between the treatment group and the wait-listed group. Bräuninger (2012) did not only demonstrate the short-term effect of DMT, but also the long-term effect after the completion of DMT. The six-month follow-up test demonstrated that the outcome was better for the treatment group. An important objective of this research was to provide evidence that DMT improved many dimensions of quality of life in the participants of the treatment group compared to the wait-listed group. For this reason, the researcher believes that DMT will have some effect on the self-esteem and level of hostility of the sexually abused adolescents. The abovementioned study demonstrates that DMT can be effective in a short term, which will be more appropriate for the researcher's target population.

Another interesting DMT study focused on how this type of treatment could help young boys diagnosed with Attention Deficit Hyperactivity Disorder (ADHD). The aim of Grönlund, Reneck, and Weibull's (2005) study was to investigate the effect of DMT as an alternative treatment. They found that because ADHD produces lifelong symptoms and challenges, DMT

provides an excellent alternative treatment for these diagnosed children and/or adults. The parents of the diagnosed ADHD children in the study viewed and experienced DMT as beneficial and thus requested another DMT intervention; hence the effectiveness of DMT was evident to the parents, as indicated in their interviews with the researchers (Grönlund et al., 2005). Grönlund et al. (2005) justified DMT as an alternative group treatment by stating that children who have fun together share their problems more easily and also show compassion for each other. The subjects of this study were five- to seven-year-old boys diagnosed with ADHD according to the DSM-IV-TR. The results of the use of DMT as an alternative treatment indicated a reduction in the emotional and behavioural symptoms of the boys as well as a positive effect on their motor function. For this reason, DMT is a type of kinaesthetic coherence or motor coordination that demonstrates an effective treatment for young boys diagnosed with ADHD. One of the advantages of DMT is that it provides structure and discipline through the rules and boundaries the therapist establishes. Grönlund et al. (2005), like many other studies such as the one by Holyoake and Reyner (2005), established certain golden rules before each session. Grönlund (2005) further enhanced the safety and structure of the sessions by ensuring that the warm-up and stretching at the beginning and end of each session are the same every week. For this reason, the researcher also included golden rules and structure within each session with her participants.

A few studies investigated the effect of DMT on depression. These include Brooks and Stark (1989), Gunther & Hölter (2006), Heber (1993), Mala, Karkou, and Meekums (2012). Jeong, Hong, Lee, Park, Kim, and Suh (2005) assessed adolescents with mild depression for a twelve-week period to establish whether or not there was a change in psychological health and neuro-hormones when using DMT. The findings demonstrated that serotonin increased and dopamine decreased (Koch et al., 2007). For this reason, DMT was shown to be an effective intervention to improve the psychological health and neuro-hormones in adolescents with mild depression. In addition, Grönlund, Renck, and Vaboe (2006) also established that DMT caused a decline in depression under adolescent girls.

Wilbur et al. (2015) conducted a study to demonstrate the effect of dance on military personnel who returned from war. Veterans often have visible and invisible scars in their physical, psychological and social domains. Veterans who return home after the war are

sometimes diagnosed with serious mental illnesses. The aim of the study was to investigate whether non-verbal movement and creativity-based treatment would alleviate some of the symptoms that they experienced due to the mental illnesses. *Dance for Veterans* believe that the dance intervention programme should integrate physical components (stretching and breathing), psychological components (creativity and relaxation) as well as the social component (synchronised movement). The reason for this is that Wilbur et al. (2015) state that the outcomes and causes of illness are usually an interaction of physical factors, psychological traits and social-environmental factors. Therefore, they argue for a biopsychosocial approach to treat for veterans suffering from a mental or physical illness. *Dance for Veterans* was developed by professional dancers and mental healthcare providers, and is thus an interdisciplinary approach to healthcare. This dance programme for veterans included three strategies: somatic principles, social entrainment and collaborative dance making (Wilbur et al., 2015). The reason for this is that these strategies address psychological, physical and social wellbeing. *Dance for Veterans* focuses on recovery and therefore the programme addresses community integration and improved quality of life. Furthermore, the programme provides opportunity for social relationships and being part of a community (Wilbur et al., 2015).

2.5.2 Physical benefits of DMT

The qualitative study of Mills and Daniluk (2002) states that research rarely focuses on the sexually abused client's relationship with and experience of their own bodies. It is assumed that bodily trauma during the preverbal stages of development can only be accessed through physical expression (Mills & Daniluk, 2002). Mills and Daniluk (2002) explore the experience of women who have been subjected to sexual abuse as children. The findings of this study further support the notion that DMT could be beneficial to abused individuals. All the women reported that they felt disconnected from their bodies; they had no control over their bodies. Some participants even stated that their bodies felt like an enemy to them. Having experienced dance therapy for a couple of weeks, these women reported that they felt reconnected with their bodies; they therefore accepted and retook control over their bodies. Another important theme gathered from Mills and Daniluk's (2002) qualitative study is that dance creates a fun alternative to 'talk therapy'. It provides relief from the difficult emotions clients have to talk about during therapy. The women also reported that they gained a 'sense of freedom', which had been taken away

from them by the abuser. They regained their ability to move physically and emotionally and consequently felt in charge of their own bodies again (Mills & Daniluk, 2002).

Most research only focuses on the psychological benefits of DMT. It is only recently that research started to focus on the health benefits that dance can bring as well (Alpert, 2011). Alpert (2011) states that dance can be just as beneficial as swimming, jogging and biking. What sets dance apart is that it requires a total body workout and is also a fun physical activity. It is therefore likely that the physical activity will commence in the long term. Most individuals recognise the importance of physical activity for healthy living (e.g. treating cardiac conditions, reducing body fat, regaining balance), but consider most routine exercises to be boring. The health benefits are numerous and include the following: calorie burning, strengthening of muscle, an increase in endurance and balance and wellbeing (Alpert, 2011). Furthermore, dance increases blood flow to the brain, which allows for creativity and decreases depression and stress (Alpert, 2011). As mentioned above, DMT is mostly applied in groups. Participating in a group can therefore improve the socialisation of the individual.

Burgess, Grogan, & Burwitz (2005) investigated the effect of physical inactivity on body image satisfaction and physical self-perception of adolescent girls. Within this study they employed a six-week aerobic dance intervention to determine the effect of physical activity on the abovementioned variables. Increased physical activity led to a higher sense of self-worth as well as reduced coronary heart diseases, hypertension, obesity and depression (Burgess et al., 2005). Unfortunately, fewer children participate in physical activity than in the past, which in turn ripples through to adulthood. This implies that a disciplined attitude and administration of physical activity is vital towards developing a pattern of physical activity in one's daily life. Burgess et al. (2005) decided to focus this study on the non-exerciser adolescent girl to determine the effect that physical activity could have on their body image and physical self-perception. A non-exerciser individual is someone who does not regularly engage in physical activity. This research was inspired by the powerful cultural determinants that influence adolescent's idea of body image and physical appearance. Some cultures promote the idea of a 'slim body image' as ideal. This cultural picture of the ideal body size in turn influences their self-esteem and self-worth. Because physical activity increases the chance to achieve the 'ideal weight', Burgess et al. (2005) decided that physical activity would be best in investigating

whether the achievement of an ideal body weight through physical activity does in fact lead to body satisfaction. Furthermore, the researchers also promoted a positive feedback environment which promoted competence and motivation rather than competitiveness. Burgess et al. (2005) used The Body Attitudes Questionnaire (BAQ), The Children and Youth Physical Self-Perception Profile (CY-PSPP) and the Leisure Time Physical Activity Questionnaire (LYPAQ). The questionnaires were administered before, during and after the intervention and again six weeks after the intervention programme to determine if the changes were in fact due to the intervention programme. Burgess et al. (2005) found that the adolescent girls who participated in the aerobic dance intervention showed an enhancement in both body attitudes and physical self-perception. In addition, after the six weeks the questionnaires indicated that the enhancement was due to the aerobic dance intervention. This study demonstrates how dance can cause an increase in both physical level (reduced variables on feeling fat, physical self-worth and fitness) and psychological level (increased levels of attractiveness).

2.5.3 The social benefits of DMT

One of the major advantages of DMT is that it can be incorporated as a group or individual therapy; it can therefore be adjusted to the needs of the client. The type of movement in dance therapy can include rhythmic dance, improvisation group dances and creative and unconscious symbolic body movements (Mills & Daniluk, 2002).

DMT can be appropriate in many disciplines. The research of Holyoake and Reyner (2005) shows the effectiveness of a nurse-led dance group for young people to enable them to express themselves and build trust with one another. Holyoake and Reyner (2005) believe that society is much too passive and lacks fitness. This implies that we are out of touch with the physical aspects of our bodies. For this reason, Charlotte Reyner (2005) decided to start a therapeutic dance group at the adolescent unit for young people with mental illnesses. The necessity of such a therapeutic group ranged between physical exercise, socialising and being spontaneous and free. Certain group rules were established in order to ensure a safe and comfortable setting where emotions could be expressed freely. The young people were asked to come up with the group rules (Holyoake & Reyner, 2005). Holyoake and Reyner (2005) explain that it is not an easy task to start a therapeutic dance group with an adolescent population. It seemed that only once trust had been established did they have the courage to express their

feelings and be themselves and could DMT continue. For this reason, the researcher ensured that trust is established early in the programme in order for the DMT to be effective.

2.6 Music and Dance

DMT consists of a combination of light exercises, music and dance. Music forms an essential part of DMT intervention. According to Woodward, Sloth-Nielsen, and Mathiti (2007) the experience of music can increase an adolescent's sense of personal fulfilment and self-confidence. Furthermore, music allows for an auditory and rhythmic cue and can facilitate synchronisation (De Dreu, Van der Wilk, Poppe, Kwakkel, & Van Wegen, 2012). Important to note for this current study is that music has the ability to improve a child's self-esteem and has the potential to lower aggression (Choi, Lee, & Lee, 2008). De Dreu et al. (2012) state that the inclusion of music in DMT could distract the individual from difficult emotions which they can experience from past trauma.

2.7 Trauma, Body and the Brain

Victims of childhood sexual abuse (CSA) have a tendency towards hyperarousal and dissociation with their bodies (Brooke, 2007; Perry, Polard, Blakley, Baker, & Vigilante, 1995). Perry (1999) explains that it is important to understand how a traumatic experience alters brain functioning as it may impact the individual for several years to a lifetime. Furthermore, Perry et al. (1995) state that when a child experiences a traumatic event, it has an impact on the development of the brain. The human brain acts this way for survival. The child's brain develops in a hierarchical fashion, starting with the brainstem (which is responsible for respiratory and cardiovascular functioning) and developing to more complex systems, for example the limbic system and cortical areas (Perry et al., 1995). The child's brain is more malleable and receptive to environmental input and therefore very vulnerable to an experience. Whether the experience is good or bad, our brain will change due to its influence. During childhood development, different areas in the brain are responsible for different functions. Disruptions during these critical developmental periods, for example CSA, result in major abnormalities or deficits in neurodevelopment, which in turn compromise certain brain functioning like empathy, affect regulation and attachment (Schoore, 2009; Perry et al., 1995).

Trauma is an experience and it is therefore important to understand how a child transforms and processes the traumatic experience that could possibly alter the child's brain functioning on a molecular and systemic level (Perry et al., 1995). The more frequently our brain experiences an event through our five human senses, a certain pattern of neural activation develops. In other words, it forms a template through which input is filtered (Perry, 1999). The child or adult will respond in an immediate, uninterrupted fashion to a threat cue if this is the neural pattern that has developed.

As mentioned above, children have difficulty to describe the sexual abuse verbally. Perry (1999) confirms this and explains that a traumatic event is primarily communicated non-verbally. In other words, the way in which a traumatised child stores a traumatic experience is different from a child who is calm. Therefore, cognitive-based modes of treatment and 'talk-therapies' are not sufficient in this situation as it communicates to different processing centres and areas in the brain (Perry, 1999). Furthermore, Brooke (2007) states that trauma affects certain areas of the brain, especially the brainstem and structures involved in the limbic system that play a role in emotions and motivation. Therefore, movement therapies hold the promise of being successful as they work on levels within the brain which verbal therapies cannot reach.

Furthermore, Harris (2007) states that the psychophysiology of trauma demonstrates that victims of trauma both live and relive some traumatic experiences. When the victim relives the trauma, it is mostly on a bodily level. The body will react with elevated heart rate, respiration and images of the trauma. Van der Kolk (cited in Harris, 2007) postulates that when an individual re-experiences the trauma it produces intense emotions. The individual struggles to modulate these emotions, and experiences the traumatic event as happening again. The reason for this is that human bodies react to trauma by fight, flight or temporary paralysis (Harris, 2007). The body can continue to react in such a state long after the perceived danger. This reaction becomes automatic. Therefore, Van der Kolk (cited in Harris, 2007) states that therapy should focus on helping these victims to understand the automatic feedback loop that produces these bodily sensations.

Harris (2007) postulates that the mind, body and brain are interconnected. For the repair of the split in body and mind due to trauma, therapy should focus on a bodily level. DMT is a body-based intervention (Harris, 2007). DMT reintegrates the body and mind experiences and

creates opportunity for creative expression of the trauma. There is a definite place for creative processes in helping children cope and integrate the traumatic experience (Harris, 2007). Van der Kolk (cited in Harris, 2007) explains that the languages of creative arts are a useful medium when an individual has difficulty to explain their feelings verbally. Therefore, the researcher wants to emphasise that DMT provides this medium for children and adolescents to express their thoughts and feelings in a creative and non-judgemental manner.

2.8 Self-esteem and Level of Hostility

It is generally believed that having a positive view of oneself is beneficial (Swann, Chang-Schneider, & McClarty, 2007; Trzesniewski et al., 2006; Heatherton, Wyland, & Lopez, 2003). High self-esteem empowers people to handle challenges, negative feedback and generally feel good about themselves. In contrast, some studies suggest that self-esteem has no important impact on health and economic welfare (Baumeister, Campbell, Krueger, & Vohs, 2003; Boden, Fergusson, & Horwood, 2008; Krueger, Vohs, & Baumeister, 2008) and some suggest that a high self-esteem can have negative consequences (Baumeister, Smart, & Boden, 1996). Baumeister et al., (1996) states that people with an inflated and unstably high self-esteem may be maladaptive in that they may be prone and vulnerable to aggression and violence. Overall, research predicts that an appropriate high self-esteem has positive effects for physical, psychological health and overall quality of life (Orth et al., 2012; Trzesniewski et al., 2006; Boden, Fergusson, & Horwood, 2008; Maniglio, 2010; Heatherton et al., 2003).

Heatherton et al. (2003) explain that people with low self-esteem have a negative perception of the environment around them and subsequently view the world through a negative filter. Self-esteem is defined as the 'evaluative aspect of the self-concept that corresponds to an overall view of the self as worthy or unworthy' (Heatherton et al., 2003, p.220).

There are two approaches, namely sociometer theory and terror management theory, which explain why self-esteem is important. The sociometer theory explains that all humans have a fundamental need to belong (Heatherton et al., 2003; Leary & Baumeister, 2000; Leary, 2005). To be part of a social group has a few adaptive benefits. Heatherton et al. (2003) explain that human survival and reproduction depend on our belonging to a group. Evolution has proved that if a person belongs to a social group, they are more inclined to survive and subsequently

have the opportunity to reproduce (Heatherton et al., 2003; Leary, 2005). Self-esteem presents as a monitor of how desirable one would be to your social group. If you behave in a way that will increase your chance of being rejected by your social group, the individual will experience a reduction in self-esteem and this will subsequently motivate behaviour to increase or restore social inclusion (Heatherton, 2003; Leary, 2005). This theory explains why people are concerned with self-esteem.

Terror management theory explains that there is a need for people to identify with groups and cultural values as this establishment provides either literal immortality or symbolic immortality. Literal immortality is a religious group that believes in reincarnation and symbolic immortality involves being part of a group that will continue even after your death. This theory explains that people want to belong to a group to reduce their fear of death. Therefore, to exercise high self-esteem is a consequence of living up to these cultural values and subsequently provides a buffer against the fear of death.

Both theories demonstrate the important correlation between self-esteem and psychological adjustment. Therefore, self-esteem is a valued attitude to improve quality of life and therefore the researcher has included it in her study.

Maniglio (2010) states that CSA shows a concern for the development of adverse effects on the individual's general health later in life. The consequences of CSA impact on important health, social and occupational areas. The researcher realised that it is important to address the symptoms stemming from CSA as researchers (Draucker, Martsof, Roller, Knapik, Ross, & Stidham, 2011; Fergusson et al., 2008) proved that CSA causes psychological and somatic difficulties and problems. This study looked at the self-esteem of the victims of CSA. As mentioned above, a high self-esteem has positive effects on the overall wellbeing of the individual, which results in their ability to handle challenges and feedback (Orth, Robins, & Rober, 2011).

The literature reports a definite link between CSA, poor self-esteem and level of hostility (Finkelhor & Browne, 1985; Wilson, 2009). Therefore, the second variable used in this study is the level of hostility resulting from CSA. It is important to realise and intervene on the increased

level of hostility because of its subsequent and negative effect on interpersonal relationships, academic and physical functioning of the individual.

Snyder and Heinze (2005) demonstrated in their research that there is a post-traumatic stress disorder (PTSD) hostility relationship commonly found in victims of CSA. Not all adolescence and adults experience negative consequences from CSA, although most victims experience depression, anxiety and suicidal ideation (Snyder & Heinze, 2005). The most common consequence among victims of CSA is PTSD, which is in turn related to hostility. Together with this, they develop comorbid opposition defiant disorder and conduct disorder, in which Snyder and Heinze (2005) have observed hostility as consequence.

2.9 Sexual Abuse

CSA is a problem that occurs in all cultures and societies and at any socio-economic level and is therefore a universal problem (Dube et al., 2005; Pereda et al., 2009). It is associated with many psychological, social and emotional effects in both men and women (Draucker et al., 2011). As mentioned, no individual is more prone to abuse than another, although there are certain factors that could likely cause an outcome of sexual abuse. Hanson and Morton-Bourgon (2005) suggest that most of these aggressive and abusive parents or perpetrators had also experienced long-term abuse, and individuals who have been brought up with harsh corporal punishment in abusive homes may continue the abusive tradition with their family or significant other. Another contributing factor is stressful living conditions, such as poverty, overcrowding and unemployment, parental divorce as well as caregivers who are substance abusers and emotionally unavailable (Dube et al., 2005). This in itself is a definite problem in South Africa. Hanson and Morton-Bourgon (2005) state that these type of living conditions can contribute to aggressive and unlawful behaviour.

Various literature have proved that CSA causes certain psychological consequences which will most likely manifest in adolescents and adulthood (Ferguson et al., 2008; Fleming, Mullen, Sibthorpe, & Bammer, 1999; Pereda et al., 2009; Stewart, Sebastiani, Delgado, & López, 1996; Young, 1992). Some of these aversive, long-term consequences are depression, low self-esteem, anxiety, anti-social behaviours, powerlessness, worthlessness, suicide attempts and ideation, and hostility towards oneself and others (Fergusson et al., 2008). Noll (2008) states

that early abuse consequences usually have a ‘sleeper effect’ that will occur in adolescence or young adulthood. The ‘sleeper effect’ refers to issues with sexual identity, romantic relationships and sexual advances. The ‘sleeper effect’ to trauma affects an important developmental period in the individual’s life. This developmental period in adolescents prepares the adolescent for a good adaptation to continued health and wellbeing throughout adulthood (Fergusson et al., 2008; Noll, 2008). For this reason, the researcher focused on adolescents who experienced sexual abuse before it could possibly manifest in long-term consequences that are more difficult to relieve.

The research aim of Fergusson et al. (2008) was to demonstrate whether different types of childhood abuse, such as CSA and childhood physical abuse (CPA), have different and/or unique outcomes to long-term consequences to mental health. Fergusson et al. (2008) followed his research participants throughout their development and assessed them on a wide range of factors, ranging from social, family and mental health factors. Fergusson et al. (2008) found that the effects of CSA on long-term consequences are somewhat stronger and more consistent than CPA. In other words, CPA was not as strong an indicator as CSA of later mental health problems (Noll, 2008). For this reason, the researcher focused on CSA because it is a stronger indicator of later mental health problems. Nonetheless, the researcher does not wish to diminish the effect that CPA could have on children and subsequently their mental health.

As stated by Murphy (2008), it is difficult for abused and neglected children to verbally explain a traumatic experience. It appears that they have lost their ability to trust adults, their memories are too frightening to express verbally and/or memories can be repressed. This being the case, one can just imagine how difficult this could be for a child who has not yet fully developed a language, especially the language surrounding sexual abuse. DMT is a therapy that incorporates non-verbal expression and bodily expression. Therefore, this type of therapy makes it easier for children to express their traumatic experience.

2.10 Adolescent’s Development

Adolescence is a period of significant physical, social and psychological developmental changes (Christie & Viner, 2005). For this reason, working with adolescents as they experience stress regarding these changes can be a very difficult and sensitive period (Louw & Louw, 2007). Physical changes during adolescence have an impact on how view their bodily image. Louw and

Louw (2007) explain that, especially through the media, there is a perceived type of ideal body for both males and females to strive towards. Furthermore, Van der Merwe (2010) states that how the adolescent experiences their own body influences their perception of other people's bodies. Therefore, developing a healthy body image can increase understanding of others and subsequently lead to better social relations and interactions. Erfer and Ziv (2006) state that DMT allows the individual to focus on and respond to their own bodily sensations. This experience happens while interacting with others and helps to develop bodily integrity within a social setting.

Another important developmental change during the adolescence period is identity development and the establishment of autonomy. Erikson's theory of human development consists of eight consecutive stages from infancy to old age (Louw & Louw, 2007). Each stage consists of two developmental challenges. The progression to the next stage depends on the resolution of the crisis of the preceding stage (Louw & Louw, 2007; Sadock & Sadock, 2014). Louw and Louw (2007) state that for identity development to take place, adolescents need to know who they are, what is important to them and in which direction they would want their life to proceed. Erikson describes this period as an identity crisis (Sadock & Sadock, 2014). This stage is called identity versus role confusion; if the individual does not cope and/or adjust correctly to this stage, role confusion could take place (Sadock & Sadock, 2014). If feelings of confusion regarding identity develop, it could have long lasting effects on the adolescent's functioning and further development. Erikson believed that there are three components to having a sense of identity. The first is to have confidence in one's own character and secondly to have certainty about ones values and beliefs. Lastly, he believed that one should be confident in one's social identity (Newman & Newman, 2014, Peterson, 1996; Van der Merwe, 2010).

Sadock and Sadock (2014) state that adolescence is a continuous development from previous stages; if the psychological functioning of a child is disturbed it could subsequently affect the adolescents psychological functioning, which could continue into adulthood.

The abovementioned demonstrate the significant changes and challenges experienced in the adolescent. Therefore, the researcher decided that adolescence is a very critical and unique period for intervention to ensure healthy adjustment and development towards adulthood.

2.11 Conclusion

From the studies reviewed above, it is evident that dance movement therapy (DMT), under the broader term of art therapy, does in fact provide an efficient therapy across a wide range of mental illnesses and problems. The researcher could not find any research in which DMT had a negative effect on the individual. It was found that it is more beneficial than non-treatment. The literature demonstrated that group DMT and short-term DMT has an effect in the reduction of certain problems.

3. Methodology

3.1 Introduction

This methodology chapter will discuss the implemented research design, the characteristics of the participants, the data collection procedure and the data analysis technique. I will also deal with the threats of validity.

3.2 Hypothesis

There are two hypotheses on which this research is based. The first focusses on the possible effect of dance movement therapy on the self-esteem of sexually abused adolescents at the children's home. The second hypothesis focuses on the possible effect of dance movement therapy on the state of hostility of sexually abused adolescents at the children's home.

3.3 Research Design and Strategy

This study utilised a quantitative research design. Quantitative research measures variables, usually in the form of numerical values that allows for interpretation and evaluation of the results (Gravetter & Forzano, 2009). Quantitative research allows for the assignment of quantities to certain variables to determine whether the manipulation of certain variables resulted in significant changes (Gravetter & Forzano, 2009). Since this research aims to determine significant changes in variables through the use of statistical techniques to analyse the data and determine the effectiveness of the treatment programme and therefore is well suited for the application of this design.

3.3.1 Introduction to quasi-experimental research strategy

Gravetter and Forzano (2009) state that there are three possible research strategies to use when comparing two or more sets of scores and those are: experimental, quasi-experimental and non-experimental research strategy. The decision on what research strategy to choose depends on the hypotheses and the researcher's ability to control and manipulate the variables (Gravetter & Forzano, 2009).

The research will be conducted through the use of a quasi-experimental research design. Quasi-experimental research strategy is akin to an experimental research strategy in that it uses

some of its rigour and control, however quasi-experimental cannot rule out all confounding variables and therefore no definite cause-and-effect relationship can be established. Quasi-experimental research strategy is an intermediate between a true experiment and non-experimental research strategy as it draws a stronger conclusion between variables as would be possible with a non-experimental strategy but not as strong as would be possible for a true experiment (Jackson, 2012). Quasi-experimental research design does attempt to limit threats to internal validity which distinguishes it from a non-experimental research strategy.

This research strategy tries to establish a cause-and-effect relationship by showing that change in dependent variable occurred after the administration of the independent variable by limiting as much threats to validity as possible. For this reason, quasi-experimental research strategy uses certain tactics to compensate for the above mentioned phenomena (Mitchell & Jolley, 2010). This includes the researcher to identify specific threats to validity and takes certain action to minimize the effect of the threat. Secondly, the researcher rule out certain threats by arguing the reason for not affecting the outcome, therefore eliminates it as a threat. If the possibility of various explanations exists then quasi-experimental strategy can make use of the law of parsimony. The law of parsimony is ‘the assumption that the explanation that is simplest, most straightforward, and makes the fewest assumptions is most likely (Mitchell & Jolley, 2010, p539). This will be argued in validity.

Quasi-experimental research is usually performed in more naturalistic settings than in laboratories, therefore mostly with human subjects within their natural environment. It is expected that not all variables can be controlled when working with human behaviour. This will create confounding variables within the research. This research is performed within the natural setting of the participants. The dance movement therapy programme is administered at their children’s home and at a time that is convenient for the group and children’s home.

3.3.2 Type of quasi-experimental design used in this study

The research will make use of a between-subject design. Within this design participants are assigned to different groups, the control group and experimental group. The control group is the group that represents the baseline of scores and the experimental group receives the independent variable (Jackson, 2012). Within this research the independent variable refers to the

dance movement therapy programme and the dependent variables refers to self-esteem and level of hostility.

The main reason for implementing between-subjects design is that it allows the researcher to test the difference on the dependent variable for the control group and experimental group, as this design provides a set of scores for each group (Gravetter & Forzano, 2009; Levin & Fox, 2011). Easterby-Smith, Thorpe, & Jackson (2012) state that when the independent variable (dance movement therapy programme) is employed the researcher needs to ensure that the manipulation is valid, which entails a real difference in the independent variable between the two groups. In this research, only the experimental group will receive the dance movement therapy programme and the control group will not receive the treatment.

This being the case, the researcher will incorporate the non-equivalent control group pre-test/post-test design (Gravetter & Forzano, 2009; Jackson, 2012; Leedy & Ormrod, 2013). The non-equivalent control group pre-test/post-test design allows for the experimental group and control group to undergo a pre-test and post-test by which their performance on the dependent variable (self-esteem and level of hostility) are measured (Jackson, 2010; Mitchell & Jolley, 2010). Easterby-Smith (2012) and Leedy & Ormrod, (2013) state that this design allows assessing whether changes occurred in the dependent variables after the implementation of the independent variable (dance movement therapy programme). In other words, this design illustrates whether there were changes in self-esteem or level of hostility in both the control group and experimental group after the implementation of the dance movement therapy programme. This is done by comparing scores of the pre-test with scores of the post-test (Jackson, 2012). Figure 1 demonstrates the research process explained above.

Before Treatment

During Treatment

After Treatment

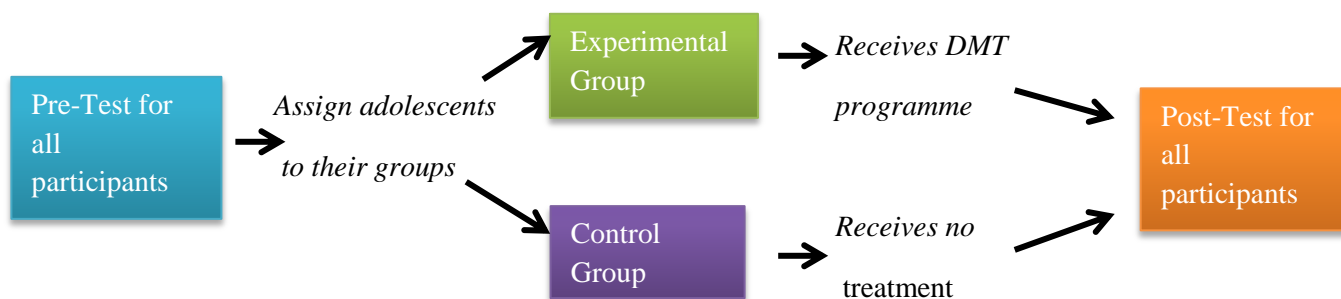


Figure 1: Diagram of the research design

3.4 Validity Issues

It is important to address the validity of this research study as there are variables that raise doubts regarding the results and interpretation (Gravetter & Forzano, 2009). Validity in research refers to the truth of the research. In other words, how accurate the research answered the questions posed. If there are any additional factors that raises suspicion regarding the outcome of the research it is regarded as a threat to validity (Gravetter & Forzano, 2009).

Within this research the researcher anticipated certain threats to validity and tried to minimalize some of the treats. It is impossible to eliminate all variables and therefore the researcher used her own judgement to decide on the most important threats to eliminate. The following are threats to validity that will be addressed: internal validity, external validity, construct validity and ecological validity.

3.4.1 Internal validity

Internal validity refers to the ability of the research to demonstrate that the change in behaviour was caused by the application of the treatment only (Mitchell & Jolley, 2010). Threats to internal validity play a role when there is doubt regarding other variables that could have influenced the outcome of the research and thus create an alternative explanation (Gravetter & Forzano, 2009).

There are always additional variables that are part of a research study and they are called extraneous variables. It is especially difficult to control extraneous variables in human behaviour

and when these variables influence the outcome of the research or provide an additional explanation it is referred to as confounding variables (Gravetter & Forzano, 2009). The ideal would be to control all confounding variables in order to establish a definite causal relationship between dance movement therapy programme and level of hostility and self-esteem.

The researcher realises that no two groups can be the same, therefore there will be individual differences between the participants (Mitchell & Jolley, 2010). The participants differ in age, gender, race and intelligence level between the control - and experimental group. The researcher used random assignment to try and counter the effect of individual differences. Although, it is clear that there are still differences between the control group and experimental group in terms of age, gender, race and intelligence level. This could not be eliminated but have been taken into account.

The researcher could not control certain time-related threats. The first is history effect. This refers to any other events outside of the treatment that may affect the outcome of the research (Gravetter & Forzano, 2009). Some of the participants in the research are part of individual therapy and the increase or decrease in their level of self-esteem and level of hostility may have been due to individual therapy and not dance movement therapy. Secondly, maturation is another factor that needs to be addressed. Maturation refers to the improvement of certain variables of the participants during the research study but the reason for this is due to natural development and growth (Gravetter & Forzano, 2009). The participants are in a developmental period, adolescence, where development and growth is apparent. Although, the treatment programme is only six weeks and therefore the effect will be minimal. Lastly, testing effect could have a threat on the internal validity of the study as the same measurement instrument was used in the pre-test and post-test. Gravetter & Forzano (2009) state that pre-test might affect the responses on the post-test. The outcome of the study could be due to the familiarity of the measurements and therefore an additional explanation can be given.

3.4.2 External validity

According to Gravetter and Forzano (2009) external validity refers to “the extent to which we can generalize the results of a research study to people, settings, times, measures, and characteristics other than those used in that study” (p. 168). In other words, the ability to

generalize the study is the main thrust with external validity. There are some limits in this research study that prevents it from being generalized.

The research was conducted with a relatively small sample and a specific population (the children's home). Further research will be necessary to determine if this study could be generalized to other population groups (Mitchell & Jolley, 2010).

Another threat to external validity is selection bias. The sampling procedure used in this research was firstly convenience sampling and thereafter random sampling. Therefore the sampling procedure favoured some individuals above others. The sample used does not accurately reflect the population and could thus be a threat to external validity as it could not be generalized. The aim of the study was to determine the effectiveness of the dance movement therapy programme and therefore not to generalize the study.

3.4.3 Ecological validity

Ecological validity of research is a means of checking the adequacy of the research by asking whether the effect of the results is representative of what happens in everyday life (Brewer, 2000). The researcher had to ask whether the circumstances of the research are typical of the larger population, thus is it typical to occur in the world as it is. It is therefore important to understand that the situations (for example the living conditions) within a children's home are different from children that are living with their biological parents. The researcher concludes that the ecological validity of the sample is fairly poor and therefore the inferences drawn from the results considered the representativeness. Although when considering the dance movement therapy programme that was specifically developed for this population, the ecological validity is good.

3.4.4 Construct validity

Construct validity refers to the extent which the measurements chosen for the research study measures the variables identified for the study (Shadish, Cook, & Campbell, 2002; Gravetter & Forzano, 2009; Mitchell & Jolley, 2010). The way in which the variables, self-esteem and hostility, is defined is very important to consider in construct validity. In chapter one,

self-esteem and level of hostility are defined and if inferences are based on the operationalized definitions then both variables are accurately measured.

3.4.5 Conclusion

Gravetter and Forzano (2009) explained that in research there is an attempt to explain the near truth. Unfortunately with human behaviour this is not always possible, confounding variables play a role in the outcome of the research. The researcher tried to minimize the threats to validity. The difficulty with validity is that an increase in one type of validity may inevitably lead to a decrease in other validities. For example, to increase the internal validity to make the sample representative could subsequently cause the study not to be generalizable. Therefore, the decision on whether to increase internal validity or external validity depends on the aim of the research and researcher. The researcher focussed on increasing her internal validity.

3.5 Measurement Instrument

The researcher made use of the Rosenberg Self-Esteem Scale to measure the adolescents' self-esteem (Appendix A). The Rosenberg Self-Esteem Scale is a self-report and standardised measure. (Rosenberg, 1965; Marsh, Scalas, & Nagengast, 2010; Schmitt & Allik, 2005). It is mostly administered in the field of social science research (Sinclair, Blais, Gansler, Sandberg, Bistis, & LoCicero, 2010; Schmitt & Allik, 2005). According to Schmitt and Allik (2005) the scale gained its popularity due to its face validity, simplicity and it being a very quick assessment.

The Rosenberg Self-Esteem Scale is the most widely used uni-dimensional scale to measure global self-esteem. In other words, the scale measures global self-esteem as a one factor based on a mixture of 5 positively worded items and five negatively worded items (Marsh et al., 2010). Although, some studies (Marsh et al., 2010) are trying to determine whether the scale taps into more than one dimension, thus bi-dimensional.

Rosenberg (1965) defines self-esteem as “one’s overall sense of worth as an individual” (p. 57). It’s a measure that looks at how an individual compares themselves to others. Generally there is an assumption in psychology that the higher the score on self-esteem the more beneficial

it is and in contrasts the lower the score, the more detrimental it is to the individual. Recently, research has focussed on both the cost and benefit of having a high self-esteem (Sinclair et al., 2010). High self-esteem is generally linked to achieving goals, but it is argued that high self-esteem can cost you in terms of the increase in competitiveness and loss of relatedness (Sinclair et al., 2010).

There is some criticism regarding the use of Rosenberg Self-Esteem Scale. Schmitt and Allik (2005) point out that because of its popularity and simplicity it's not been through rigorous psychometric evaluation, especially to determine the validity and reliability across different cultures, gender and age. Furthermore, there is no underlying theoretical framework for the particular inclusion of certain items in the scale, thus no rationale behind the inclusion criteria (Schmitt & Allik, 2005; Sinclair et al., 2010). It has also been pointed out that the validation of the scale has only been done on a very limited population, for example university students (Butler & Gasson, 2006). Nevertheless, the measurement demonstrates structural and predictive validity and shows internal consistency and good test-retest reliability (Schmitt & Allik, 2005).

Because the Rosenberg Self-Esteem Scale has demonstrated to be effective in application in various groups, especially university and adolescents groups (Rosenberg, 1965; Schmitt & Allik, 2005) it is well suited for application for purposes of this particular study. Rosenberg (1965) developed the scale for high school students (adolescents). It is apt to consider that Rosenberg Self-Esteem Scale has been used in other studies in South Africa (Bornman, 1999; Dirks, 1998; Van der Merwe, 2010).

The scale has been found to be reliable with a correlation of 0.80 (Rosenberg, 1965). Rosenberg (1965) explained that the internal consistency ranges from 0.77 to 0.88 and test-retest ranges from 0.82 to 0.85. The measurement also demonstrates validity in that it measures what it is supposed to measure (Rosenberg, 1965).

The Rosenberg Self-Esteem Scale consists out of 10 structured items that have been translated into various languages. The Rosenberg Self-Esteem Scale makes use of a 4-point Likert Scale ranging from totally agree to totally disagree. Higher scores on scale imply high self-esteem and lower scores indicate low self-esteem (Martin-Albo, Núñez, Navarro, & Grijalvo, 2007).

For the level of hostility measurement, the researcher will make use of the Cook-Medley Hostility Scale (Barefoot, Dodge, Peterson, Dahlstrom, & Williams, 1989). The Cook-Medley Hostility Scale is a widely used 50-item self-report measure that assesses cognitive, affective and behavioural aspects of hostility (Ronan, Dreer, Maurelli, Ronan, & Gerhart, 2013; Samuelson, Carmody, Kabat-Zinn, & Bratt, 2007). The scale was developed by selecting certain items of the The Minnesota Multiphasic Personality Inventory (MMPI) by teachers who identified themselves as being hostile (Strong, Kahler, Greene, & Schinka, 2005)

According to Ronan et al. (2013) high scores on the scale is associated with resentment, mistrust towards others and bitterness. Strong et al., (2005) define hostility as a “trait featuring the presence of cynical attitudes, mistrust of others and irritability and tendency toward anger expression” (p. 22). Additionally the scale has shown to indicate relations to health outcomes (Strong et al., 2005). In other words, an increase in hostility can be associated with an increase in certain unfortunate health habits, like increase in smoking (Calhoun, Bosworth, Siegler, & Bastian, 2001; Musante, Treiber, Davis, Strong, & Levy, 1992) and increase in alcohol intake (Leiker & Hailey, 1988).

For the purpose of the study the researcher is interested in only the total score of the level of hostility and the Cook-Medley Hostility Scale has demonstrated to be effective in this regard (Samuelson et al., 2007; Strong et al., 2005). Chen and Paterson (2006) states that the scale has good internal consistency.

Although the scale was developed for participants over eighteen years old, some studies have successfully utilized the scale for adolescent population (Chen & Paterson, 2006). Due to limited resources available, the Cook-Medley Hostility Scale was available for the researcher. Three of the items were omitted in the scale because of their inappropriateness for the children’s home. As mentioned above, the researcher is only interested in the total level of hostility and whether it increased or decreased because of the dance movement intervention programme. Therefore, the omission of few items will not affect the results. Further, some of the items needed to be adapted in order for the adolescent participant to fully understand the questions posed.

Both the measurements were translated into Afrikaans using the cross-cultural translation procedure. The process adopted included that the researcher who is conversant in Afrikaans and English translated the items from the original language (English) into Afrikaans. Thereafter, another bilingual person re-translated the items back to its original language.

The participants, both the control group and experimental group, have been required to complete the Cook-Medley Hostility Scale and Rosenberg Self-Esteem Scale prior to the intervention programme and thereafter. The reason for this was to determine whether the experimental group showed a difference in their scores on self-esteem and level of hostility after the six-week intervention programme. Further, the researcher looked at the control group to determine whether their scores showed an improvement in level of hostility and self-esteem because they did not receive the intervention programme.

Each adolescent have been given a specific period of time to complete both of the questionnaire's in a quiet room, together with the researcher and assistant to assist with uncertainties.

3.6 Sampling

The target population for this study was the adolescent population at the children's home. The researcher, together with the social worker selected 18 adolescents that satisfied the criteria. The researcher understands that a larger sample would have been more representative according to the law of large numbers (Gravetter & Forzano, 2009). Unfortunately, due to limited resources the researcher could only access a certain number of participants that were available at the children's home. Ideally a larger number would have been more beneficial and representative of the larger population. Furthermore, based on prior experience, the researcher selected this amount of participants as it allowed the therapist to give the necessary attention to each participant in order to enhance the prospects of a successful intervention.

The inclusion criteria required the participant to have been a victim of previous sexual abuse. Further, the participants needed to have been between the ages of 11 and 18. The researcher understood there are different variables and circumstances surrounding abuse, for example rape versus molestation, the nature of the relationship and the duration and severity of

the abuse. The rationale for a broader inclusion of sexual abuse was to ensure that the researcher had enough participants to ensure a viable study.

The researcher arranged to conduct two intervention periods of the dance movement treatment programme. In other words, the first group were treated as the experimental group and received the treatment and thereafter the control group also participated in the dance movement treatment programme. Unfortunately there were circumstances that prevented the implementation of the second dance movement therapy programme for the control group. In other words, only the experimental group underwent the six-weeks dance movement therapy programme.

The participants' for the study were selected by making use of convenience sampling. Convenience sampling is based on the availability and willingness of the participants (Gravetter & Forzano, 2009). The reason for the implementation of this sampling technique was that commitment to the programme was imperative. The adolescents at the children's home already had other activities scheduled and therefore willingness to commit to the programme from the participants side was vital. The researcher received a list from the social workers at the children's home with all the names of the possible participants.

The researcher understands that this could be viewed as a weaker form of sampling as this sampling method does not guarantee representivity and could possibly be biased. Gravetter and Forzano (2009) argued that the following techniques were implemented to correct the flaws: Firstly, the researcher should try to make the sample as representative and unbiased as possible by implementing a systematic sampling for the division of the two groups, the control group and experimental group. Secondly, the researcher will provide a clear description of what was done to select the participants.

As mentioned above, after the selection of a sample population at the children's home the researcher made use of systematic sampling to divide the group into an experimental and control group. The main thrust of this sampling method is that the researcher picks a random starting point. Thereafter, every second name will be included within the experimental group. The rest will be assigned to the control group (Gravetter & Forzano, 2009). The participation in this study

is on a volunteer basis and those adolescents who give assent and who signed the informed consent will be divided into either an experimental group or control group.

Gravetter and Forzano (2009) state that sampling consists of a few steps. The first step is to clarify what population will be used, from which the sample will be drawn. Given the position of the researcher, as student with restricted funds and access to different sections of the population, she will make use of the adolescent population at the children's home that have been subjected to previous sexual abuse. The social worker helped with identifying possible participants for the study. The second step will be to list all the possible participants in the population, which consists of the willing applicants at the children's home and each will be allocated a number (Gravetter & Forzano, 2009). The third and last step will be to use systematic sampling technique. The researcher will randomly select the first name and continue by selecting every second participant on the list. The researcher will select eight individuals for the first intervention programme (experimental group), and the remaining ten participants will be assigned to the control group.

3.7 Participant Characteristics

The adolescents that participated in the study are all residents at the children's home. There were 18 adolescents that participated in this study. The sample consisted of five boys and thirteen girls. The ages of the participants ranged between eleven and eighteen years and the mean age of the participants were 13.5. Five of the participants were black and thirteen were white.

The researcher planned to engage ten participants in the experimental group, although only eight participated fully in the dance movement therapy programme. The remaining ten participants were grouped into the control group. The experimental group consisted out of two boys and six girls with the mean age being 13. The experimental group consisted of four black and four white participants.

The participants in both the experimental and control group were previous victims of sexual abuse. The social worker at the children's home compiled a list with details of all the possible participants. She used her knowledge regarding the history of the adolescents and evidence from the adolescent's file.

Sexual abuse within this research refers to “Any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed against women’s sexuality, using coercion (i.e. psychological intimidation, physical force or threats of harm), by a person, regardless of relationship to the victim, in any setting, including, but not limited to, home and work” (Krug et al., 2002, p.149). All of the participants in the research fitted into the above category of sexual abuse. In other words, within their past they have been subjected to some kind of sexual abuse. The researcher understood and took into account that there are different variables and circumstances surrounding abuse, for example rape versus molestation, the nature of the relationship and the duration and severity of the abuse. Unfortunately, due to limited resources and participants available, the researcher needed to use the broader definition of sexual to ensure sufficient amount of participation.

The control group consisted out of ten participants of which three were boys and seven were girls. Their mean age was 14.1. There were nine white and one black participants. The control group also consisted of adolescents that were subjected to previous sexual abuse (as explained above).

3.8 Data Collection Procedure

The variables involved within the study are the following: independent variable (dance movement therapy), dependent variable (self-esteem and state of hostility), pre-test (to assess the initial self-esteem and state of hostility) and post-test (to assess whether the dance movement therapy made a difference). This selection had as basis the researcher’s observation and practical experience at the children’s home and concluded that both self-esteem and hostility needed to be addressed. The data was collected at the children’s home. The researcher made use of the adolescents at the children’s home. Arrangements were made with the social workers at the children’s home. The social workers assisted with the identification and collection of adolescents at the children’s home.

Within a group format the researcher discussed the aims of the intervention programme to the social workers, house mothers and possible participants at the children’s home. Opportunity was provided for questions and allowance to raise concerns regarding the treatment programme. Thereafter, the participants were given an assent form to complete. The participants’

house mother assisted in this process and ensured that the participant understood the assent form. The house mother and social worker completed the consent form with each participant. Both the consent form and assent form is available in Appendix C. Both the experimental and control group were required to complete the consent and assent form.

After acquiring the informed consent from the social workers and assent from the participants, the intervention programme began. A large room was used for the adolescents to have enough room to express themselves freely. Payne (1993) state that a structured and safe environment is necessary for the success of the dance movement therapy. The researcher realised that it was important to implement strict rules that all participants were required to adhere to. The researcher together with the group established the ‘golden rules’ within the first session. The researcher ensured that the rules were co-created by the participants. The reason for this structure was to creates boundaries and the adolescents to know what the consequences were if the rules were not obeyed (Chaiklin & Wengrower, 2009). All participants signed, in a creative way next to the ‘golden rules’.

The researcher utilised the Rosenberg Self-Esteem Scale in measuring the adolescent’s self-esteem and the Cook-Medley Hostility Scale in measuring their state of hostility. The questionnaires are available in Appendix B. Both questionnaires were completed in a group format for both the control group and experimental group. The researcher and assistant explained the instructions to the group and allowed opportunity for questions. Thereafter, the researcher read through each question explaining the content of the question to the participants in order to ensure the participants understood the question. It took 60 minutes to complete both questionnaires.

Thereafter, the eight participants that were selected in the experimental group participated in the dance movement therapy programme. The intervention programme took place over six weeks and comprised a 60 minute session per week. Most of the participants participated in each session. The average of the participation was 73%.

After the six week period, the participants in the experimental group and control group again completed the Rosenberg Self-Esteem Scale and Cook-Medley Hostility Scale. The researcher again assisted the participants in the completion of the questionnaires, as was done

earlier. The participants and social workers that were interested were debriefed regarding the results and the outcome of the intervention programme.

3.9 Data Analysis

The first part of analysing the data was to employ descriptive statistics to describe the demographic characteristics of the sample. Thereafter, inferential statistics were administered to determine whether there was a significant difference between the pre-test and post-test for both the experimental and control group.

As mentioned above, the researcher used convenience sampling to gather the initial sample. Thereafter, the researcher made use of random sampling to divide the group in an experimental- and control group. However, the assumptions for random selection were not met. In addition, the demographic characteristics for the two groups are not equally distributed and could affect the results. Therefore the researcher could not administer parametric test.

The alternatives to parametric tests are nonparametric tests. The researcher administered nonparametric tests. The reason for this is that nonparametric tests accommodate small samples, they require ordinal or categorical level of measurement and these tests do not require a normally distributed population, thus they accept irregular or non-normal distributions. This research met the criteria above. A wide variety of nonparametric tests are available and therefore it is important to consider the assumptions of each of the tests to determine its efficacy to the data being examined.

Non-parametric tests “overcome their problem of the shape of the distribution of the scores by ranking the data” (Field, 2013, p. 214). Thereafter, the analysis of the results of the research is administered on the ranks rather than on the original data. By ranking the data it allows the non-parametric test to avoid the impact of the outliers.

The Mann-Whitney U test and Wilcoxon signed rank test was selected as the most appropriate non-parametric test for the data. The Mann-Whitney U test determines whether there were a significant difference in the gain scores from the dependent variable (self-esteem and level of hostility) for the two groups, experimental group and control group. With this gain score approach the pre-test and post-test median scores are subtracted from one another for both the

groups, experimental and control group. The gain scores from each group are then compared to determine if there is a significant difference. Further Siegel (1956) state that the Mann-Whitney U test is an effective test when there are two independent groups to compare. Table 1 contains the assumptions of the Mann-Whitney U test (Pett, 1997). The research met the following assumptions.

Table 1 Assumptions for Mann-Whitney U test (Pett, 1997)

Number	Assumptions
1	When there are two or more groups being compared the level of measurement should be ordinal
2	The independent variable, which is dance movement therapy, has to be two mutually exclusive groups. In other words there is no participant that appears more than once in the data set.
3	“The population distribution of the dependent variable for the two independent groups have similar unspecified shape but with a possible difference in measures of central tendency” (Pett, 1997, p. 173)

As mentioned above, the sample is small and therefore the exact significance (one-tailed) was used instead of the asymptotic significance. Field (2013) stated that when a sample is small (anything under 50) it is advised to use the exact significance. Further Field (2013) suggested, the effect size (r) should also be calculated (large effect size > 0.5 , medium effect size is $0.3-0.5$ and small effect size is < 0.3):

$$r = \frac{z}{\sqrt{N}}$$

The Wilcoxon signed rank test was used to determine whether the size of the difference is significant between the pre-test and post-test. The test is very sensitive for small samples and requires ordinal data (Pett, 1997). The Wilcoxon signed rank test also makes use of ranks. Table 2 explains the assumptions of the Wilcoxon signed rank test and was met by the research (Pett, 1997):

Table 2 Assumptions for Wilcoxon signed-rank test (Pett, 1997)

Number	Assumptions
1	It is assumed that the data being measured should be a test-retest measure
2	It is assumed that the data being measured should be a test-retest measure
3	The distribution of the difference scores of the population median is symmetric.

Field (2013) suggested that the effect size should also be calculated as in the case with Mann-Whitney U test. In addition the exact significant (p) was used because of the small sample size.

3.10 Ethical Considerations

The researcher has obtained ethical clearance from the children’s home, the psychology department and the ethical committee of the Humanities Faculty at the University of Pretoria. It was the researcher’s responsibility to ensure that the collection of data and analysis of the study will adhere to ethical guidelines as provided by the Health Professional Act (56 of 1974), Annexure 12.

Further, the research that the researcher conducted and the intervention with the themes used in the data collection is based on previous established scientific research (Corteville, 2009; Lewy, 1988; Van de Merwe, 2010) If some of the themes in the treatment programme were not used exactly like in previous established research it was minimally adjusted to fit the present study.

The researcher will ensure that the human dignity and worth of the subjects are protected throughout the study (Jackson, 2009). The participant’s viewpoint attitudes and beliefs were respected throughout the research study. To ensure their right and dignity is protected the researcher established, with the participants ‘golden rules’ that must be adhered to at all times. This being said, it was made clear at the beginning of the dance movement therapy programme that the participants have the option to withdraw at any time they wish. This was further

elaborated in in the assent and consent form that they and their caregiver signed. The participants and caregiver were invited to attend the debriefing session.

The researcher may not have achieved the results from the dance movement therapy programme that she hoped for regarding increased self-esteem and decreased levels of hostility, nevertheless no harm was caused by participating within the six-weeks dance movement therapy programme, physically and/or psychologically. The researcher performed a thorough warm-up and cool-down exercises in each session to prevent physical injuries. As dance is found to be a physical exercise, it has been proven that physical exercise decreases risk for physical illness, for example cancer, cardiovascular diseases and diabetes as well as the overall mental health of adolescents (Bonhauser, et al., 2005).

As mentioned previously, an informed consent form was given to each house mother and social worker to read and sign. The informed consent document includes comprehensive information about the purpose and nature of the study, as well as an understanding of the possible benefits (Jackson, 2009). Within the informed consent, the researcher stated that participation is voluntary and that the participant may withdraw at any stage. Further, the participants and their house mother were assured of their anonymity and confidentiality of the data gathered at all times.

Both the Rosenberg Self-Esteem Scale and Cook-Medley Hostility Scale were translated into Afrikaans to ensure no participants are being treated in a discriminatory manner. The measurements were given in both Afrikaans and English. As mentioned above, the cross-cultural translation procedure was used to translate the measurements from English to Afrikaans. The researcher had an assistant that was available to explain the instructions and questions in the questionnaires. The measurements used were not created for a South African population. Although, previous studies have demonstrated their reliability and validity for adolescent use (Lin et al., 2008; Patchin & Hinduja, 2010; Rosenberg, 1965). The researcher did take into consideration the cultural differences might influence the results of the study.

The most important ethical consideration for the researcher was to ensure to create a warm, empathic and sensitive environment where the adolescent felt safe to explore emotions. The researcher created the 'golden rules' together with the participants to ensure a safe

environment to dance and explore emotions. Further, the researcher used empathic and non-judgmental responses during the six-week dance movement therapy programme.

It is important to note, that the researcher has 14 years of dance experience on national and international level as well as performed dance movement classes for a group at Itsoseng clinic in 2013. The researcher will make use of a graduate in dance to help with the structured dance and movements. Further, the researcher will use her knowledge and experience in therapy in during the dance movement therapy programme.

3.11 Conclusion

The study could not control all extraneous variables and limits within the study. Nevertheless, this research study is still supportive in guiding future research by considering the benefits and limitations of the chosen methodology.

4. Treatment Programme

4.1 Introduction

This chapter will explain the dance movement therapy programme as implemented with the adolescents at the children's home. Firstly, this chapter will provide an overview of the dance movement therapy programme and thereafter an adequate description of every session with the particular theme will be provided. Lastly, the structured part of the dance movement therapy programme will be discussed and motivated.

Payne (1993) explained that dance movement therapy is not dependent on language skills and movement can be seen as a vehicle for expression of emotions. The aim of dance movement therapy is not to correct body movement but to provide a platform for the participant to explore certain emotions and subsequently to better understand the self. This was foremost the mind of the researcher during the administration of the dance movement therapy programme.

The dance movement therapy programme consisted of six sessions over six weeks. The participants participated in one session a week which lasted 60 minutes. The first 40 minutes were dedicated to the theme for the day and the last 20 minutes was used to learn the structured dance. The researcher used a dance graduate student to equip her with movements for the themes and structured dance.

This dance movement therapy programme was for most part structured but was intermingled with some unstructured sessions. The structure of the sessions has created routine over the six-weeks which in turn provided a safe and comfortable environment. The unstructured parts were created by the themes that were explored each week. That being said, Kaban (2003) stated that the therapist should be flexible within the programme as the participants are children that are continuously developing and therefore need to be able to adapt to new demands. Within this dance movement therapy programme, the researcher needed to consider the population that was used and therefore needed to include more structure and verbalization into the session (Payne, 1993).

The dance movement therapy programme was administered in a group format. Yalom and Leszcz (2005) stated that groups allow an opportunity for the participants to form

relationships and subsequently enhance their social skills. Payne (1993) and Yalom and Leszcz (2005) state that using a group for dance movement therapy allows the other members in the group to give feedback and nurture feelings. This according to the researcher, in turn will create an environment of trust.

Each dance movement therapy session started with a warm-up session and ended with a cool-down session at the end of the day. Previous research has demonstrated the benefits of incorporating both these sessions (Carter, 2004; Kaban, 2003; Jeppe, 2006). The warm-up and cool-down session were approximately five to ten minutes. The warm-up allowed the participants to stretch and warm-up the muscles to prevent injuries. The warm-up was structured in such a way as to get the participants to be in the here-and-know and rid themselves from external stressors. The warm-up created an environment to ensure that the participants were present, relaxed and motivated for the dance movement therapy sessions. The researcher used breathing exercises to aid the participants in relaxation as it assisted in the reduction of stress levels and the increase of body awareness and connection (Choi et al., 2008; Puig, Lee, Goodwin, & Sherrard, 2006).

4.2 Themes Used Within the Sessions

As mentioned earlier, a new theme was explored each week. The rationale for the use of the specific themes was that it allowed an emotional expression related to the physical and psychological effects of sexual abuse. Additionally, the themes addressed aspects related to self-esteem and state of hostility. The themes were chosen as informed by research that demonstrated that these emotions are present with sexual abuse victims (Draucker & Martsof, 2009). The themes were used in a specific order as it benefitted to build and establish group cohesion and rapport. Creative dance movement therapy techniques were used to express these emotions. The techniques were adapted for the adolescent population to fit their physical, psychological and intellectual level.

In some instances the researcher first demonstrated a certain theme to help the participants understand what is expected. Especially at the beginning of the dance movement therapy programme, the researcher played a more active and directive role in order for the participants to learn what is expected. In the sessions, the themes were explored either as a

group, individually or with a partner. Payne (1993) states that it is important, especially at the beginning of dance movement therapy, to verbalise the movement for the child. This will help the child to explore and understand their movements and convey the message of acceptance.

Table 3 display the themes used during the dance movement therapy programme. The less threatening and intense themes were performed first and thereafter the more intense themes were explored when the participants were more comfortable with the dance movement therapy as well as rapport and group cohesion were established.

Table 3: The themes explored during the dance movement therapy session

Week	Theme Explored
Week 1 – session 1	Introduction and building rapport and group cohesion
Week 2 – session 2	Control and helplessness
Week 3 – session 3	Negative feelings part A (anger, aggression and hate)
Week 4 – session 4	Negative feelings part B (sadness, loss and hopeless)
Week 5 – session 5	Trust
Week 6 – session 6	Hopes and dreams

4.3 Detailed Explanation and Justification of the Session

The following describes the planning of the dance movement therapy programme with an explanation and/or justification of the themes and techniques used during each session. A space was provided for the participants to feel comfortable in (Holyoake & Reyner, 2005). The researcher used the same space each week in order to create comfort and familiarity as this was necessary and helpful in exploring difficult emotions open and freely.

4.3.1 Dance movement therapy session 1

Space required:

The school hall was used as this allowed enough space to move and explore emotions. The space created an environment that was safe and open for movement.

Materials:

Stationary was necessary during session in order to create a banner for the group containing their name and rules of the programme.

Description of the session:

The first session was dedicated to establish rapport and group cohesion. This session focussed on getting to know the co-participants and the researcher. Holyoake and Reyner (2005) and Payne (1993) stated that it was important to establish rules for the group. The establishment of the rules were a group effort. This allowed everyone to take responsibility and not to only follow but to assist in enforcing the rules. Every participant signed in a creative way next to the rules indicating that they agree with the rules. Table 4 has the rules co-created by the participants and researcher:

Table 4: The co-created rules for the six-week dance movement therapy programme

Rule number	Co-created rules
Rule 1	Only one person may talk at a time
Rule 2	I may not kick or shove another group member. No physical violence
Rule 3	I am not allowed to argue
Rule 4	I am not allowed to humiliate each other
Rule 5	No back-chatting
Rule 6	I am not allowed to swear
Rule 7	I should respect all other group members even if we disagree on certain topics.
Rule 8	We should help each other
Rule 9	Everything that happens in here should be kept confidential.

Thereafter, the group decided on a name. The name the group decided on was #MoveMakers. The participants created a banner with the name of the group (#MoveMakers) and the rules. This banner was displayed at every session. Lastly, the researcher discussed the proceedings of the dance movement therapy programme and allowed the group members time for questions and to explore their expectations of the following sessions.

The rest of the session was used to get to know each other. The researcher introduced the *name game*. The name game is an exercise where each participant is granted an opportunity to introduce themselves through a movement. The rest of the group was expected to mimic the movement and name of the participant.

4.3.2 Dance movement therapy session 2

Space required:

The school hall was used as this allowed enough space to move and explore emotions. The space creates an environment that was safe and open for movement.

Materials:

A music centre and related equipment were necessary for the session.

Description of session

During the second session, the themes of *control and helplessness* were explored. The theme control and helplessness was divided into two parts. The first part focussed on control and the second part focussed on helplessness. These two emotions were chosen as they are very much part of the experience of a sexual abused victim (Draucker & Martsolf, 2009).

The dance movement technique used to help participants experience both loss of - and being in control was an exercise that mimics musical chairs. The idea of this technique is based on Mary Stack Whitehouse's idea of *authentic movement* (Payne, 1993). The principle of authentic movement is that the mover (participant) can be spontaneous and move their body as the moment allows, thus anything experienced in the moment can be demonstrated through movement. The witness (researcher) needs to be compassionate, empathic and non-judgemental in their response (Berrol, 2006; Erfer & Ziv, 2006). This is done through empathic feedback to the participant regarding the movement that the researcher witnesses. The theme of control was exercised through playing music onto which the participants could decide how they would like to move, hence authentic movement. This part of the exercise illustrated being out of control. The researcher demonstrated some movements that simulated being out of control and ensured the music complimented the feeling of being out of control. The researcher continuously stopped the

music at random times and the participants were required to ‘freeze’ in that position. This ‘freeze’ position symbolizes being in control. The researcher continually reflected on the movements displayed by the participants in order for them to feel understood and accepted (Payne, 1993). A discussion followed on the subjects of being in- and out of control.

The second part focussed on helplessness. The participants struggled to understand this emotion. A discussion was dedicated towards helping the participants understand what is meant by helplessness. The practice, *improvisation* was used (Payne, 1993). Improvisation is a spur of the moment performance that addresses the needs at the moment. Therefore, the participant uses body movement as a tool to explore the unknown (Levy, 1988). Payne (1993) explains that the rules of the game are made up as the game continues. The researcher started with some movements to symbolize helplessness. The participants quickly joined in and created their own version of helplessness. Thereafter the participants and researcher discussed what they experienced during the session. Most of the participants reflected that their movements represented a particular situation in their personal life where they felt out of control and helpless.

4.3.3 Dance movement therapy session 3

Space required:

The school hall was used as this allowed enough space to move and explore emotions. The space creates an environment that was safe and open for movement.

Materials:

A music centre and related equipment were necessary for the session.

Description of session:

The themes explored during this session were *anger, aggression and hate*. The session was initiated with a discussion exploring these emotions and how this related to previous episodes of abuse. Again the method of improvisation was used (Payne, 1993; Levy, 1988). The researcher decided that the best way to use improvisation with these emotions was through *emotional charades*. The researcher wrote the emotions with their secondary emotions on different pieces of paper. The participants randomly chose certain papers not knowing what

particular emotion was depicted thereon. The participants were then required to demonstrate the emotion through a movement story. The rest of the group members had to guess what emotions were being performed. The researcher continuously reflected on the movements she observed in order to assist the participants to feel understood and accepted.

4.3.4 Dance movement therapy session 4

Space required:

The school hall was used as this allowed enough space to move and explore emotions. The space creates an environment that was safe and open for movement.

Materials:

A music centre and related equipment were necessary for the session.

Description of session:

During the fourth session, the theme of *loss, sadness and hopelessness* were explored. The researcher decided to use Blanche Evan's idea of *verbalisation of thoughts*. Within this exercise the therapist called out a sentence that the group members needed to complete with a movement (Levy. 1988). The researcher constructed sentences relating to the themes of loss, sadness and hopelessness and expected the participants to complete the sentence with body movements. Some examples of the sentences in table 5

Table 5 Example of sentences used with the technique of verbalisation of thoughts.

Number	Example of Sentences
1	It makes me sad or depressed when...
2	I'm scared I will lose...
3	My heart was hurt the most when...
4	I feel lonely when....
5	I will never...

Subsequent to the *verbalisation of ideas technique* the researcher made use of the *mirroring* technique to further explore this theme. According to Payne (1993), mirroring is a dance movement therapy technique where the therapist reflects back to the patients through movement. Marian Chace understood mirroring as empathic communication through a feedback loop back to the patient. She believed this will reflect the therapist's availability and willingness to explore the patient's feelings and thoughts (Chaiklin & Wengrower, 2009). The researcher used mirroring to reflect back to the participants. The group was then divided into pairs and they were requested to reflect (mirror) each other's movements. A discussion followed wherein the effect of mirroring on the participants was explored.

4.3.5 Dance movement therapy session 5

Space required:

The school hall was used as this allowed enough space to move and explore emotions. The space creates an environment that was safe and open for movement.

Materials:

A music centre and related equipment were necessary for the session.

Description of session:

The theme explored during the fifth session was *trust*. The researcher made use of a projective technique in dance movement therapy namely *story telling*. The participants were required to tell a story through body movements as a means to express thoughts and emotions relating to the theme of trust (Levy, 1988). Within this performance it was important to use music fitted the themes with the theme and the type of story the participant wanted to tell (Levy, 1988). It was up to the participant to choose the music to fit their story. The story focussed on trust and the participant's movements represented an experience of trust.

4.3.6 Dance movement therapy session 6

Space required:

The school hall was used as this allowed enough space to move and explore emotions. The space creates an environment that was safe and open for movement.

Materials:

A music centre and related equipment were necessary for the session.

Description of session:

The last theme was used to explore *hopes and dreams*. The researcher's goal with this session was to create hope for the future. Firstly, the participants were allowed the opportunity to demonstrate their favourite movements used during the programme. Furthermore, a discussion was held wherein we focussed on each of the participant's hopes and dreams for the future. They were granted the opportunity to choose any means of body movement and music to demonstrate their hopes and dreams to the rest of the group. Some participants used improvisation and some used storytelling to express their hopes and dreams. Each participant had the opportunity to explain their movements and how it related to their hopes and dreams.

4.4 Structured Dance Movement Sessions

The goal of the structured dance movement sessions were to provide structure and consistency during each session as well as to provide the participants with a vast amount of resources for body movements to use each week. The weekly session had the potential to contribute in building confidence which may subsequently enhance the self-esteem of the participants (Payne, 1993).

The structured dance was divided into six sessions. Each week a part of the dance was learnt and rehearsed. Every week the structured dance build upon the previous week's structured dance in order to form a complete dance at the end of the six weeks. The structured dance was created by a dance graduate student that assisted the researcher. Further, the participants were encouraged to add their own movements to the dance. The structured dance section lasted 20 minutes.

4.5 Conclusion

The researcher adapted the dance movement therapy programme according to the needs of the participants, hence it can be changed and adapted according to the requirements of the therapeutic session. The researcher decided that this particular six week dance movement therapy session will require a warm-up, exploration of themes, structured dance and a cool-down. A structured dance was introduced as the researcher was of view that this could enhance confidence and subsequently self-esteem.

5. Results

5.1 Introduction

The efficacy of the dance movement therapy programme was evaluated by testing for significant differences of both the pre-and post-test of the Rosenberg Self-Esteem Scale and the Cook-Medley Hostility Scale. The participants were given both the Rosenberg Self-Esteem Scale and the Cook-Medley Hostility Scale before and after the dance movement therapy programme.

First, there will be a discussion on the descriptive statistics of the total, experimental and control group. Thereafter, the results of the Mann-Whitney U test will be discussed. Lastly, the statistical results of the Wilcoxon Signed rank test will be discussed.

Both the Mann-Whitney and Wilcoxon signed rank test are non-parametric tests. They are administered instead of the usual parametric t-test for related and unrelated t-test samples. Field (2013) stated that non-parametric tests are done when outliers or non-normal distributions are of concern. This is usually the case with small samples that have been randomly selected from a population. Non-parametric tests uses ranked data instead of the raw data and therefore some valuable information can be lost. Non-parametric tests are less powerful than their parametric counterparts.

5.2 Descriptive Statistics of the Sample

The following will present the demographic information of the 18 participants that participated in this study.

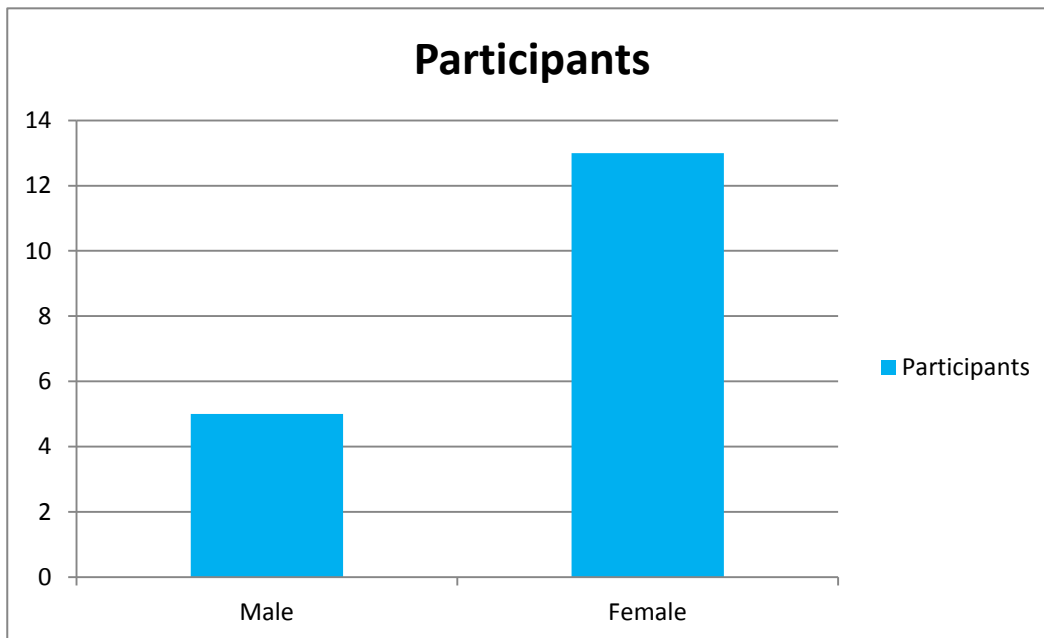


Figure 2 Total gender distributions within the dance movement therapy programme

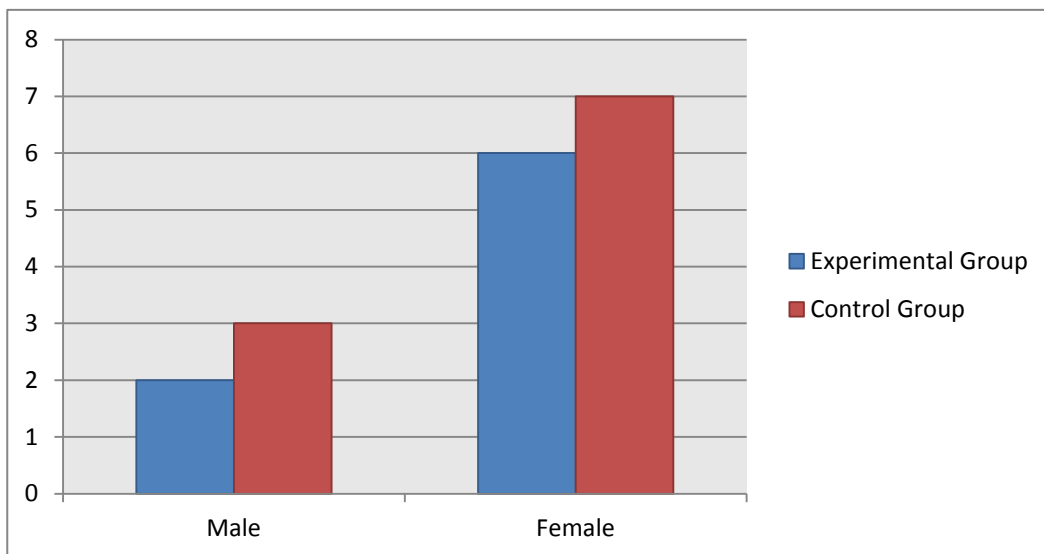


Figure 3 Gender distributions for the experimental- and control group

Figure 2 represents the gender distribution of the research study. There were a total of 18 participants in this research study. There was an equal distribution between the control group (55.6%) and the experimental group (44.5%), $\chi^2(1) = 3.56, p = 0.06$. Figure 3 shows that the experimental group consisted of 6 females and 2 males and the control group consisted of 3

males and 7 females. Gender was not equally distributed between male (28%) and female (72%) participants (see Appendix D).

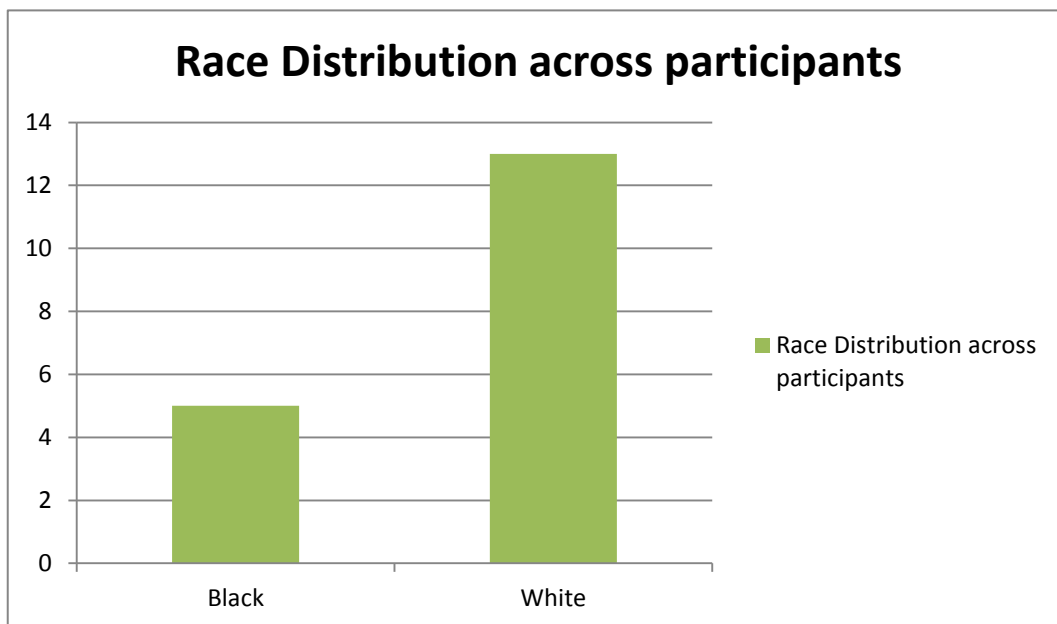


Figure 4 Overall race distribution across participants

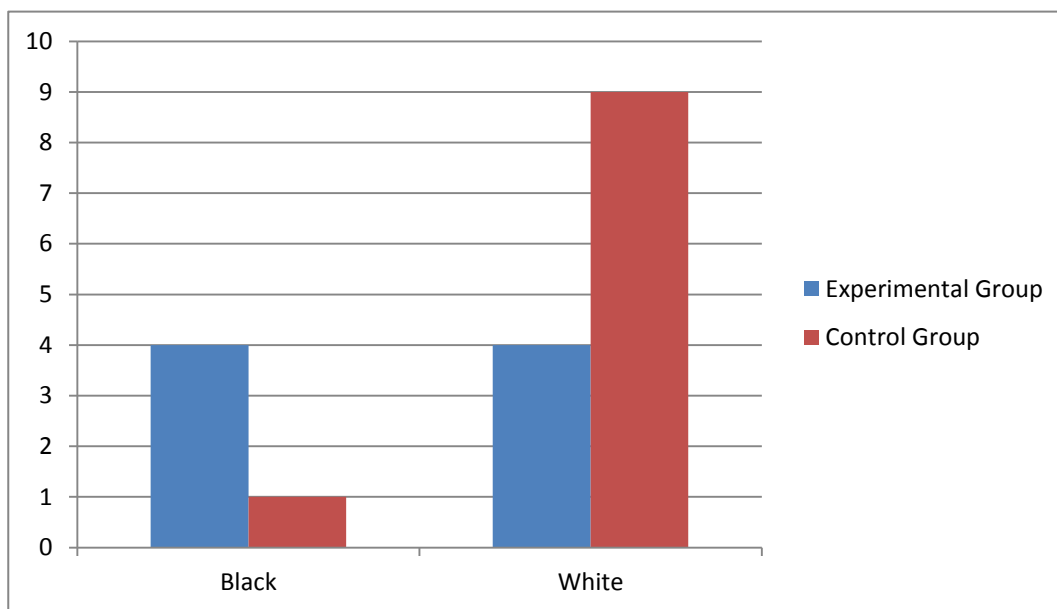


Figure 5 Race distribution between the experimental- and control group

As can be seen from figure 4 there is an unequal race distribution between the overall sample, with only 5 black participants and 13 white participants, $\chi^2 (1) = 3.56, p = 0.06$ (see Appendix D). However, figure 5 show that there were an equal distribution of race within the

experimental group, with 4 black participants and 4 white participants (see Appendix D). According to Pearson’s Chi square there were no significant difference ($p > 0.05$) in race within the experimental group, $\chi^2 (1) = 3.55, p = 0.06$.

Table 6 Age distribution (mean, median and standard deviation) for experimental, control and total group participants.

	N	Mean	Median	Standard Deviation
Experimental Group	8	13.00	12.50	2.00
Control Group	10	14.10	14.00	1.91
Total	18	13.61	13.50	1.98

Table 6 represents the age mean, median and standard deviation of the 18 participants.

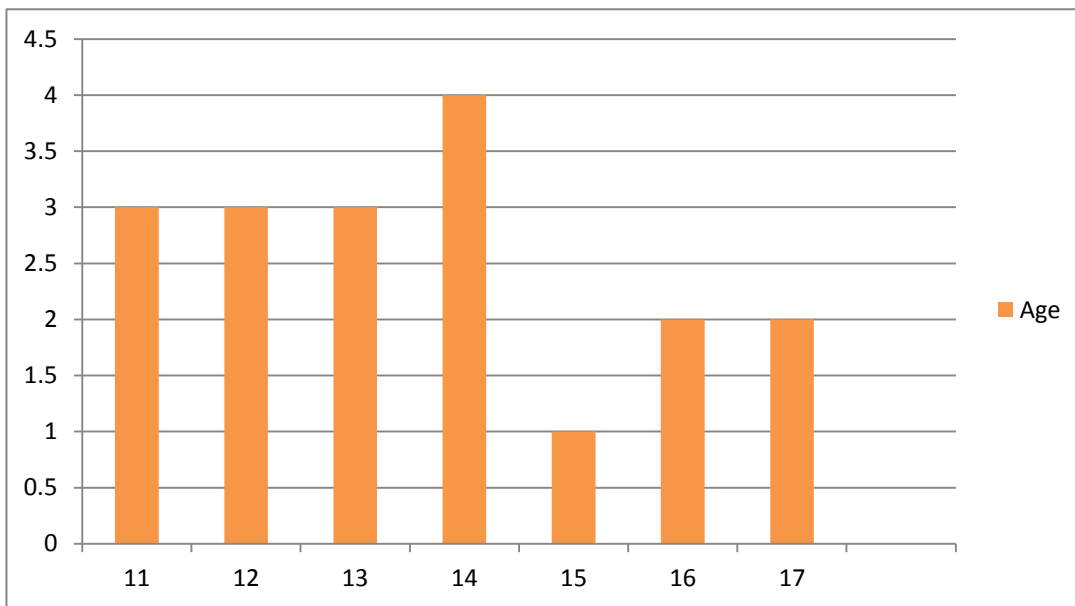


Figure 6 Overall age distribution across participants

Figure 6 presents the overall ages across the 18 participants. The overall mean age of the 18 participants are 13.6, $p = 1.98$. Table 6 indicates that the mean age of the experimental group is 13.00, $p = 2.00$ and the mean age of the control group is 14.10, $p = 1.91$ There is no significant

difference between the median ages of the experimental group ($Mdn = 12.50$) and control group ($Mdn = 14.00$), $U = 53.50$, $z = 1.22$, $p = 0.237$, $r = 0.29$ (small effect size). See Appendix D for more detail.

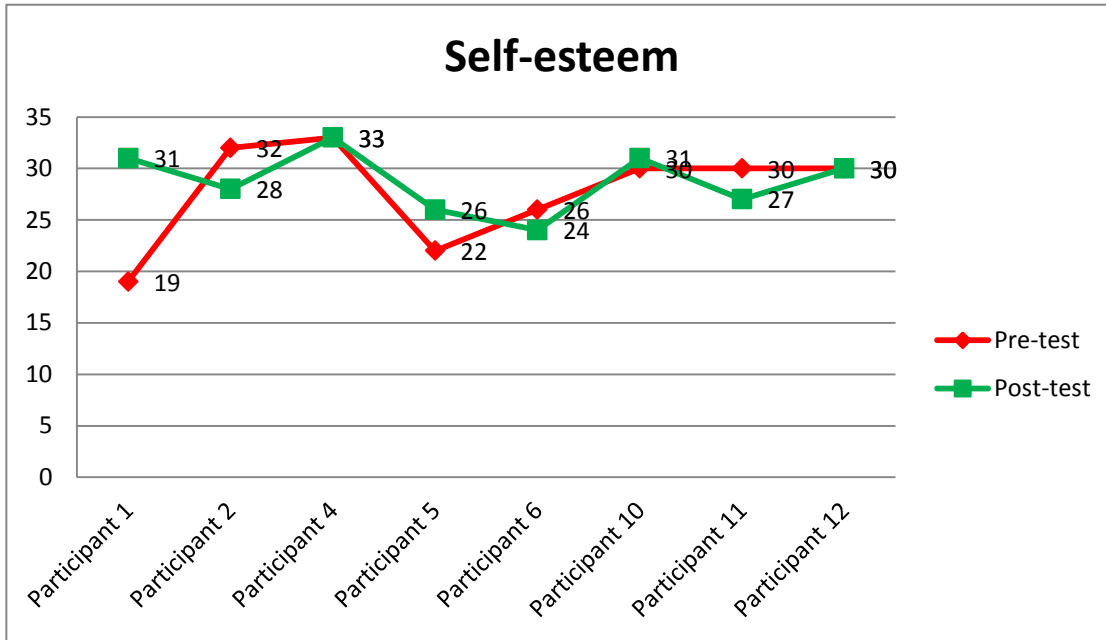


Figure 7 Raw scores of the experimental group for the Rosenberg Self-Esteem Scale pre- and post-test

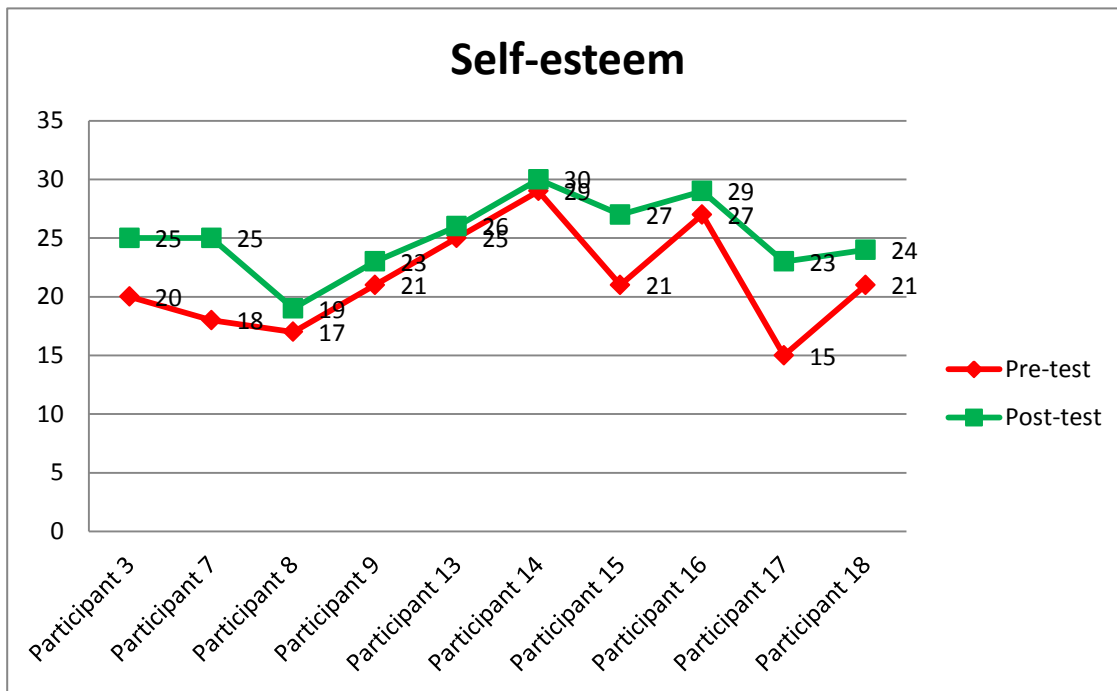


Figure 8 Raw scores of the control group for the Rosenberg Self-Esteem Scale pre- and post-test

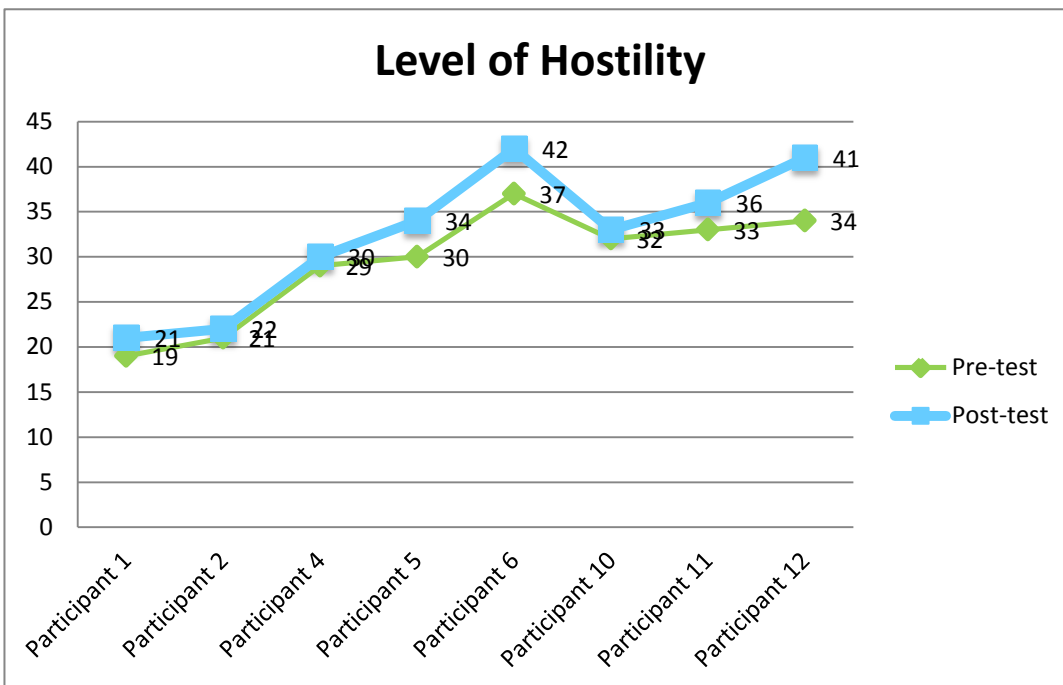


Figure 9 Raw scores of the experimental group for the Cook-Medley hostility Scale pre - and post-test

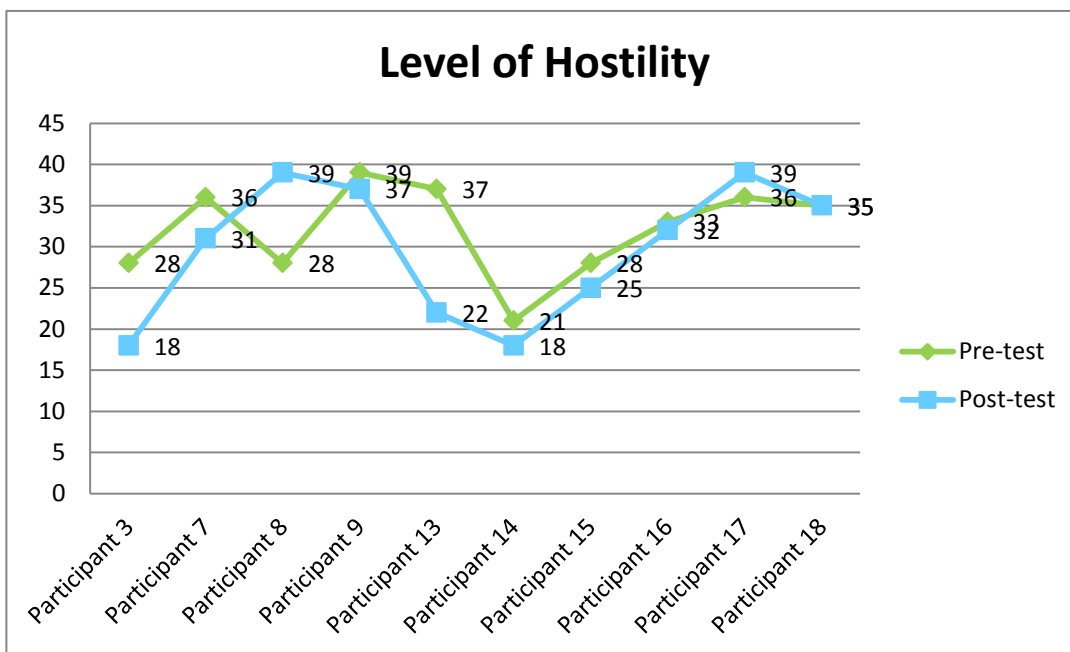


Figure 10 Raw scores of the control group for the Cook-Medley hostility Scale pre - and post-test

With reference to self-esteem, 37.5% of the experimental group and 100% of the control group showed an increase in self-esteem (Figure 7 and 8). Only 2 participants (25%) in experimental group's self-esteem stayed the same throughout the dance movement therapy programme. Figure 9 and 10 shows that 12,5% of the experimental group and 70% of the

control group shows a decrease in level of hostility after the dance movement therapy programme.

Already this demonstrates that there is a clear difference between the experimental group and control group for both self-esteem and level of hostility. However it is not in the expected direction. The significance of the difference will be discussed by administering the Mann-Whitney U test and Wilcoxon signed rank test.

In table 7 and 8 the summary statistics for the Rosenberg Self-Esteem Scale and Cook-Medley Hostility Scale are given. The mean, median and standard deviation is given for each group, namely the pre-test and post-test for both the experimental and control group.

Table 7 Mean, median and standard deviation for the Rosenberg Self-Esteem Scale pre- and post-test

Group	N	Pre- or Post-test	Mean	Median	Standard deviation
Experimental Group	8	<i>Pre-test</i>	27.75	30.00	4.98
Control Group	10		21.40	21.00	4.43
Experimental Group	8	<i>Post-test</i>	28.75	29.00	3.01
Control Group	10		25.10	25.00	3.18

Table 8 Mean, median and standard deviation for the Cook-Medley Hostility Scale pre- and post-test.

Group	N	Pre- or Post-test	Mean	Median	Standard deviation
Experimental Group	8	<i>Pre-test</i>	29.38	31.00	6.30
Control Group	10		32.10	34.00	5.63

Experimental Group	8	<i>Post-test</i>	31.13	31.50	7.94
Control Group	10		29.60	31.50	8.28

The last value that we need for comparing the groups and tests were found by subtracting the pre-test and post-test scores for each test (self-esteem and level of hostility). Thus, for each group (experimental and control group) change or gain score were calculated for each test (self-esteem and level of hostility). The values can be found in table 10. Table 9 represents the total gains core for the 18 participants.

Table 9 Self-esteem and level of hostility gain score mean, median and standard deviation.

N=18	Median	Mean	Standard deviation
Self-esteem gain score	2.00	2.50	4.02
Hostility gain score	0.50	-0.61	6.15

Table 10 Self-esteem and level of hostility gain scores for experimental - and control group

		N	Median	Mean	Standard deviation
Self-esteem	Experimental Group	8	0.00	1.00	5.10
	Control Group	10	2.50	3.70	2.58
Hostility	Experimental Group	8	1.50	1.75	4.17
	Control Group	10	-2.50	-2.50	7.00

A graphical representation of the gain scores to be compared can be found in figure 11 and 12. It can be seen from self-esteem (figure 11) that the control groups scores were higher than those of the experimental group. The tendency is contrary to expectation. Figure 12 shows that the gain scores for the control group decreased and increased for the experimental group. However, in the following section the difference between the gain scores will be tested for statistical significance.

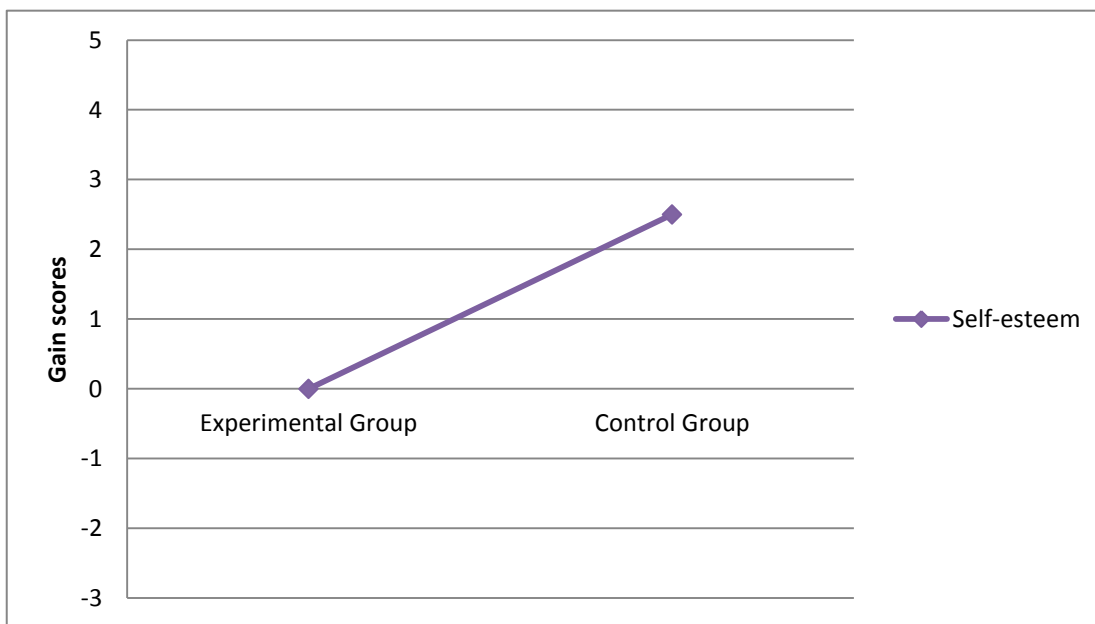


Figure 11 Gain scores for self-esteem in both experimental- and control group

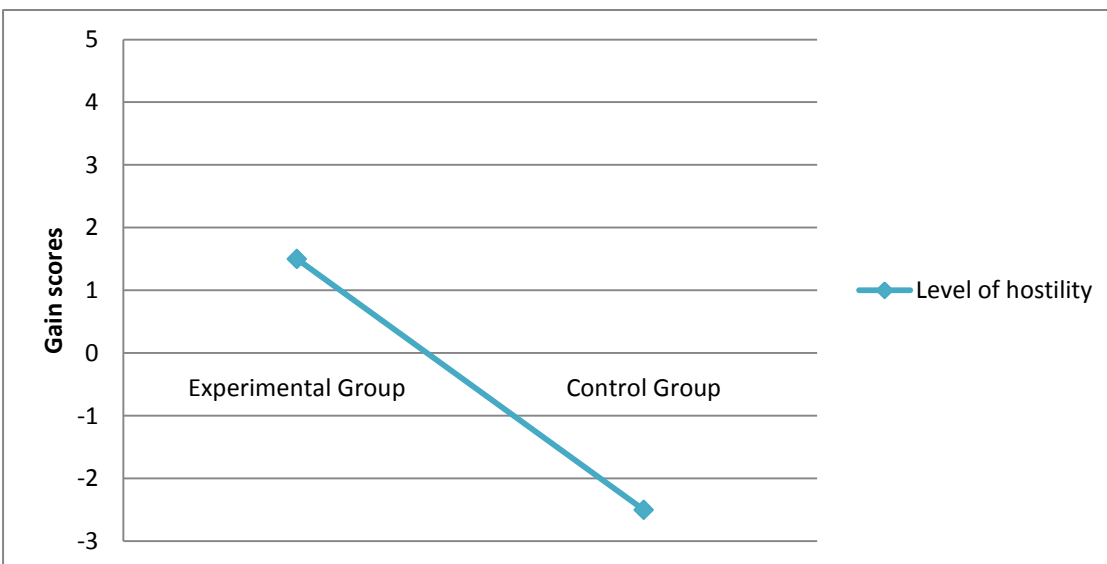


Figure 12 Gain scores for the level of hostility for both the experimental- and control group

5.3 Statistical Analysis for Difference

In this section the differences between the tests and groups will be assessed for statistical difference. The gain score for both tests will first be evaluated, and as a matter of interest the test scores of the pre-test and post-test for each group. Although my aim is to see whether the gain scores differ significantly, the fact that unexpected patterns were found (see figure 11 and 12 above), I would also like to determine whether increases and/or decreases for each group were significant (which the gain score does not indicate except for its magnitude). The significance of pre-post test scores can provide us with information to explain the pattern of results I have found. The analysis was done in two steps: (a) Mann-Whitney U test will be administered to determine whether the gain scores for each test differ significantly between the control and experimental group. This test is used for independent groups and evaluates the similarity in distributions and medians between two groups. (b) The Wilcoxon signed rank test was administered to determine whether there was a significant difference between the pre and post-test for both the experimental and control group separately.

5.3.1 Statistical significance of the difference of the gain score between groups.

Table 11 The results from Mann-Whitney U Test for both experimental - and control group

N=18	Self-esteem gain score	Level of Hostility gain score
Mann-Whitney U	63.00	19.00
Wilcoxon W	118.00	74.00
Standardised test statistic (z score)	2.05	-1.87
Asymptotic Sig. (2-sided test)	0.04	0.06
Exact Sig. (2-sided test)	0.04	0.07
Effect size (r value)	0.48	-0.44

The Mann-Whitney U Test was administered to determine whether there is a significant difference between the medians of the gain scores. Figure 11 show self-esteem gain score for both groups. Table 10 show that the self-esteem for the experimental group ($Mdn = 0.00$)

differed significantly ($p \leq 0.05$) from the control group ($Mdn = 2.50$, $U = 63.00$, $z = 2.05$, $p = 0.04$, $r = 0.48$, medium effect size). Figure 12 display the gain scores for the level of hostility for both groups. The level of hostility for experimental group ($Mdn = 1.50$) does not differ significantly from the control group ($Mdn = -2.5$, $U = 19.00$, $z = -1.87$, $p = 0.07$, $r = -0.44$, medium effect size).

Table 12 The results from Mann-Whitney U test for the gain scores for self-esteem pre-test for the experimental - and control group

N=18	Self-esteem pre-test for experimental and control group
Mann-Whitney U	12.00
Wilcoxon W	67.00
Standardised test statistic (z score)	-2.50
Asymptotic Sig. (2-sided test)	0.01
Exact Sig. (2-sided test)	0.01
Effect size (r value)	-0.59

Table 13 The results from Mann-Whitney U test for the gain scores for self-esteem post-test for the experimental - and control group

N=18	Self-esteem post-test for experimental and control group
Mann-Whitney U	15.00
Wilcoxon W	70.00
Standardised test statistic (z score)	-2.23
Asymptotic Sig. (2-sided test)	0.03

Exact Sig. (2-sided test)	0.03
Effect size (<i>r</i> value)	-0.53

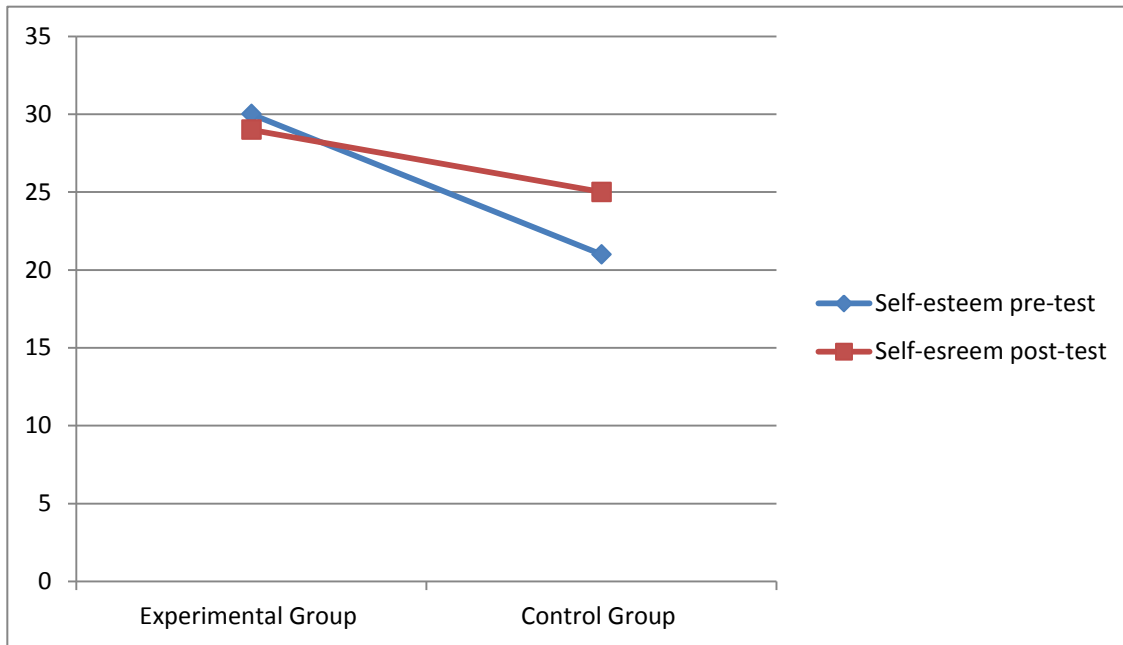


Figure 13 The gain score difference for self-esteem between the experimental – and control group pre- and post-test

Figure 13 shows that there were a significant difference ($p \leq 0.05$) between the self-esteem pre-test for the experimental group ($Mdn = 30.00$) and the control group ($Mdn = 21.00$, $U = 12.00$, $z = -2.50$, $p = 0.01$, $r = -0.59$, large effect size). Additionally, figure 13 shows that there were a significant difference ($p \leq 0.05$) between the self-esteem post-test for the experimental group ($Mdn = 29.00$) and the control group ($Mdn = 25.00$, $U = 15.00$, $z = -2.23$, $p = 0.03$, $r = -0.53$, large effect size).

Table 14 The results from Mann-Whitney U test for the gain scores for level of hostility pre-test for the experimental - and control group

N=18	Level of hostility pre-test for experimental and control group
Mann-Whitney U	49.50
Wilcoxon W	104.50

Standardised test statistic (z score)	0.85
Asymptotic Sig. (2-sided test)	0.40
Exact Sig. (2-sided test)	0.41
Effect size (r value)	-0.20

Table 15 The results from Mann-Whitney U test for the gain scores for level of hostility post-test for the experimental - and control group

N=18	Level of hostility post-test for experimental and control group
Mann-Whitney U	35.50
Wilcoxon W	90.50
Standardised test statistic (z score)	-0.40
Asymptotic Sig. (2-sided test)	0.69
Exact Sig. (2-sided test)	0.70
Effect size (r value)	-0.09

Figure 14 shows the difference in gain scores between the experimental pre-test and control pre-test for the level of hostility. The level of hostility for the experimental pre-test ($Mdn = 31.00$) does not differ significantly from the control pre-test ($Mdn = 34.00$, $U = 49.50$, $z = 0.85$, $p = 0.41$, $r = 0.20$, small effect size). Furthermore, Figure 14 shows that there is no significant difference ($p \geq 0.05$) between the level of hostility for experimental post-test ($Mdn = 31.50$) and control post-test ($Mdn = 31.50$, $U = 35.50$, $z = -0.40$, $p = 0.70$, $r = -0.09$, small effect size).

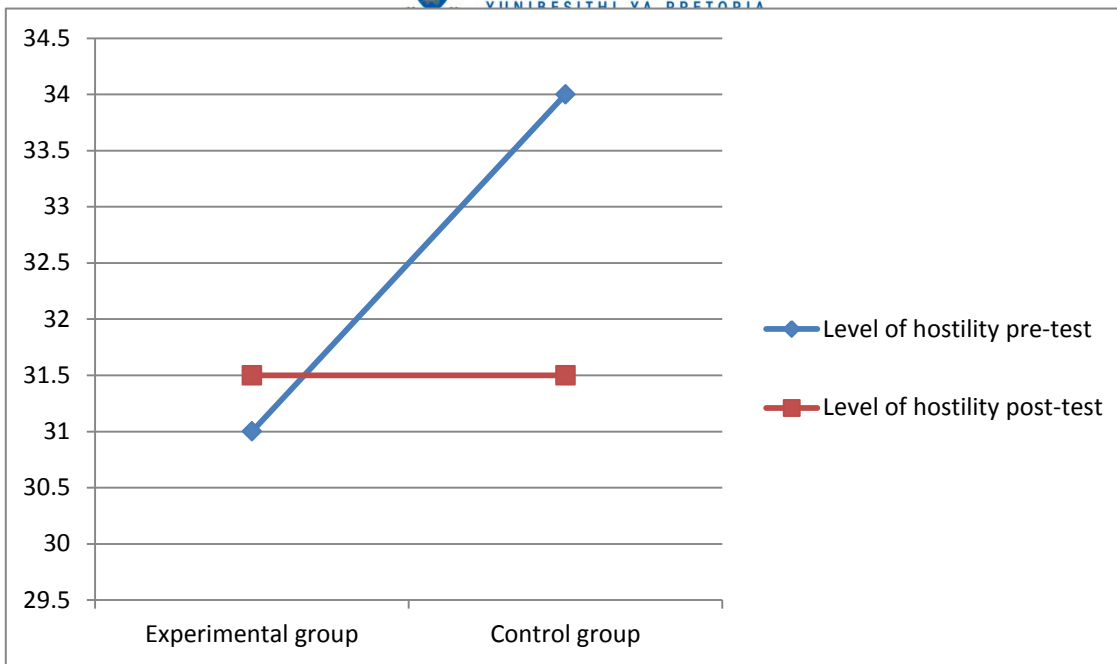


Figure 14 The gain score difference for level of hostility between the experimental - and control group pre- and post-test

5.3.2 Statistical significance of the difference of the pre - and post-test scores for both groups.

The Wilcoxon signed-rank test is also a non-parametric test. A non-parametric test is usually employed when the sample is small and/or doubt exists about the normal distribution of the variables. Another reason is that the variables are on a lower measurement, however it is a less powerful statistical test than the parametric tests. Wilcoxon signed-rank test is especially administered when two sets of scores are to be compared (Field, 2013; Siegel 1956). Further, it compares the same participants over two conditions, in other words we can compare the level of differences of participants over two conditions (Field, 2013).

Table 16 Results from Wilcoxon- Signed Rank Test for the experimental group self-esteem pre- and post-test

N= 8	Self-esteem for experimental group
Standardised test statistic	0.210
Asymptotic Sig (2-sided test)	0.83

Point probability	
Effect size (<i>r</i>)	0.07

Table 17 Results from Wilcoxon Signed Rank Test for control group self-esteem pre- and post-test

N= 10	Self-esteem for control group
Standardised test statistic	2.81
Asymptotic Sig (2-sided test)	0.01
Point probability	
Effect size (<i>r</i>)	0.89

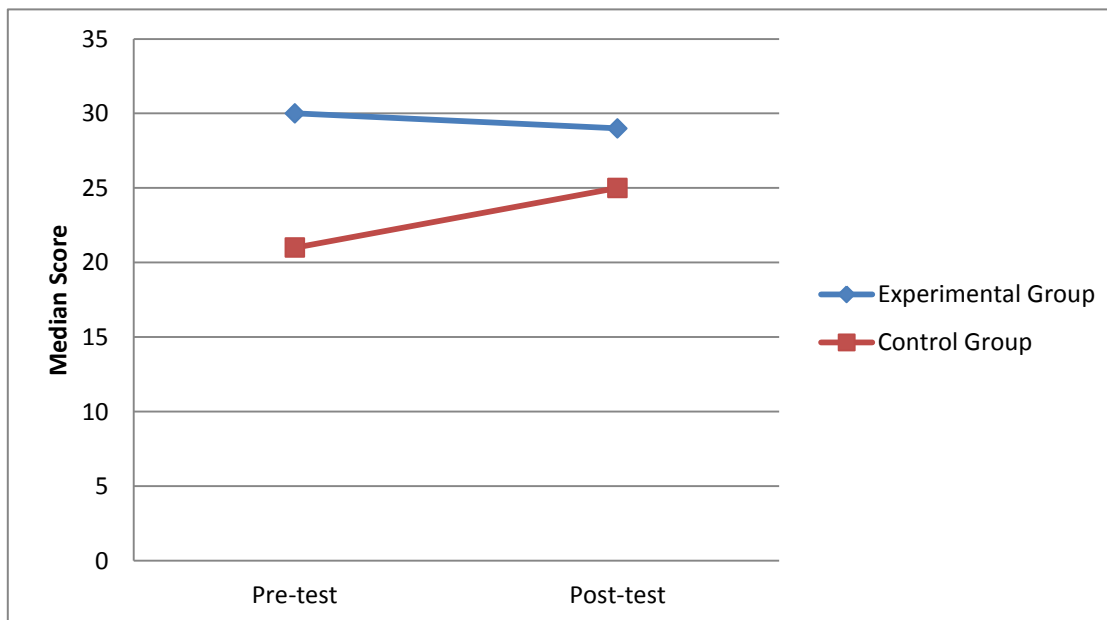


Figure 15 Self-esteem median scores for the control - and experimental group pre- and post-test

The Related-Sample Wilcoxon Signed Rank Test was used to test whether there is a significant difference between the median scores of self-esteem for the pre and post-test for each group (experimental and control group) separately. Figure 15 demonstrates both the median levels across the self-esteem pre-test and post-test. For the experimental group, self-esteem pre-test ($Mdn = 30.00$) does not differ significantly from the self-esteem post-test ($Mdn = 29.00$, $z = 0.21$, $p = 0.83$, $r = 0.07$, small effect size). However, for the control group the self-esteem levels were significantly higher on the post-test ($Mdn = 25.00$) than on the pre-test ($Mdn = 21.00$, $z =$

2.81, $p = 0.01$, $r = 0.89$, large effect size). The change of direction is in the positive direction which means that their self-esteem increased although it was not expected. From the gain score we found a significant difference between the groups. Although the Wilcoxon Signed Rank Test show that the control group was responsible for the significant change which is contrary to expectation.

Table 18 Results from Wilcoxon Signed Rank Test for experimental group level of hostility pre-test and post-test

N= 8	Level of Hostility for experimental
Standardised test statistic	1.48
Asymptotic Sig (2-sided test)	0.14
Point probability	0.52
Effect size (r)	

Table 19 Results from Wilcoxon-Signed Rank Test for control group level of hostility pre-test and post-test

N= 10	Level of Hostility for experimental
Standardised test statistic	-1.25
Asymptotic Sig (2-sided test)	0.21
Point probability	-0.40
Effect size (r)	

Again, the Related-Sample Wilcoxon Signed Rank Test was used to test whether there is a significant difference between the median scores of level of hostility for the pre and post-test for each group (experimental and control group) separately. Figure 16 reveals the differences in the hostility level median scores from the pre-test to post-test for both the experimental and control group. For the experimental group, the level of hostility pre-test ($Mdn = 31.00$) did not differ significantly ($p \geq 0.05$) from level of hostility in the post-test ($Mdn = 31.50$, $z = 1.48$, $p = 0.40$, $r = 0.52$, large effect size). Although there is no significant difference, the direction of the change is positive and therefore not in the direction that was expected. For the control group, the level of hostility in the pre-test ($Mdn = 34.00$) did not differ significantly ($p \geq 0.05$) from the

post-test ($Mdn = 31.50$, $z = -1.25$, $p = 0.21$, $r = -0.40$, medium effect size). While there is no significant difference, there is more negative differences ($N = 7$) than the positive differences ($N = 2$) and therefore the difference are in the correct direction but was not expected for the control group.

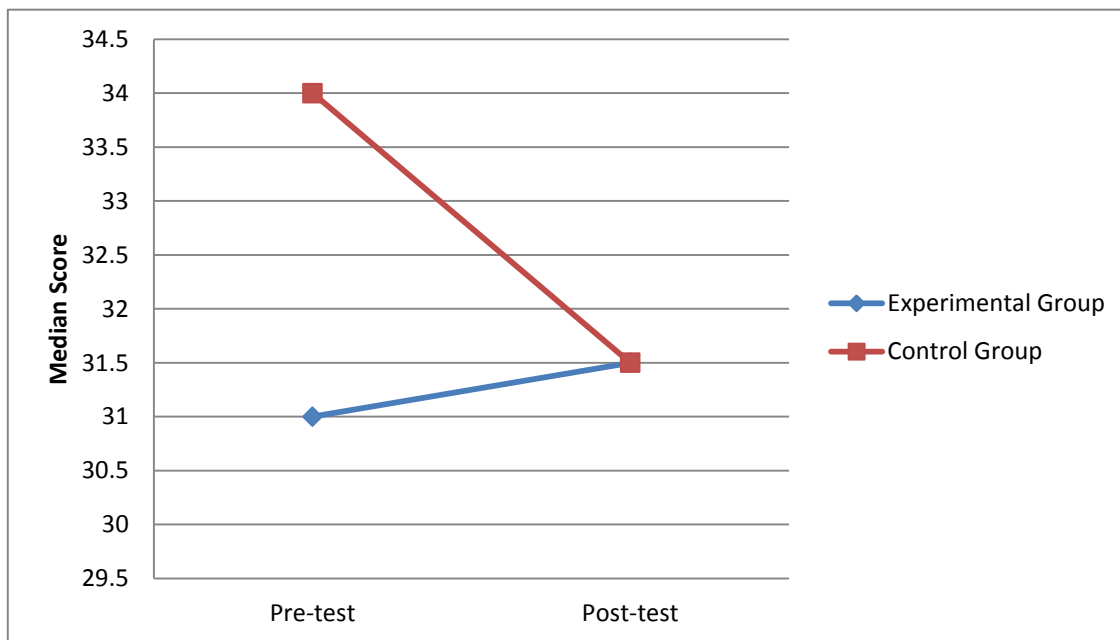


Figure 16 Level of hostility median scores for the control and experimental group pre-test and post-test

5.4 Conclusion

In chapter five, the descriptive statistics and non-parametric test were conducted to determine the effect of dance movement therapy programme on the experimental – and control group. In chapter six the results will be discussed and subsequently inferences will be drawn in order to provide a conclusion

6. Discussion of Results

6.1 Introduction

The discussion chapter is based on the results described chapter 5. In this discussion the focus will be on the biographical characteristics and outcome patterns. This will be followed by a discussion of the statistical outcomes of the Mann-Whitney U test and Wilcoxon signed-rank test.

6.2 Discussion Focussed on the Biographical Characteristics

It is important to discuss the difference in variables between the experimental - and control group as this could have significantly affected the results. The circumstances surrounding this study increased the difficulty of controlling and managing the biographical characteristics of the participants. The reason for this is that the sample was small and the researcher was dependent on the availability of the participants.

All eighteen participants in this study have a history of sexual abuse. The history and complete detail of the specific traumatic events were not available and it remains a possibility that the specifics and severity of the sexual abuse, as experienced by each individual, could have had an effect on the results. The researcher did not test the severity of the trauma that each individual was still experiencing at the time of the study. Although all eighteen participants were subjected to sexual abuse, the results could be affected by the duration of the sexual abuse and the relation to the perpetrator.

The median age of the control group ($Mdn = 14.00$) was slightly higher than the experimental group ($Mdn = 12.50$), although there was no significant difference between the two groups ages ($U = 53.50$, $z = 1.22$, $p = 0.237$). The researcher is however of view that the slight age differential between the experimental - and control group did not affect the outcome of the results of the study.

The gender distribution was far from equal. There were more female - than male participants in the total gender distribution (Figure 2). This unequal distribution was clear in the experimental group with more female than male participants (Figure 3). This is an important aspect to consider of as there are studies that confirm that gender differences play a role in

emotional expression and regulation and this subsequently may impact the results of the study. Brody and Hall (2008) express the view that women differ from men in emotional expression in terms of specific emotions. They have identified that the difference is to be found in women's advanced ability to decode and to pick up on facial and non-verbal cues. Furthermore differences exist in how emotions of men and women are regulated based on their self-schema (interdependence vs. independence). Brody and Hall (2008) state that men's self-schema is more focussed on independence and women's self-schema is more focussed on interdependence. This in turn will affect their understanding and expression of emotions. Important to note, is that the findings in this study are based on self-report measures and Brody and Hall (2008) highlight that gender differences cannot be understood without taking cultural and situational variables into account. In other words, the socialisation of emotions and traditional gender roles expressed by caregiver's also need to be taken into account when exploring gender differences. Some interesting information emerges when we examine the raw scores obtained from the self-esteem and level of hostility questionnaires from the boys compared to the same questionnaires of the girls. Both the males in the experimental group showed an increase in self-esteem and level of hostility compared to the girls whose scores varied in terms of increase and decrease. The difference in the expression and regulation of their emotions may have influenced the results of the study.

With reference to race, there was an unequal distribution across the eighteen participants as well as within the control group. However, as seen in the previous chapter, the racial distribution was equal within the experimental group (Figure 4). Against the background of cultural values it is important to consider individualistic vs. collectivistic cultures. Lively and Powell (2006) express the view that there are racial differences in how certain emotions, such as anger, are expressed. Anger was a main theme within the dance movement therapy programme and therefore this possible differential should be taken into account. Black cultures tend to be more collectivistic and will therefore focus on emotions that express a group goal while white cultures are more individualistic and will focus on emotions that promote a personal goal. Examination of the scores of both self-esteem and level of hostility reflected that there is no difference between the scores obtained from the black participants and white participants. The racial distribution was not equal and it remains an important factor to consider that this could have affected the outcome of the results.

In conclusion; because of the relative small size of the sample in this study, a conclusive answer to the impact of the unequal distribution of gender and race within the experimental group would only be answered if a larger sample is used in future research.

One of the major challenges of this study was the researcher's limited access and resources to control the demographical variables to ensure that both groups were equally representative. Therefore a recommendation for further study is that the researcher should have more control to ensure an equal distribution as far as gender and race are concerned

6.3 Discussion of the Outcome of the Study

Shadish et al. (2002) stated that when interpreting the results of a study it is very important to consider other possible explanations that could be responsible for the outcome of the results. The researcher employed certain methods to mitigate the influence of confounding variables, however there were certain validity threats that the researcher could not control due to practical limitations.

Selection-maturation is undoubtedly an important dynamic to consider. It deals with two important aspects. Firstly, the manner in which the participants were selected and secondly the differences within and between the experimental - and control groups. Selection-maturation may inform – or explain the results during the six-week intervention programme. This could clarify some of the results which were contrary to what the researcher had predicted. The results indicate that both groups exhibited growth or decline in both self-esteem and level of hostility and the researcher had to search or investigate certain other explanations or interventions that may explain this phenomenon. A likely explanation may be found in the fact that some of the participants have been, as part of the general programme of the children's home, subjected to other therapy programmes during the period of this study. This could also explain the history effect. Shadish et al. (2002) mention that with field research it is rarely possible to control all outside effects, thus experimental isolation is present. It was established that the participants may have benefitted from other interventions such as equestrian therapy, music therapy and individual therapy. This may and in all likelihood does explain the significant differences between the experimental and control groups.

It is important to consider the selection bias, as the researcher relied on voluntary participation to ensure that the participants would be able to commit to the six-week dance movement intervention programme. Shadish et al. (2002) explain that self-selected participants could affect the results differently than randomly picked participants out of a sample. In other words, participants that select themselves to participate might be more motivated to change than participants selected by the researcher. This could affect both the experimental - and control group as all 18 participants were self-selected. Since both groups showed an increase and decrease in both self-esteem and level of hostility, this variable might not have affected the outcome of the results.

It is crucial to consider the effect of attrition on the outcome patterns of the study. During field research, it is unlikely to expect that all participants will follow the ideal which the researcher provides (Shadish et al., 2002). Shadish et al et al. (2002) state that there are various reasons that attrition takes place within research of which two apply within this research. Firstly, there were two participants assigned to the dance movement therapy programme who refused to participate during the first session. Further, Shadish et al. (2002) explain that one should also take into account that there could be participants who completely drop out of the study. Although there were no drop-outs, there were participants that did not attend each session. The average attendance of the eight participants within the experimental group was 73%. The researcher's view was that the lack of treatment attendance was an important contributing factor to the non-significant results. Various factors contributed to the lack of attendance, of which the following may be significant: lack of time, disappointment by initial treatment progress and loss of motivation. These three reasons are very important for future research to consider and to factor into the programmes in an attempt to decrease attrition. This could be improved by providing homework to the participants during the week, which they have to return the following sessions. If possible, one should attempt to ensure that there is a supportive structure that will ensure they attend each session. Lastly, some reinforcement may positively lead to an increase in the attendance of the treatment programme.

6.4 Discussion of the Results as found by Mann-Whitney U test and Wilcoxon Signed-rank test

It is perhaps apt to initiate this discussion by highlighting the two hypotheses of this research study in order to explicate the results. Firstly, it was hypothesised that the self-esteem of the experimental group would improve because of the participation in the six-week dance movement therapy programme. Furthermore, it was envisaged that the improvement in self-esteem within the experimental group will be greater than the possible improvement of self-esteem within the control group. In the study, there was a significant difference in the self-esteem level within the experimental and control groups. Unfortunately, the increase happened within the control group (Figure 15). This increase was contrary to what was expected. The experimental group had a slight decrease in self-esteem but this decrease is not statistically insignificant. However, contrary to the prediction of the first hypothesis, the control group had a statistically significant increase in their self-esteem with a medium size effect. Field (2013) state it is important to consider effect size, irrespective of the significance of the effect. The medium effect size of self-esteem within the control group shows there were a definite increase in their level of self-esteem. This study did not find statistical support for the hypothesis that the self-esteem of the experimental group will improve because of the participation in the dance movement therapy programme when compared to the participants who did not receive this specific treatment.

The possible effect of within-group differences was discussed *supra*. It is therefore important to consider the possible effect that between-group differences could have on the outcome of the study. Pre-test scores for both self-esteem and level of hostility are important to consider and can provide information on the differences in growth or decline between the two groups. Shadish et al. (2002) argued that if the pre-test scores of the experimental - and control group differed to some extent at the pre-test, it (consequently) exhibits a difference in ‘ability’ from the start. Figure 9 shows that the pre-test for self-esteem for both the experimental and control groups differed significantly ($Mdn = 21.00$, $U = 12.00$, $z = -2.50$, $p = 0.01$, $r = -0.59$, large effect size). Therefore, the irresistible inference exists that participants within the control group had a higher level of self-esteem than those in the experimental group when the study commenced. Shadish et al. (2002) suggest that this would lead to greater maturation and

improvement within that specific 'ability. The improvement of self-esteem within the control group could therefore possibly be due to the innate characteristics of the participants rather than the dance movement intervention programme

There were no significant differences between the self-esteem pre-test and post-test results observed within the experimental group. If cognisance is taken that the initial level of self-esteem were very high at the pre-test it is not overly surprising that the intervention had no significant impact on self-esteem. Shadish et al. (2002) suggest that it would be more advisable to conduct such an intervention on a group with a lower self-esteem. This was not possible due to the restrictions placed on the researcher. The following are possible reasons for the high levels of self-esteem within the experimental group:

- a) The Rosenberg-Self-Esteem Scale is a self-report measure and therefore the participants could have reported the questions in a socially desirable manner. This conclusion is further justified since the researcher had to assist the participants with most of the questions as they had difficulty to understand the questions.
- b) The adolescents at the children's home are provided with excellent supportive services and the participants benefitted from other intervention programmes during this time.
- c) The sexual abuse trauma could have occurred a long time prior to this intervention and the impact of the trauma may have been less severe and different for each adolescent.

Secondly, it was hypothesised that the six-week dance movement therapy programme would decrease the level of hostility of the experimental group. Furthermore it was believed that the decrease within the experimental group would be statistically significant when compared to the control group. From the results, it can be seen that the experimental group's levels of hostility were higher than the control group (Figure 16). The difference in level of hostility was not statistically significant. Although, contrary to what was expected, the experimental group showed an increase in their level of hostility. Furthermore, the control group showed a decrease in their level of hostility. This decrease in hostility is not significant; nevertheless it is in the correct direction. Therefore the study did not find statistical support for the hypothesis that a six-week dance movement therapy programme will decrease the level of hostility.

The increase in the level of hostility within the experimental group varied from what was expected. According to the effect size, the variation from the expectation was small and not significant. None-the-less, the effect size provided some support of an increase. It is, however, crucial to consider the aim and effect of dance movement therapy in the evaluation of the results. Dance movement therapy is a therapeutic tool that brings unconscious feelings to the fore and enables the participants to explore these feelings that were hidden from the conscious mind. It is the researcher's summation that this phenomenon played itself out during this research. The researcher submits that dance movement therapy helped the experimental group to experience this hidden emotion (hostility, anger and aggression) and therefore the increase within the hostility levels. It is probable that if dance movement therapy continued for a longer period the levels of hostility would have dropped significantly whilst the participants gained more control over their emotions.

The control group supported the second hypothesis, although it was not expected. The decrease within the control group is not statistically significant. The effect size is medium and therefore it provides some support that there was a decrease within level of hostility. The researcher believes that the other interventions programmes within the children's home affected the level of hostility and subsequently decreased the level of hostility.

Furthermore, the researcher believes it is pertinent to separately examine the pre-test and post-test scores for level of hostility, for both the experimental and control groups. Figure 10 illustrates that the control group had a higher pre-test score on the level of hostility than the experimental group, although there was no statistical significance within this difference ($Mdn = 34.00$, $U = 49.50$, $z = 0.85$, $p = 0.41$, $r = 0.20$, small effect size). However, it is still crucial to consider that the higher pre-test score allowed for greater possible decline in the level of hostility than the average score amongst the experimental group. .

6.5 Improving the Methodology

Shadish et al. (2002) suggest that to improving and/or changing the non-randomised quasi-experimental design implemented in a research study could assist the researcher in controlling certain variables. Originally, it was planned to implement a second dance movement therapy programme for the control group. Unfortunately, due to unforeseen circumstances, the

children’s home decided not to implement the dance movement therapy for the control group. The idea was to use a *switching replications design*, as this design allows the dance movement therapy programme to be administered to the control group as well. Table 20 will demonstrate this graphically.

Table 20 Explanation of switching replications design

	Phase 1			Phase 2	
Experimental Group	Experimental group pre-test phase	Treatment administered	Experimental group post-test phase		Experimental post-test phase
Control group	Control group pre-test phase		Control group post-test phase	Treatment administered	Control post-test phase

In other words, the control group serves as a control in the first phase and thereafter receives the dance movement therapy programme within the second phase. Shadish et al. (2002) explain that this is a stronger design, although the context in which the treatment is received in the second phase could subsequently be different. This design allows the researcher to examine the effect of the dance movement therapy programme with more certainty as the intervention is administered to both groups whilst both groups are being tested on the dependent variables before and after participation. The advantages and impact limits of the second phase treatment are beyond the scope of this research, although essential to consider for future research.

As mentioned within the methodology chapter *supra*, the items on the Cook Medley Hostility Scale were difficult to understand and therefore had to be adjusted in order for the adolescent to understand the questions sufficiently. Yet, despite the attempts to adapt the difficulty scale the adolescents still struggled with the items. Furthermore, because the Cook-Medley Hostility Scale is a self-report measure, it may have caused the adolescent to rather, especially because of the assistance granted by the researcher, answer in a socially desirable manner. The Cook Medley Hostility Scale was developed for an adult population. It is my submission that this phenomenon has had an effect on the results within this study. The

participants struggled to understand most of the items on the questionnaires. The researcher believes that if the adolescent version of the Cook Medley Hostility Scale had been administered it could have changed some of the results. Unfortunately, the researcher had version challenges to overcome and the adolescent version of the Cook-Medley Hostility Scale was not available to the researcher. As mentioned before, the researcher had limited resources available and had to adjust and use what was available.

6.6 Adolescent's Experience

Additionally, the researcher believes it is of value to include the adolescents' experience of the six-week dance movement therapy programme. Most of the participants continually reiterated that they enjoyed the alternative therapeutic approach. They explained that they enjoyed the dance movement therapy more than the individual 'talk therapy'. There was a sense of accomplishment and an observable increase in confidence as the sessions progressed. The researcher is of view that this was in part due to the participants' increase in their movement repertoire. Furthermore, the participants became more comfortable as they experienced the non-judgemental atmosphere of the sessions. The researcher received positive feedback from the participants at the end of the dance movement programme and therefore conceptualised that the participants enjoyed and benefitted from a creative and alternative therapeutic approach.

6.7 Conclusion

In conclusion, based on the information provided above, the study could not determine from the results whether the dance movement therapy programme may increase self-esteem and decrease level of hostility. However, this study provides a useful illustration of how such a research study could be administered. As mentioned above, the effect of the individual differences, especially race and gender, between the groups can only be determined once it has been controlled. It is crucial to strive to create an equilibrium between the experimental- and control group. It is vital to include a larger sample of participants in order for robust statistical techniques to be used. It is advised that the self-esteem should be more a realistic standard when the study commences in order to determine an accurate increase or decrease within the variable. It is necessary for the intervention programme to be extended over a longer period of time as this will ensure that the emotions being uncovered are explored and under control. Investigating the

effect of dance movement therapy as an alternative therapeutic approach remains important to psychology and the scientific community.

7. Conclusion

The pitfalls and benefits of the research study were identified and the impact thereof on the research will be elaborated on in this chapter. The researcher is confident that consideration of these issues will be beneficial for further research studies. The researcher anticipated that the six-week dance movement therapy programme may influence the two dependent variables, self-esteem and level of hostility.

Dance movement therapy was used as alternative techniques to ‘talk therapy’ hoping that this will assist in relieving the lingering trauma of childhood sexual abuse. Dance movement therapy is a therapy that focusses on expressing conscious and unconscious emotions through body movements. The informed expectation was that the dances may cause the participants not only to experience certain hidden emotions but to also create an opportunity for dealing with and understanding these emotions. The sympathetic feedback provided by the therapist (researcher) during the dance movement therapy sessions in fact enhanced this particular outcome. The researcher hoped that applying a six-week dance movement therapy programme will increase self-esteem and help the participants experience, understand and control their level of hostility.

The study employed a quantitative research design with a quasi-experimental research strategy. Therefore questionnaires were used to determine whether the independent variable, dance movement therapy, had influenced the participant’s self-esteem and level of hostility. The Rosenberg Self-Esteem Scale and Cook-Medley Hostility Scale were completed by the 18 participants before and after the dance movement therapy programme and were measured to determine whether the dance movement therapy programme had an influence. The group of eighteen participants were divided into an experimental- and control group. The eight participants within the experimental group received the dance movement therapy programme. Both the control group and experimental group were required to complete the two questionnaires before and subsequent to the six-week dance movement therapy programme.

The results of the study revealed a non-significant difference in self-esteem and level of hostility for the experimental group. The six-week dance movement therapy programme did not influence the dependent variables as expected. Although it cannot be established from this study whether dance movement therapy increased the self-esteem and lowered level of hostility, useful

information can be construed from this study. I have in the paragraphs above dealt with the lessons learned and possible causes of the unanticipated outcome but in summary want to emphasise three important aspects. For purposes of any future endeavours in this regard, it is important to ensure the equal division of biographical differences between the experimental- and control-group. It is furthermore proposed that the researcher should ensure that the self-esteem and level of hostility pre-test score is more or less equal for both groups at the start of the study. Lastly, yet importantly it is essential that the control group is not subjected to other forms of interventions during the dance movement therapy programme. The lack of statistical significance could be due to any confounding variable such as the small sample size, maturation, biographical differences, convenient sampling and history effect.

The researcher identified and discussed certain specific limitations to the study and recommendations that should be taken into consideration for future studies will in the following paragraphs group it together.

7.1 Limitations

The following are limitations that were identified throughout the research process:

- The researcher hoped for a larger sample of participants. The small sample used in the research could have contributed to the result not being statistically significant
- The researcher had limited resources available and therefore was constricted to participants within the children's home. Further, convenient sampling was necessary as participants had to be willing to attend all the sessions. Therefore the sample was not representative of the population. Although, the researcher employed random sampling with the selected 18 participants there were limitations placed on the random sampling as some participants would not have been able to attend all of the sessions. The uneven distribution of demographic characteristics could have affected the results.
- A significant percentage (25%) of the participants within the experimental group did not attend all six of the dance movement therapy sessions. The results could have been different if they attended all the sessions. Their absence may very well have affected the results.

- As mentioned throughout the research, the dance movement therapy programme was administered over six weeks, thus six sessions. The researcher decided on a six-week programme as time constraint was evident. Therefore, if the dance movement therapy programme was extended over 12 weeks the results could have been different, the expectation that the level of hostility within the experimental group could have decreased because of a gain in a sense of control is very reasonable.
- Both the Rosenberg Self-Esteem Scale and Cook-Medley Hostility Scale is not standardised for a South African population. Therefore cultural differences could have affected the results.
- The Cook-Medley Hostility Scale was developed for an adolescent population. The researcher lowered the complexity of the questions but cannot escape the conclusion that application of the scale could have affected the results.
- Most of the participants within the control group attended individual or other group therapy programmes which could have affected their results. Maturation was also a confounding variable that possibly impacted the results. This was beyond the researcher's control.

7.2 Recommendations

Based on the limitations mentioned above and the experience of the researcher, the following recommendations are stated for future research:

- A larger sample would be beneficial and could lead to more definite results
- The sample should be more representative of the entire populations, therefore extending the research beyond the children's home.
- Further, the participants should be selected randomly as this would decrease the influence of uneven demographic characteristics.
- To allow for the identification of possible significant differences the dance movement therapy programme should be implemented over an extended period of time. This will allow enough time to have an impact on the dependent variables as well as would possibly lead to more lasting consequences.

- Steps should be implemented to ensure that participants within the experimental attend all the dance movement therapy sessions as this will ensure more conclusive results.
- The measurement instruments used for future studies should be standardised for a South African population as this will ensure that cultural differences don't affect the results
- The scale that measures level of hostility should be standardised for an adolescent populations as the complexity of the items would be developmentally appropriate.

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Appendix A

Rosenberg Self-Esteem Scale

Name/Naam: _____ Surname/Van: _____

Participant number: _____ Gender/Geslag: _____

Age/Ouderdom: _____ Signature/Handtekening: _____

Please read the instructions:

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement. If you strongly agree, circle SA. If you agree with the statement, circle A. If you disagree with the statement, circle D. If you strongly disagree with the statement, circle SD.

		Strongly Agree	Agree	Disagree	Strongly Disagree
1.	On the whole, I am satisfied with myself.	SA	A	D	SD
2.*	At times I think I am no good at all.	SA	A	D	SD
3.	I feel that I have a number of good qualities.	SA	A	D	SD
4.	I am able to do things as well as most other people	SA	A	D	SD
5.*	I feel I do not have much to be proud of.	SA	A	D	SD
6.*	I certainly feel useless at times.	SA	A	D	SD
7.	I feel that I'm a person of worth, at least on an equal plane with others.	SA	A	D	SD
8.*	I wish I could have more respect for myself.	SA	A	D	SD
9.*	All in all, I am inclined to feel that I am a failure.	SA	A	D	SD
10.	I take a positive attitude toward myself.	SA	A	D	SD

Rosenberg Self-Esteem Scale

Name/Naam: _____ Surname/Van: _____

Participant number: _____ Gender/Geslag: _____

Age/Ouderdom _____ Signature/Handtekening: _____

Asseblief lees die instruksies:

*Hieronder is n lys met stellings wat verband hou met algemene gevoelens oor jouself. Asseblief dui aan of jy volkome saamstem of nie saam stem nie. As jy **volkomse saamstem**, maak n sirkel om **VS**. As jy **saamstem** met die stelling, maak n sirkel om **S**. As jy **nie saam stem nie**, maak n sirkel om **NS**. As jy **glad nie saam stem nie**, maak n sirkel om **GS**.*

		Ek stem volkome saam	Ek stemsam	Ek stem nie saam nie	Ek stem glad nie saam nie
1.	Oor die algemeen is ek tevrede met myself.	VS	S	NS	GS
2.*	Sommige tye dink ek, ek is nie goed genoeg nie.	VS	S	NS	GS
3.	Ek voel dat ek het n paar goeie kwaliteite	VS	S	NS	GS
4.	Ek is in staat om dinge te kan doen so goed soos ander dit kan doen.	VS	S	NS	GS
5.*	Ek voel dat ek nie baie het om op trots te wees nie.	VS	S	NS	GS
6.*	Partykeer voel ek nutteloos.	VS	S	NS	GS
7.	Ek voel dat ek n person is wat waarde het en dat ek gelyk is aan ander.	VS	S	NS	GS
8.*	Ek wens ek het meer respek gehad vir myself.	VS	S	NS	GS
9.*	Bowenalles, is ek regverdig om te voel soos n mislukking.	VS	S	NS	GS
10.	Ek neem n positiewe houding aan teenoor myself.	VS	S	NS	GS

Appendix B

Cook-Medley Hostility Scale

Name/Naam: _____ Surname/Van: _____

Participant number: _____ Gender/Geslag: _____

Age/Ouderdom: _____ Signature/Handtekening: _____

Asseblief lees die instruksies:

Hieronder is n lys met stellings wat verband hou met jou vlakke van vyandigheid insluitend woede geneigdheid, wantroue en wrok. Asseblief dui met n X of die stelling waar is of vals is in verband met jouself. As jy saam met die stelling stem, dui waar aan. As jy nie saam met die stelling stem nie, dui vals aan.

Please read the following instructions:

*Below is a list of statements dealing with your level of hostility including anger-proneness, mistrust and resentment. Please indicate with an X if the statement is true or false for you. If you agree with the statement, indicate **true**. If you do not agree with the statement, please indicate **false**.*

	English statement	Afrikaans stelling	True/Waar	False?Vals
1	When people do me wrong, I feel that I should pay them back if I can, because they deserve it	Wanneer iemand iets teen my verkeerd doen , voel ek ek moet hul terug kry want hul verdien dit		
2	I prefer to pass by school friends, or people I know but have not seen for a long time, unless they speak to me first	Ek verkies om mense te vermy by die skool of mense wat ek ken maar lanklaas gesien het, tensy hulle eerste met my praat		
3	I have often had to take orders from someone who did not know as much as I did	Ek moes al dikwels opdragte volg van iemand wat nie so baie kennis soos ek het nie.		
4	I think many people exaggerate their problems in order to gain sympathy and help from others.	Ek dink mense oordryf hul probleme om simpatie en hulp van ander te ontvang		
5	It takes a lot of argument to convince people of the truth	Dit verg baie oorreding om mense te oortuig van die waarheid		
6	I think most people would like to be the best	Ek dink meeste mense wil die beste wees		
7	Someone has it in for me	Iemand het iets teen my		
8	Most people are honest mainly because they are	Meeste mense is eerlik, hoofsaaklik omdat hul bang is om uitgang te		

	afraid of being caught	word		
9	Most people will use some unfair way to gain profit or an advantage rather than to lose it.	Meeste mense sal eerder n onregverdige manier gebruik om voordeel te trek eerder as om dit te verloor		
10	I often wonder what hidden reason another person may have for doing something nice for me	Ek wonder dikwels wat die bedekte rede is, indien n persoon iets goed doen vir my		
11	It makes me impatient to have people ask my advice or otherwise interrupt me when I am working on something important	Ek raak ongeduldig wanneer mense my raad vra of my onderbreek, wanneer ek besig is met iets belangriks		
12	I feel that I have often been punished without cause	Ek voel dat ek dikwels gestraf word sonder rede		
13	I am against giving money to beggars	Ek is gekant daarteen om geld vir bedelaars te gee		
14	Some of the people in my house have habits that bother and annoy me very much	Sommige lede van my familie doen goed wat my pla en irriteer.		
15	My way of doing things are misunderstood by others	My manier van dinge doen word gewoonlik misverstaan deur ander.		
16	I don't blame people for trying to grab everything they can get in this world	Ek blameer nie mense wat soveel as moontlik dinge vat in die lewe soos wat hul kan nie.		
17	It is safer to trust nobody	Dis veiliger om niemand te vertrou nie		
18	I do not blame a person for taking advantage of people who leave themselves open to it	Ek neem 'n persoon nie kwalik wat 'n ander persoon uitbuit nie, veral nie as hy homself daaraan blootgestel het nie		
19	I have often felt that strangers were looking at me critically	Ek voel gereeld dat vreemdelinge krities na my kyk		
20	Most people make friends because friends are likely to be useful to them	Meeste mense maak vriende vir die rede dat vriende nuttig kan wees.		
21	I am sure I am being talked about	Ek is seker daar word oor my gepraat		
22	I am likely not to speak to people until they speak to me	Ek sal heel waarskynlik nie met mense praat, indien hul nie eerste met my praat nie		
23	Deep down, most people dislike putting themselves out to help others people.	Diep binne, glo ek dat meeste mense hou nie daarvan om goed op te gee om ander te help nie		
24	No one cares much what happens to you	Niemand gee regtig om wat met jou gebeur nie		
25	I tend to be on my guard with people who are somewhat more friendly than I had expected	Ek is geneig om op my hoede te wees, indien iemand oorvriendelik is		

26	People often disappoint me	Mense stel my meestal teleur		
27	I have met people who were supposed to know better and be more skilled than I actually no better than I	Ek het al dikwels mense ontmoet wat veronderstel is om kenners op 'n gebied te wees, maar wat dan nie meer weet as ek van die onderwerp		
28	It makes me feel like a failure when I hear the success of someone I know well	Dit laat my soos n mislukking voel as ek die sukses stories hoor van mense wat ek goed ken.		
29	People generally demand more respect for themselves than they are willing to give others	Mense vereis meer respek vir hulself as wat hul bereid is om vir ander te gee.		
30	I am quite often not in the gossip and talk of the group I belong to	Ek is meestal nie in die skinder stories of praatjies van die groep waaraan ek behoort nie.		
31	I have often found people jealous of my good ideas, just because they had not thought of them first	Ek vind meestal mense is jaloers op my goeie idees, net omdat hul nie eerste daaraan gedink het nie		
32	I don't like to be part of a crisis or difficult situation	Ek skram weg van krisisse of moeilike situasies		
33	I like keeping people guessing what I'm going to do next	Ek hou daarvan om mense te laat wonder oor wat ek volgende gaan doen		
34	I frequently ask people for advice	Ek vra gereeld advies by mense		
35	I would certainly enjoy beating criminals at their own game	Ek sal dit geniet om kriminele te oorwin met hul eie skelmstreke		
36	I have at times had to be rough with people who were rude or annoying	Ek moes al partykeer kwaai wees met mense wat ongeskik of irriterend is		
37	There are certain people that I dislike so much that deep down I am pleased when they are caught out for something they have done	Daar is sekere mense waarvan ek so min hou, dat ek bly was toe hul uitgevang is vir iets wat hul verkeerd gedoen het		
38	I am often inclined to go out of my way to win a point with someone who has opposed me	Ek is dikwels geneig om uit my pad te gaan om 'n argument teen 'n teenstaander te wen		
39	I do not try to cover up my poor opinion or pity of people so that they won't know how I feel	Ek probeer nie eers my swak opinie of bejammering van mense wegsteek nie.		
40	I have frequently worked under people or with people who does things in a way so that they can get credit for the good work they have done but their mistakes are not seen	Ek het al dikwels onder mense gewerk wat dinge op so 'n manier doen dat hul erkenning kry vir goeie werk, maar die skuld vir hulle foute en mislukkings word op ander afgeskuif		

41	I strongly defend my own opinions as a rule	As n reel, verdedig ek my opinie baie sterk		
42	People can pretty easily change my mind even when I have made a decision about something	Mense kan my baie maklik van opinie laat verander, selfs al het ek klaar 'n besluit daaroor geneem		
43	Sometimes I am sure that other people can tell what I am thinking	Ek is soms oortuig dat mense kan sien wat ek oor dink		
44*	My house members or family are all in sympathy with me. In other words they understand my feelings.	Die huismense of familie het simpatie met my.		
45*	I can be friendly with people who do things which I consider wrong	Ek kan steeds vriendelik wees met mense, al doen hul in my opinie verkeerde dinge		
46*	I am not easily angered	Ek word nie vinnig kwaad nie.		

Appendix C

Informed Consent

Research study: The effect of dance movement therapy on the self-esteem and state of hostility of sexually abused adolescents at a Children's Home.

There are three parts to this informed consent form:

1. An information leaflet to provide information about the research study.
2. An assent form for the adolescent to read and sign if they choose to participate.
3. A consent form for the guardian to read and sign if they agree that the adolescent can participate.

Part 1

The Information Leaflet

Purpose of the study

My name is Amorie Burns, a counselling masters student at the University of Pretoria. I am currently conducting a research project called: The effect of dance movement therapy on the self-esteem and state of hostility of sexually abused adolescents at a Children's Home.

This research study is aimed at determining if dance movement therapy can have an effect on the self-esteem and level of hostility of the adolescent population at a Children's Home. Dance movement therapy is an alternative to other traditional psychotherapies and it talks to different brain regions to address the trauma the child faces.

Participation

The research will involve your participation by requesting that the participant should complete the two questionnaires before the dance movement programme immense. Thereafter, some of the participants will take part in a dance movement intervention programme that will run over six weeks. Participants will be required to attend one session a week for 60 minutes. After the six weeks the participants will be requested to complete the same two questionnaires again.

During the six weeks the dance movements and music will be used to explore emotional themes related to trauma of the sexual abuse. Each session will be divided between a warm-up, structured group dance,

creative emotional expression and a cool-down. Relaxation exercises will be included in the warm-up as this will increase body awareness and connection.

Potential risk or discomfort

There is a possibility for some physical injury during the dance movement programme. This could be prevented by doing proper warm-up and cool-down exercises at each session. If certain emotions arise during the session and cannot be dealt with during the 60 minutes, the researcher arranged with the Children's Home that she will be available for debriefing of the adolescent after the session.

Possible benefits

The possible benefits for participation in the dance movement programme can include an improved self-esteem and lowered hostility behaviour. Further, the intervention can increase physical fitness and social relations.

If you have any further questions regarding the research study, you can contact the researcher.

Amorie Burns

083 555 8072

amorienel@gmail.com

Part 2

Part 2 is divided in two parts: Afrikaans and English assent form.

Instemmings vorm

Geagte Deelnemer,

Vir jou om te kan deel neem aan my navorsings studie, benodig ek jou toestemming. Die studie gaan hieroor: The effect of dance movement therapy on the self-esteem and state of hostility of sexually abused adolescents at a Children's Home.

Jy moet die volgende mooi deur lees en goed verstaan, voordat jy jou toestemming gee:

- Ek verstaan dat dit my eie besluit is om deel te neem. As ek nie meer wil deelneem nie, mag ek onttrek sonder dat ek in die moeilikheid sal kom. My deelname is vrywillig.
- Ek weet waaroor die navorsingstudie gaan, soos verduidelik deur Amorie Burns, en ek het die kontakbesonderhede van die navorser (Amorie Burns) as ek enige vrae het.
- Ek verstaan dat my persoonlike inligting anoniem sal bly. Dit beteken dat my naam en enige ander inligting wat my bekend kan maak, nie op die navorsing studie sal verskyn nie.
- Ek verstaan dat al die inligting in die navorsingstudie vertroulik gehou word. Dit beteken dat die inligting sal nie bekend gemaak word vir ander mense nie.
- Ek verstaan dat ek in n sielkundige navorsingsstudie deelneem en dat net die nodige inligting gebruik sal word vir die navorsingsstudie.

Ek, _____ verstaan die verduideliking soos hierbo beskryf, en soos verduidelik deur Amorie Burns. Ek wil deelneem aan die dans terapie program.

Datum

Handtekening van Deelnemer

Datum

Handtekening van Voog/Getuie

Datum

Handtekening van Navorsers

Amorie Burns (Navorsers)

083 555 8072 of amorienel@gmail.com

Assent Form

Dear Participant,

In order for you to participate in this research study, I would require your informed assent that you agree to participate in the study titled: The effect of dance movement therapy on the self-esteem and state of hostility of sexually abused adolescents at a Children's Home.

Please give attention to the following:

- I understand that my participation is my choice and I may refuse to participate without any penalty. That is, the participation is voluntary.
- I understand that I have been provided with information on the research in which I shall participate and have been given the name and contact details of the researcher if I have any further questions.
- I understand that my participation will be anonymous. That is, my name and details will not be linked to any particulars in the research study.
- I understand that all the information of the research study will remain confidential.
- I understand that I am participating in a psychological research study and therefore the information of the study will be used for research purposes.

I, _____, understand the above, as explained by my guardian and the researcher (Amorie Burns). I agree to be part of the dance movement therapy programme.

Signature of Participant

Date

Signature of Witness/Guardian

Date

Signature of Researcher

Date

Amorie Burns (Researcher)

083 555 8072 of amorienel@gmail.com

Part 3

Consent Form

Dear Guardian,

For the participant to participate in the research study, I require that you as the guardian give your informed consent that the adolescent who is younger than 18 years may participate in the study titled: The effect of dance movement therapy on the self-esteem and state of hostility of sexually abused adolescents at a Children's Home. Please give attention to the following:

- I understand that the participation of the adolescent is voluntary and that I may refuse further participation without any penalty.
- I understand that I have been provided with information on the research study in which the adolescent will participate and have been given the name and contact details of the researcher if I have any further questions.
- I understand that the participation will be anonymous. That is, the adolescent's name and details will not be linked with any particulars.
- I understand that all the information of the research study will remain confidential.
- I understand that the adolescent is participating in a psychological research study and therefore the information of the study will be used for research purposes.

I, guardian of _____, understand the above, as explained by the researcher (Amorie Burns) and social workers at the Children's Home. I agree that the adolescent may be part of this study.

Signature of Guardian

Date

Signature of Witness

Date

Signature of Researcher

Date

Appendix D

Table D1 Gender distribution

Gender	Experimental Group	Control Group	Total	Percentage
Male	2	3	5	28%
Female	6	7	13	72%
Total	8	10	18	100%
Percentage	44%	56%	100%	

Table D2 Chi-Square for Gender

Test Statistics

	Gender
Chi-Square	3.556 ^a
df	1
Asymp. Sig.	.059

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 9.0.

Table D3 Chi-Square for Race

Test Statistics

	Race
Chi-Square	3.556 ^a
df	1
Asymp. Sig.	.059

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 9.0.

Table D4 Race for experimental group (equal)

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.545 ^a	1	.060		
Continuity Correction ^b	1.831	1	.176		
Likelihood Ratio	3.678	1	.055		
Fisher's Exact Test				.118	.088
N of Valid Cases	18				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 2.22.

b. Computed only for a 2x2 table

Table D5 Mann-whitey results for age category

N=18	Age
Mann-Whitney U	53.50
Wilcoxon W	198.50
Standardised test statistic (z score)	1.22
Asymptotic Sig. (2-sided test)	0.23
Exact Sig. (2-sided test)	0.24
Effect size (r value)	0.29

Table 6D Results from experimental-, control- and total group

Group	Age	Rosen_pre	Rosen_post	hos_pre	hos_post	Rosen_gain	Hostile_gain	
Experimental	Mean	13.000	27.7500	28.7500	29.3750	31.1250	1.0000	1.7500
	N	8	8	8	8	8	8	8
	Std. Deviation	2.0000	4.97853	3.01188	6.30051	7.93613	5.09902	4.16619
	Minimum	11.0	19.00	24.00	19.00	21.00	-4.00	-7.00
	Maximum	17.0	33.00	33.00	37.00	42.00	12.00	7.00
	Median	12.500	30.0000	29.0000	31.0000	31.5000	.0000	1.5000
Control	Mean	14.100	21.4000	25.1000	32.1000	29.6000	3.7000	-2.5000
	N	10	10	10	10	10	10	10
	Std. Deviation	1.9120	4.42719	3.17805	5.62633	8.27580	2.58414	6.99603
	Minimum	11.0	15.00	19.00	21.00	18.00	1.00	-15.00
	Maximum	17.0	29.00	30.00	39.00	39.00	8.00	11.00
	Median	14.000	21.0000	25.0000	34.0000	31.5000	2.5000	-2.5000
Total	Mean	13.611	24.2222	26.7222	30.8889	30.2778	2.5000	-.6111
	N	18	18	18	18	18	18	18
	Std. Deviation	1.9745	5.57891	3.54477	5.91995	7.92469	4.01834	6.14663
	Minimum	11.0	15.00	19.00	19.00	18.00	-4.00	-15.00
	Maximum	17.0	33.00	33.00	39.00	42.00	12.00	11.00
	Median	13.500	23.5000	26.5000	32.5000	31.5000	2.0000	.5000