# The effectiveness of therapy dogs in a South African clinical context: A critical review


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Mini-dissertation accepted in fulfilment of the requirements for the degree Master of Arts in Clinical Psychology at the North-West University

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## SUMMARY

The effectiveness of therapy dogs in a South African clinical context: A critical review.



*Keywords:* Animal-assisted therapy, therapy dogs, psychology, South Africa, clinical context, critical review.



Depression, loneliness, anxiety, isolation, and a lack of engagement and motivation are symptoms that are prevalent in the clinical context of South Africa. Patients in the South African clinical context face numerous challenges, such as substance abuse, psychotic disorders, stress, and attachment difficulties. However, a brief interaction with a dog yields significant relief and produces positive effects for such patients. Moreover, mental and physical health are closely linked; therefore, enhancing individuals' physical health can directly improve their mental health. Evidence has shown that through experiencing interaction with therapy dogs, patients encounter numerous health benefits. The primary goal of healthcare professionals in the South African clinical context should be to improve patients' mental health. Overall, therapy dogs can improve the global functioning of patients and the severity of serious psychiatric disorders.

A therapy dog can be defined as a dog that delivers interaction with humans that is of a therapeutic nature, usually in a clinical context, to improve their emotional, physical, social, and cognitive functioning. Therapy dogs work in alliance with a specialised human psychologist to offer motivating and empathetic treatment proposed to facilitate a patient's recovery.

A critical review of scientific literature has been conducted for this research study in order to review what has been examined and written about the phenomenon so far and to provide an all-inclusive account of therapy dogs and the effectiveness of these dogs within

the South African clinical context. The focus on therapy dogs is motivated by the lack of research therein in the South African clinical context. There is a lacuna in research on therapy dogs in the South African clinical context; thus, it is essential for the findings or conclusions to be synthesised, allowing for a clearer empirical understanding of this phenomenon.

All the data for the critical review were obtained from English peer-reviewed published studies that scientifically evaluated the effectiveness of therapy dogs in a clinical context in South Africa. Once the search and appraisal of the literature had been conducted successfully, three studies were included in the final pool for analysis. Thematic analysis was used to identify themes for the research study. Important themes that were identified included the following: enhancement of health benefits; motivational tool or technique in therapy; the need for trained professionals; and the lack of research in the South African clinical context.

This research study provides a synthesis of the effectiveness of therapy dogs in a clinical context in South Africa. Thus, the research study can be used as a basis for further studies and the application and development of therapy dogs within the South African clinical context. The research study reveals the effectiveness of therapy dogs in a clinical context in South Africa and the importance of implementing therapy dogs to enhance the mental health of patients to decrease anxiety, depression, and seclusion and to increase positive feelings, communication, and a sense of happiness.

# PREFACE

- The stipulated guidelines for the article by the North-West University in the A-rules have been adhered to in this mini-dissertation.
- See Appendix A for the ethics approval of this research study.
- The article (Section 2 of the mini-dissertation) will be submitted to the *South African Journal of Psychology* (SAJP) for possible publishing.
- The mini-dissertation complies with the guidelines established by the American Psychological Association (6th edition). Section 2 of the mini-dissertation was compiled according to the author guidelines specified by the SAJP.
- Chronological page numbering is followed, starting with Section 1 and ending with Appendix B.
- The language editing of the mini-dissertation was conducted by a qualified language practitioner (see Appendix B).
- The submission of the mini-dissertation for examination purposes (in fulfilment of the requirements for the master's degree in Clinical Psychology) was approved by the research supervisor, Professor Werner de Klerk.
- The mini-dissertation was submitted to Turn-it-in.

**PERMISSION LETTER FROM SUPERVISOR**

I, Prof Werner de Klerk, herewith grant permission for Francis Jansen van Rensburg to submit this mini-dissertation entitled "The effectiveness of therapy dogs in a South African clinical context: A critical review" for degree purposes.

23/11/2020

Prof Werner de Klerk
Programme Administrator (Research Psychology)
Associate Professor / Research Psychologist
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Potchefstroom

## DECLARATION

I, Francis Jansen van Rensburg, declare that this research study, *The effectiveness of therapy dogs in a South African clinical context: A critical review*, is initial work done by myself. This research study serves in the partial fulfilment of my master's degree in Clinical Psychology done at the North-West University in Potchefstroom. This work has never been submitted for examination. The necessary consent of all relevant parties has been given to conduct this research study, and throughout this mini-dissertation the required acknowledgment has been given to all reference material.

Francis Jansen van Rensburg

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## STRUCTURE OF RESEARCH MINI-DISSERTATION

This mini-dissertation includes three sections. Section 1 provides an all-inclusive comprehensive literature overview that attempts to offer pertinent information regarding the components and structures of this research study to orientate the reader (pp. 1-31). Section 2 is a presentation of the article, which includes the methodology used, the research findings, and a discussion of the findings, along with the limitations of the research study and the conclusion (pp. 32-57). The final section, Section 3, is a critical reflection on the experiences of the researcher conducting the research study, as well as an overview and the possible further implementation of the research study (pp. 58-69).

# SECTION 1: INTRODUCTION

## Introduction

The comprehensive literature overview presented in Section 1 aims to provide the reader with a broad understanding of the important components of this research study. The topics covered in the literature overview include animal-assisted therapy (AAT) and therapy dogs. The problem statement, the methodology used (in-depth overview), ethics, and rigour are also presented in this section of the mini-dissertation.

## Animal-Assisted Therapy

> *Animals are an aid in that they help to fill needs which are not being met in other, perhaps better ways, because society makes inadequate provision for meeting them. In the meantime, animals can provide some relief, give much pleasure and remind us of our origins.* (Dr Boris Levinson, 1969 – former Director of Human Companion Animal Therapy at the Blueberry Centre and Professor Emeritus of Psychology at Yeshiva University's Ferkauf Graduate School of Psychology)

From the beginning of time, animals have served as companions to people; currently, researchers have started to study the human-animal relationship in greater detail (Van Heerden, 2018). In 1867, a centre for treatment in Germany that focused on treating people with epilepsy accredited the benefits of animals for individuals and added animals as companions to their therapeutic group (Budahn, 2013). AAT originated from human-animal interaction, which is defined by Jones, Rice, and Cotton (2018) as any relationship between humans and animals, whether domesticated pets or not. Knesl, Hart, Fine, and Cooper (2016) state that there is a reciprocated connection between people and animals, which can be defined as a shared self-motivated and beneficial relationship that is influenced by behaviour considered to be significant to the health and wellbeing of both. The connection consists of,

but is not limited to, physical, emotional, and psychological connections between humans, animals, and the environment (Knesl et al., 2016). Put more simply, this relationship is symbiotic in nature and a dynamic process where there is a mutual connection that results in the satisfaction of the needs of both species (humans and animals) (Knesl et al., 2016).

AAT originated many years ago, and early pioneers in this field had a high degree of success (Odendaal, 2000). AAT was initially acknowledged in the United States of America at the Pawling Army Air Force Convalescent Hospital in New York (Altschiller, 2011). This hospital treated soldiers suffering from psychological trauma, who interacted with farm animals, including cows and horses (Altschiller, 2011). Shubert (2012) mentions that the initial recognised case of animals being utilised for therapeutic reasons occurred in the ninth century in Gheel, Belgium. Animals formed part of a treatment for handicapped people in the Gheel community (Shubert, 2012). In 1792, the York Retreat, a mental retreat in England, was the first to use animals as a therapeutic agent (Altschiller, 2011; Budahn, 2013; Serpell, 2011). This retreat used rabbits to offer patients the opportunity to interact with and put their attention on something external that awakened compassionate and social emotions. In 1867, animals became an essential part of the therapy process for epileptics at a residential treatment centre in Bielefield, Germany (Altschiller, 2011).

According to Hettema (2002), William Tuke (circa 1792) of the York Retreat Hospital was an early developer of AAT in England. The therapeutic aim with the incorporation of animals at this hospital "was to facilitate the development of self-control for emotionally disturbed people by stimulating responsibility" (Hettema, 2002, p. 8). The hospital proposed to treat individuals with mental illnesses like lucid beings and believed that treating patients as ordinary individuals would be beneficial. Tuke also tried to modify treatment to each patient and contained patients with similar conditions together (Hettema, 2002).

Moreover, Boris Levinson, a psychologist, was the pioneer of AAT with children and found that animals acted as a social lubricant that created a more comfortable context, encouraging self-disclosure (Friesen, 2010). Some of Levinson's objectives with AAT were grounded in the formation of a safe relationship between children and animals (Friesen, 2010; Hettema, 2002). Moreover, Levinson observed that contact between a psychotherapist and child became probable through the canine's (dog) acceptance of the child, predominantly when the child had been otherwise unresponsive to extensive treatment (Friesen, 2010). Hence, combining the dog in sessions with children can enable rapport between the therapist and the child (Friesen, 2010). It was not until the 20th century that people really began to comprehend the potential AAT had on humans' overall wellbeing (Le Roux & Kemp, 2009). As a result, research began to show the benefits AAT could produce, and professionals began to implement AAT (Le Roux & Kemp, 2009).

Le Roux and Kemp (2009) define AAT as a goal-directed, controlled, strategic, and recognised intervention being delivered in a wide variety of contexts by a trained professional who is registered with the professional board and where the animal is a fundamental part of the treatment process. Delta Society defines AAT as therapeutic, where the role of the animal is essential in assisting with speech therapy, mental health therapy, physical therapy, or occupational therapy, and the animal enhances physical, mental, emotional, and social wellbeing (Cole, 2009).

It is recommended that professionals pursuing to include AAT in practice should have formal training (Chandler, 2017). Van Heerden (2018) states that the intervention should be therapeutic in nature, and all treatment must be evaluated and documented. AAT is not a therapy technique in and of itself but rather a specific therapeutic assistant that can be broadly applied (Hettema, 2002). In addition, utilising animals in therapy can act as an aid to other therapeutic methods (Hettema, 2002). AAT usually incorporates dogs, but other animals,

such as cats, horses, dolphins, birds, and lamas, can be included within the definition (Cowell, 2017). AAT consists of a set of nonpharmacological interventions intended to improve human wellbeing using skilled animals (Hettema, 2002; Peluso et al., 2018).

Moreover, according to Cole (2009), therapy integrated with AAT is a practical, effective, and worthwhile technique. Therapists should be skilled enough in their area of expertise in therapy and practice to be able to integrate animals thoughtfully into their practice (Cole, 2009). It is significant for the professional psychologist to be able to effectively include an animal as a therapeutic change mediator into the therapy process in a way that shields the protection and welfare of both the individual and the animal (Chandler, 2017). AAT has often been recognised to be a significant catalyst for the psychologist-patient relationship, and it is said to enhance the building of rapport between therapist and patient (Buckle, 2015). This encourages social contact between the psychotherapist and the patient and forms an atmosphere where the patient can self-disclose and experience trust, compassion, comfort, and warmth (Coetzee, Beukes, & Lynch, 2013). Thus, a therapeutic context with the presence of an animal allows for a non-threatening, safe setting where the patient can reveal personal feelings and experiences (Coetzee et al., 2013). In addition, Chandler (2017) describes AAT as fulfilling a therapeutic role in cognitive behavioural therapy. To sum up, the purpose of AAT is to develop rapport, build and create trust, communicate emotions and thoughts, improve insight, gain societal capabilities, demonstrate effective behaviour, and build self-confidence (Chandler, 2017).

**Animal-assisted therapy and animal-assisted activities.** AAT distinguishes between the use of an animal as a means of support to therapy and an animal-directed form of treatment (Hettema, 2002). Therefore, it is important to differentiate between AAT and animal-assisted activities (AAAs), as there may be confusion regarding the two terms. An AAA should not be confused with therapy, even though it has positive outcomes (Buckle,

2015). AAAs, according to Van Heerden (2018), can deliver recreational and motivational benefits to boost quality of life, whereas AAT is for therapeutic purposes and is involved in a patient's treatment plan. Buckle (2015) states that AAAs do not include therapeutic goals; instead, the animal acts as a social remedy in a variety of settings. AAA visits are spontaneous, unstructured, unplanned, and can provide company, support, comfort, pleasure, stress relief, or stimulation to those the animals visit (Buckle, 2015; Simon, 2014). It is also noted that an AAA is facilitated by someone who does not have to be professionally trained and may be just a volunteer (Van Heerden, 2018). Individuals who facilitate AAAs generally do not have a degree in professional health sciences (Geletta & Duranowski, 2016). Geletta and Duranowski (2016) mention that conducting AAAs can pose various ethical challenges, as the individual facilitating the activity may not be professionally trained and thus does not have proper ethical training.

Van Heerden (2018) declares that it is extremely significant to make a clear distinction between recreation and therapy, where therapy relates to the treatment of disorders by some form of rehabilitation or remedial process, whereas recreation relates to a pleasant experience, exercise, or leisure. According to Fine (2006), AAAs consist of support-based and casual encounters involving "meet-and-greet" activities in which animals qualified for the purpose of visitation are taken to, for example, hospital wards to comfort the patients. Activities can be conducted with, for example, a dog on a leash, where individuals are allowed to interact with the dog by grooming, stroking, and talking to the dog (Le Roux & Kemp, 2009). Geletta and Duranowski (2016) mention various examples of AAAs that involve "meet-and-greet" activities in nursing homes and providing comfort and support for trauma victims and survivors of crises or disasters. These activities should be conducted with an individual or a small group not exceeding seven participants (Geletta & Duranowski,

2016). Le Roux and Kemp (2009) report that in long-term care facilities, AAA visits can make a difference in the depression levels of individuals.

**Animal-assisted therapy and context.** Recently, AAT has been recognised in the fields of nursing, medicine, and psychotherapy (Budahn, 2013). Furthermore, AAT can be implemented within family therapy, group work, and community work, as well as working with individuals (Van Heerden, 2018). AAT has been practised in prisons, psychiatric units, rehabilitation facilities, burn units, and nursing homes (Altschiller, 2011; Palley, O'Rourke, & Niemi, 2010). According to Friesen (2010), within the clinical context, AAT has become more popular. AAT combined with clinical practice may stimulate the process of change for future possibilities of improving the healthcare system (Chandler, 2017). Research has shown that AAT may be used to help with the mental health care of paediatrics and may be applied as an assistant to improve the care within the healthcare field of the clinical context (Cowell, 2017). According to Jalongo, Astorino, and Bomboy (2004), there are many psychological, physical, and social advantages to AAT in the clinical context. Thus, AAT is utilised with inpatient psychiatric facilities to aid with diagnosis and assessment and create social contact for patients who are isolated in the clinical context (Granger & Kogan, 2006). Peluso et al. (2018) mention that currently, AAT has been trailed for diverse psychiatric and neurological disorders. Fine (2006) reported that in a clinical population of hospitalised psychiatric patients, AAT resulted in reduced anxiety levels of patients with a variety of psychiatric diagnoses, psychotic disorders in particular.

Moreover, AAT can assist with the management of diverse disorders, such as autism spectrum disorder, schizophrenia, anxiety disorders, and depression (Jones, Rice, & Cotton, 2019). In addition to this, AAT might be effectual in the clinical practice for various DSM (*Diagnostic and Statistical Manual of Mental Disorders*) disorders, such as generalised anxiety disorder, bipolar disorder, borderline personality disorder, attention deficit

hyperactivity disorder, conduct disorder, posttraumatic stress disorder, and oppositional defiant disorder (Chandler, 2017). Furthermore, according to Cowell (2017), AAT can be beneficial for neglected and abused children and provide them with comfort from separation or loss and reduce regression. Overall, findings have shown that AAT programmes are being run world-wide in a variety of contexts and with a diversity of populations (Jones et al., 2019).

**South Africa and animal-assisted therapy.** Referring to the history in South Africa, AAT has been used in hospitals, residential facilities, care facilities, and special needs schools (Buckle, 2015). Odendaal (2000) mentions two projects that were significant in the field of AAT. In Potchefstroom at the Witrand Care and Rehabilitation Centre for patients with psychological disorders, a study was focused on using cage birds to aid patients in the normalising process, to screen any overall progress in patient behaviour, and to establish recognition of individual temperament (Odendaal, 2000). In Cape Town, Pollsmoor Prison implemented a programme in which some inmates were involved in raising and breeding parakeets in order to sell them in the community (Hettema, 2002). In addition, in the Eastern Cape Province, a substance abuse inpatient programme used AAT to enhance the remedial process (Coetzee et al., 2013). The AAT intervention involved patients visiting a local animal park where they could sightsee and observe lions, wild dogs, tigers, alpacas, and cheetahs (Coetzee et al., 2013). Patients were also permitted to view, feed, touch, and pet animals such as a giraffe, an impala, rabbits, goats, ostriches, a donkey, and a mongoose (Coetzee et al., 2013). According to Coetzee et al. (2013), the above-mentioned intervention facilitates improved self-awareness and social intercession among inpatients.

However, Beukes (2011) states that there are few psychiatric facilities that practise AAT in their treatment for substance abuse patients. Le Roux, Swartz, and Swart (2014) mention that more recently in the Western Cape, an animal-assisted reading programme was

implemented at a low-socioeconomic elementary school. Lubbe and Scholtz (2014) first experienced AAT in a hospital and observed that patients who interacted with animals appeared to be more positive and energetic.

According to Boyd and Le Roux (2017), another form of AAT is equine-assisted psychotherapy (EAP) and therapeutic horseback riding. In South Africa, EAP was founded by Kim Kidson, a registered clinical psychologist (Boyd & Le Roux, 2017). EAP utilises horses to attain psychotherapeutic results (Boyd & Le Roux, 2017). Change is facilitated by the interaction with the horse and by improving the functioning of a person with disabilities through the riding activity. This type of therapy provides physical effects, such as improving participants' capability to walk, jump, and run, while it also has psychological benefits, such as boosting confidence and improving social functioning (Boyd & Le Roux, 2017). EAP has been implemented in treatment plans for children with autism spectrum disorder in South Africa, where it was found that their skills in communication had been enhanced through therapeutic horseback riding (Boyd & Le Roux, 2017). According to Boshoff, Grobler and Nienaber (2015), EAP can be implemented in South African youth care facilities to improve various coping mechanisms of adolescent boys who display problematic behaviour. EAP is used in South Africa for individuals of any age, married couples, families, and educational groups (Boyd & Le Roux, 2017). Moreover, educational psychologists have utilised EAP with sexually abused children in South Africa (Boyd & Le Roux, 2017). Benefits of EAP include teaching individuals empathy, patience, and communication skills and supporting people in getting in touch with their emotions, responses, and thoughts (Fine, 2006). According to Craig (2016), horses act as non-judgemental and instinctual support structures and facilitate self-reflection, psychological healing, and peace of mind in people who come from a background of turmoil, such as people who grew up in the violent streets of the Western Cape townships.

As the field of AAT expanded, it has been used to some extent in a therapeutic context. According to Budahn (2013), overall, therapists' perspective of AAT is that this type of therapy is effective with their patients, as they show significant changes and improvement after such therapy. Although a wide variety of animals can be used in therapy, mostly dogs are incorporated because of their natural approachability and sensitivity to the emotions of humans (Peluso et al., 2018).

**Therapy Dogs**

This critical review research study focused on therapy dogs, which form part of AAT. "Therapy dog", which falls under the umbrella term "animal-assisted therapy", is an internationally accepted term used for a dog that assists and enhances a therapeutic process (Davis, 2002). Dogs are one of the main species of animals involved in AAT (Beck & Katcher, 2003). Therapy dogs are said to initially have been introduced in the United States of America, by Therapy Dogs International, the first registry for therapy dogs, where dogs were involved in visits to facilities that promoted health care (Davis, 2002).

Over 50 years ago, the acknowledgement of animals' potential as communicative partners for children with autism was perhaps the groundwork for the initial practice of using dogs as therapeutic assistants (Soloman, 2010). According to Le Roux and Kemp (2009), one of the first pioneers of therapy dogs was Boris Levinson, who used a dog in psychotherapy with children. In addition, Sigmund Freud also incorporated his dog into therapy and used his dog for interpretations to aid the therapeutic process (Wille & Montgomery, 2011). Freud noted that dealing with children, adolescents, and adults, it seemed that patients were more open to talking about painful issues when a dog was included in the therapeutic setting (Coren, 2010). Schoenfeld-Tacher, Hellyer, Cheung, and Kogan (2017) define a therapy dog as a dog that delivers a therapeutic contact to humans, usually in a clinical context, to

enhance their social, physical, cognitive, and emotional functioning. Chandler (2017) remarks that each therapy dog serves the same basic purpose, working in collaboration with a professional human psychologist to offer empathetic and motivating treatment intended to facilitate the patient's recovery.

Moreover, therapy dogs have been researched across various contexts, such as in therapeutic settings, classrooms, and hospitals (Friesen, 2010). Therapy dogs often visit contexts with populations that are vulnerable, where they are usually able to soothe stressed patients (Alliance of Therapy Dogs, 2018). Over the past decade, research has shown the benefits of therapy dogs with patients diagnosed with dementia and autism spectrum disorder (Soloman, 2010; Swall, Ebbeskog, Lundh Hagelin, & Fagerberg, 2014). According to Jones et al. (2019), sexually abused children with posttraumatic stress disorder attending a group treating trauma showed a substantial reduction in symptoms of arousal, intrusion, avoidance, and detachment. Thus, the inclusion of a therapy dog in the therapy conducted with sexually abused children is a meaningful and effective tool to reduce symptoms of trauma (Jones et al., 2019). Friesen (2010) and Cole (2009) acknowledges that over the past 30 years, research has indicated that therapy dogs may offer support with regard to emotional, social, physiological, and physical aspects.

Therapy dogs can aid the therapeutic relationship, as a bond may be established between a person in therapy and a therapy dog; this bond may aid the therapist to gain the patient's trust (Lubbe & Scholtz, 2013). In therapy, dogs offer patients what is referred to as "unconditional acceptance and non-judgement" (Cole, 2009). Therapy dogs usually act as a means of support when they are included in treatment programmes in an environment that is therapeutic in nature (Friesen, 2010). However, the therapy would be less effective and even potentially damaging if the therapy dog and psychotherapists lack suitable training (Chandler, 2017).

A therapy dog is a dog of good temperament, any breed or mix, and must be at least one year of age (Alliance of Therapy Dogs, 2018). The golden retriever and the labrador retriever are breeds that are calm, sturdy, and intelligent (Chandler, 2017). They can generally handle pressure, stress, and trauma and may be able to endure children who are smaller as opposed to having a smaller dog that is fragile in the context (Chandler, 2017). According to Jalongo et al. (2003), therapy dogs are thoroughly assessed, trained, and registered, which allow them to be able to adjust to various situations and settings. Therapy dogs undergo training for approximately 18 months (Swall et al., 2014). Therapy dogs should have the appropriate nature to act as therapy dogs and be affectionate, sociable, and approachable to people of any gender, ethnicity, and age (Chandler, 2005). The dog should also be obedient, moderately calm, easy to control, and able to endure high levels of activity and noise (Chandler, 2005).

Therapy dogs can be used in individual or group-based therapy (Van Heerden, 2018). According to Chandler (2017), incorporating therapy dogs into psychotherapy by means of a professional therapist who owns the therapy dog and has had the proper screening and training is a form of AAT that is preferred, as the professional therapist knows the dog's behaviour and has undergone training with the dog. The roles of therapy dogs vary and may include actively participating in rehabilitation therapy or aiding children with learning disabilities to improve reading skills, whereas some work solely in one field, such as a psychiatric facility (Alliance of Therapy Dogs, 2018).

Therapeutic interventions can include interaction with a dog or simply being in the presence of a dog (Jalongo et al., 2003). A suitable dog is introduced into the therapeutic session by a therapist, where the therapy dog promotes goal-directed programmes (Van Heerden, 2018). Furthermore, therapy dogs are known for providing attention reciprocally to individuals; hence they act as a safe medium through which assistance in therapy can take

place (Lubbe & Scholtz, 2013; Odendaal, 2000). However, it should be noted that therapy dogs are used to enhance treatment and not to provide the treatment (Jalongo et al., 2003).

Recently, according to Jones et al. (2018), research on therapy dogs in the clinical context has become increasingly prevalent. Ramani and Leinster (2008) define a clinical context as a facility, such as a sanatorium or a private practice, where patients are admitted by a certified mental health professional for psychological intervention and participate in therapeutic rehabilitation. Effective treatment in the clinical context may involve therapy dogs as co-therapists (Jones et al., 2018). In addition, therapy dogs may decrease apprehension that goes hand in hand with stressful circumstances, such as clinical interviews for adults with major depression or schizophrenia in a clinical context. As a result of the interaction with therapy dogs, the negative symptoms of inpatient adults diagnosed with schizophrenia and anhedonia can be reduced (Jones et al., 2019). Dogs may assist in the treatment of mental disorders by improving the rapport between patients and clinicians, decreasing severe anxious provocation related to trauma treatment, and encouraging positive and motivated engagement in treatment (Jones et al., 2018). Jones et al. (2019) further mention that hospitalised adults with substance dependence showed an increase in interaction and therapeutic cooperation when they interacted with a therapy dog. According to Fine (2006), during group treatment with dissociative patients, a therapy dog offered a comforting influence and informed the psychotherapist of distraught patients. Therefore, dogs can play a significant role in the psychological wellbeing of humans by reducing levels of anxiety, depression, stress, and loneliness (Le Roux & Kemp, 2009). McCullough, Ruehranz, and Jenkins (2016) mention that many hospitals across the United States of America use therapy dogs to give patients the opportunity to interact with dogs and to make the hospital context less anxiety provoking and more relaxed. Hence therapy dogs can provide the benefits of medicine without any negative side effects (Van Heerden, 2018).

In South Africa, research on therapy dogs in the clinical context is limited; however, research studies have shown the impact that therapy dogs can have on children in a school context and in therapy with outpatients (Lubbe & Scholtz, 2013). Various organisations have been established that provide therapy dog services in different contexts, such as magistrate courts, hospitals, schools, and care facilities (Lubbe & Scholtz, 2013). Doctor Conor Hughes, the vice-president of Top Dogs, explains that therapy dogs are being used to support and prepare abused children who have to testify in court against their alleged abusers (Top Dogs, 2017). Doctor Magda van Heerden has implemented therapy dogs in Weskoppies – an inpatient psychiatric hospital (Van Heerden, 2018). Likewise, therapy dogs have been implemented at the Red Cross Children's Hospital in Cape Town.

In the clinical context, adults and children alike seem to appreciate the company of therapy dogs and demonstrate their satisfaction by fondling them or feeding them biscuits (Lubbe & Scholtz, 2013). Scholtz (2013) mentions that such a scenario was her first experience of a therapy dog. In the school context, a therapy dog programme in the form of a reading programme that provides support for children with learning disabilities has been implemented in the Western Cape (Le Roux et al., 2009). Results showed that children reading to a dog scored higher; consequently, reading to a dog increases the reading skills of learners (Le Roux et al., 2014). However, there is a lacuna in research on therapy dogs in the South African clinical context.

## Problem Statement

According to Lubbe and Scholtz (2013), therapy dogs are proven to be beneficial to humans, both directly and indirectly. Research has indicated that even a short interaction with a therapy dog can produce higher levels of pleasure and healing hormones and lower levels of stress hormones (Jones et al., 2018; Mangalavite, 2014; Odendaal, 2000). Dogs can have a positive influence on symptomatology and primary diagnoses, yielding additional benefits to

typical treatment for internalising disorders and posttraumatic stress disorder, and corresponding effects for anger, anxiety, and externalising disorders (Jones et al., 2019). In a psychiatric facility, a therapy dog can provide significant relief for patients diagnosed with schizophrenia who have to participate in clinical interviews (Jones et al., 2018). Substance abuse in South Africa is a major reason for psychiatric inpatient admissions, and interacting with a therapy dog can increase therapeutic collaboration and interaction, thereby aiding the remedial process (Coetzee et al., 2013). Numerous children in the South African clinical context experience severe attachment difficulties and mistrust people; hence implementing a therapy dog can provide a safe, secure, and non-judgemental environment where the child can experience unconditional acceptance (Jones et al., 2018). Overall, therapy dogs can improve the global functioning of patients and reduce the severity of serious psychiatric disorders (Jones et al., 2019). However, according to Jones et al. (2018), mental health professionals are underestimating the impact therapy dogs can have in clinical intervention and assessment in South Africa.

Given the above-mentioned information, it seems that therapy dogs can be effective in a clinical context, but are not being utilised sufficiently in the South African clinical context, which may be due to the lack of research available. Thus, the literature needs to be critically reviewed in order to broadly discuss the effectiveness of therapy dogs in the South African clinical context. Moreover, this can inform researchers and practitioners whether therapy dogs can be effective in the South African clinical context. Therefore, the following research question guided the research study: *What conclusions can be drawn from the literature in South Africa on the effectiveness of therapy dogs within a clinical context?*

## Method of Investigation

A critical review of scientific literature was used for the purpose of this research study. A critical review not only interprets the scientific literature selected for review but also combines a degree of theoretical innovation and investigation through presenting, analysing, and synthesising data from various resources (Grant & Booth, 2009). By means of a critical review method, the primary researcher was able to retrieve all the applicable scientific literature regarding therapy dogs in the South African clinical context, synthesise and analyse the data in the appropriate manner, and critically and broadly review what the scientific literature indicates concerning the effectiveness of therapy dogs in the South African clinical context. As described by Carnwell and Daly (2001), to conduct a critical review, the following steps have been applied in this critical review research study: 1) defining the purpose of the literature review; 2) defining the scope for the review; 3) identifying the sources of relevant information; 4) reviewing the literature; 5) writing the review; and 6) applying the literature to the research study.

### Step 1: Defining the Purpose of the Literature Review

The overall purpose of the critical review was to critically appraise and synthesise the current state of data concerning therapy dogs in a South African clinical context, as a resource to investigate the effectiveness thereof. The findings (see Section 2) served as a guideline as to whether therapy dogs could be applied in the South African clinical context and whether this form of therapy (AAT) would be of clinical significance.

### Step 2: Defining the Scope of the Review

The scope of the critical review included existing knowledge in theoretical and empirical works of literature published in peer-reviewed scholarly journals, and quantitative, qualitative, and mixed-methods theses and dissertations about therapy dogs in the South

African clinical context and the effectiveness thereof. For the purpose of this critical review, all literature based on the keywords (see step 3) regarding the South African context was included. As the research that had been done in the South African context was very limited, all of the available scientific literature was reviewed. The primary researcher determined the relevance of the available literature by viewing all of the scientific literature obtained.

Furthermore, the purpose, namely to determine the effectiveness of therapy dogs in the South African clinical context, was a determiner of selecting relevant scientific literature. Studies published in languages other than Afrikaans and English were excluded for the purpose of the research being based on the South African context. The title and abstract of each of the scientific literature works assisted the primary researcher in determining which research studies should be included and which excluded. The primary researcher excluded any studies that did not include therapy dogs and therapy done in a clinical context.

**Step 3: Identifying and Selecting Sources**

In finding and determining relevant literature, a researcher uses keywords to do computerised searches of published literature (Carnwell & Daly, 2001). All databases were searched for literature regarding the South African context. The following search engines were used to search for peer-reviewed literature published in books, university dissertations and theses, and scholarly journals: Academic Search Premier, PsycINFO, Africa-Wide Information, ScienceDirect, Library Catalogue, MEDLINE, SocINDEX with Full Text, African Journals and CAB Abstracts User Limit. The keywords used were “dog assisted therap*”, “animal assisted therap*”, or “pet assisted therapy” and “South Africa” and “psychology”. Search terms and keywords were combined or improved using Boolean operators, such as “AND”, “NOT”, “*”, and “OR” in order to produce more appropriate results. A librarian at the North-West University, Potchefstroom, was consulted to assist in

the search using this method. The literature found provided the primary researcher with other keywords that could be used to extend the search and consisted of names of authors who had published literature related to the research topic. The search was completed autonomously by the primary reviewer (master's student), while the second reviewer (study leader) supervised the review process and acted as the co-analyst of the extracted information.

**Step 4: Reviewing the Literature**

In this critical review research study, once the primary list of studies had been gathered during the search phase, the studies on the list were appraised and evaluated (Puks, 2016). To date, there are suggestions for conducting a critical review; however, there are no structured approach and formalised requirements for evaluating publications (Grant & Booth, 2009; Puks, 2016). Therefore, the following method was followed for this critical review research study. The identified literature was reviewed by manually reading through it. The appraisal was conducted using the inclusion and exclusion criteria, which were based on using the abstract and title alone. When an abstract was ambiguous on how the literature complied with the inclusion criteria, the full document was analysed to review which literature to include (cf. Puks, 2016). This was done with the objective of determining how the studies were tied into the inclusion criteria and to finally determine which should be included and which excluded (cf. Puks, 2016). Lastly, once the review was done, the researchers continued with the final two stages of synthesis and analysis (cf. Puks, 2016).

The full text of each relevant study was read, and pertinent information was extracted, such as the author(s), publication date, journal, book, and whether it was a university dissertation or thesis, the research design and methodology, as well as themes and codes that answered the research question. Wide-ranging extraction was utilised, where all the appropriate data were extracted and included on a data sheet to avoid missing findings

valuable to the synthesis (cf. Noyes & Lewin, 2010). The critical review was enhanced by synthesising evidence from the research, while looking for evidence of the effectiveness of therapy dogs. Aggregative and informative synthesis was utilised. The data extraction was an iterative procedure, as the reviewers moved between reading relevant literature, data extraction, analysis, and synthesis in numerous sequences as themes and questions arose from the synthesis (cf. Noyes & Lewin, 2010).

Thematic analysis is a qualitative data analysis technique that allows for the academically flexible application of six steps, with the eventual purpose of categorising patterns and themes from the data relating to the research question (Braun & Clarke, 2006; Clarke & Braun, 2013). Thematic analysis includes the identification of themes and patterns in the data for adequate understanding and clarification of meaning. The six steps provided by Clarke and Braun (2013) are as follows:

**Phase 1 – Familiarising oneself with the data or text.** The literature was continuously analysed and re-read.

**Phase 2 – Generating initial codes**. This included the construction of a preliminary list of codes; subsequently, the critical review followed an inductive approach, and these codes were primarily "data-driven" (Braun & Clarke, 2006, p.18).

**Phase 3 – Searching for themes.** The codes were sorted according to a pattern that answered the research question. This involved the creation of preliminary themes, with their equivalent data.

**Phase 4 – Reviewing themes.** The primary researcher took a step back and checked the preliminary themes created in step 3 and reflected on the text from which the codes were generated. The primary researcher commenced with improving the themes by incorporating two discrete themes or separating what primarily seemed like a distinct theme.

**Phase 5 – Defining themes and naming themes.** In this step, a description and a name were given to the revised themes by referring to the core of the gathered bits of data.

**Phase 6 – Write up.** This step comprised the distribution of the themes collected in such a way that it would persuade the reader that the themes matched and presented the concrete text, while also answering the research question.

### Step 5: Writing the Review

The findings and results of each reviewed scientific study were presented coherently, consistently, clearly, interestingly, non-repetitively reasonably in alignment with the aims of the research, as suggested by Puks (2016). Where it was suitable, visual methods, such as tables, were used. It was essential for the primary researcher to read the primary studies fully to gain an idea of the entire publication (cf. Puks, 2016). Puks (2016) suggests that when the primary researcher reads the whole literature publication, the researcher should ask questions that relate to the clarity of the study and the results or findings, the methodology required, and what the essential results or findings were, hence guiding the researcher as the literature is being reviewed.

### Step 6: Producing the Report

In the final report, for the analysis, a discussion was provided, inferring the findings and speculating on the significance thereof in further research in the field. Lastly, the final report (see Section 2) was concluded by a summarising paragraph, defining the findings of the research and any gaps or weaknesses (cf. Puks, 2016).

## Ethics

This critical review research study did not include human participants or implement interventions and only utilised existing or secondary data from primary literature. Thus, ethical considerations concerning participants were not relevant. Ethical approval (see Appendix A) was obtained from the Health Research Ethics Committee of the North-West

University (NWU-00484-19-A1). To find, select, analyse, synthesise, and interpret literature in an ethically responsible way through a method of rigour was the focus. Throughout the research process, the ethical responsibility of the critical review involved following the process of rigour (see the section on rigour below). Furthermore, ethical guidelines were adhered to by following procedures set out by Wager and Wiffen (2011). According to Wager and Wiffen (2011), in order to increase the clarity of the research, the critical review and the work within were done exclusively by the authors who have been accredited.

The first and primary reviewer, that is, the writer (Francis Jansen van Rensburg), is registered as a master's student within the Master's Clinical Psychology Programme at the North-West University. The writer has undergone the necessary ethical training as required by the North-West University. Professor Werner de Klerk (the study leader) is the second reviewer, who has assisted in monitoring the critical review procedure of the primary reviewer and acted as the co-analyst of the data. Professor De Klerk has knowledge and experience in both thematic analysis and the critical review process (see publication by De Klerk & Pretorius, 2019). The final report refrains from redundancy and has not been issued in numerous publications (cf. Wager & Wiffen, 2011).

The primary reviewer (writer) ensured that plagiarism was averted, and following the guidelines of the American Psychological Association 6th Edition, the works of other authors were referenced both in the text and in a reference list. The primary researcher used her own funding for the critical review research study; thus, she was not influenced by competing interests and was neutral (cf. Wager & Wiffen, 2011). Accurateness of the research procedure was ensured, and because the primary reviewer did not attempt to direct the findings in a particular direction, the extraction of data was truthful throughout the process (cf. Wager & Wiffen, 2011). The primary reviewer conducted the critical review by following a method of rigour and understanding the transparency and honesty of both interpretation and data.

Literature that had undergone some form of ethics review was included (per the requirements of the Health Research Ethics Committee).

## Rigour

Rigour was necessary in this critical review research study to ensure accuracy and thoroughness in the development of theory, the design and execution of the research study, and in reporting the findings and drawing implications (cf. Gnyawali & Song, 2016). The researchers ensured that credibility, confirmability, dependability, and transferability were attained throughout the research process of this critical review research study.

### Credibility

Assurance in the truth (Krefting, 1991) was established by the primary reviewer so that the findings represent credible information from the original literature and the accurate interpretations have been made of the several primary author's views (results/findings). The following strategies have been executed by the reviewers: extended engagement with the literature by immersing wholly into the literature in order to increase an understanding of the context of the study; transferability of the information to other frameworks through a dense report of the findings; reflexivity through taking comprehensive transcripts of the process followed; and peer examination, whereby the primary reviewer conferred the process and findings with the second reviewer in order to ensure the authority of the reviewer and operational consistency (cf. Anney, 2014; Sharts-Hopko, 2011).

### Confirmability

Confirmability was achieved by suitable data being reported on, from the research question and data collection methods, through raw information and analysing and understanding findings. The critical review, as described, followed the steps as set out by Carnwell and Daly (2001). The critical review was cautiously planned, the information were collected through the rigorous searches of search engines and published literature that met the

inclusion criteria, full texts were read, and all the information associated to the research question were included in a data sheet for further thematic analysis. Correct citations were used for all the sources included in the critical review research study, allowing the reader to find each source included.

**Transferability**

Transferability was achieved by consistently and systematically following the critical review and thematic analysis process and describing the relevant context of each included published work of literature, for readers to determine how the findings could be used for implementing therapy dogs in a clinical context or further research (cf. Sharts-Hopko, 2002). In the discussion of the themes identified from the reviewed literature, the researchers, as far as possible, clarified the appropriate factors relating to each of the themes (cf. Krefting, 1991).

## Conclusion

In this section, an all-inclusive literature overview was presented and proposed to provide the reader with a comprehensive awareness of the central parts of this research study. AAT and therapy dogs are topics covered in this literature overview. AAT is utilised in the clinical context for various neurological and psychiatric disorders (Peluso et al., 2018). Inpatient psychiatric facilities implement AAT to lend support with diagnosis and assessment and to produce social contact for patients who are lonely in the clinical context (Granger & Kogan, 2006). The literature overview has shown that AAT is used world-wide with diverse populations in a variety of contexts (Hettema, 2002). Chandler (2017) describes the overall goal of AAT as follows: to develop the therapeutic relationship, communicate feelings, build and create trust and thoughts, improve insight, build self-confidence, and demonstrate effective behaviour. Even though various animal species can be used in treatment, dogs are mostly used because of their natural friendliness and understanding of people's feelings

(Peluso et al., 2018). The purpose of therapy dogs is to work in alliance with a professional psychologist to offer encouraging and emphatic treatment planned to facilitate patient recovery (Chandler, 2017). In the clinical context, therapy dogs can deliver the benefits of medicine without any adverse side effects (Van Heerden, 2018). Therapy dogs can make a significant contribution to the clinical context by alleviating the symptoms of patients (Van Heerden, 2018).

Discussions on the problem statement, the method used, ethics, and rigour were presented in the above section. These provide the reader with an understanding of the researchers' method implemented to conduct this critical review and how the primary researcher ensured that the research study adhered to ethical considerations. Lastly, the way in which the researchers ensured that dependability, credibility, dependability, transferability, and confirmability were achieved throughout the research procedure of the critical review research study was set out.

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## SECTION 2: ARTICLE

The article (as part of this mini-dissertation) will be submitted for possible publication in the *South African Journal of Psychology*. First, a summary of the author guidelines for this specific journal is provided, followed by the article.

### Instructions for Authors (Summary)

#### Article Types

The *South African Journal of Psychology* considers submissions addressing South African, African or international issues, including:

1. Manuscripts reporting on research investigations.
2. Review articles focusing on significant issues in Psychology.

New submissions should not exceed 5500 words, including references, tables, figures, etc. Authors of manuscripts returned for revision and extension should consult the Editorial Office regarding amended length considerations. All manuscripts should be written in English and include an abstract of not more than 250 words. The writing must be of a high grammatical standard, and follow the technical guidelines stipulated below. The publication guidelines of the American Psychological Association 6th edition (APA 6th) must be followed in the preparation of the manuscript. Manuscripts of poor technical or language quality will be returned without review.

#### Preparing your Manuscript for Submission

**Formatting.** Manuscripts should be submitted as a Word document only. Templates are available on the Manuscript Submission Guidelines page of our Author Gateway. The text should be double-spaced throughout and with a minimum of 3cm for left and right hand margins and 5cm at head and foot. Text should be standard 12 point.

**Journal style.** The *South African Journal of Psychology* conforms to the SAGE house style. Research-based manuscripts should use the following format: The introductory/literature review section does not require a heading, thereafter the following headings /subheadings should be used:

Method (Participants; Instruments; Procedure; Ethical considerations; Data analysis (which includes the statistical techniques or computerized analytic programmes, if applicable); Results; Discussion; Conclusion; References.

The "Ethical considerations" section must include the name of the institution that granted the ethical approval for the study (if applicable).

**Keywords and abstracts.** Helping readers find your article online Authors should include (a) an Abstract of up to 250 words and (b) up to six alphabetised keywords. The title, keywords and abstract are key to ensuring readers find your article online through online search engines such as Google. Please refer to the information and guidance on how best to title your article, write your abstract and select your keywords by visiting SAGE's Journal Author Gateway Guidelines on How to Help Readers Find Your Article Online.

**Artwork, figures and other graphics.** For guidance on the preparation of illustrations, pictures and graphs in electronic format, please visit SAGE's *Manuscript Submission Guidelines.* Figures supplied in colour will appear in colour online regardless of whether or not these illustrations are reproduced in colour in the printed version. For specifically requested colour reproduction in print, you will receive information regarding the costs from SAGE after receipt of your accepted article.

**Reference style.** *South African Journal of Psychology* adheres to the APA reference style.

**Article**

Running Head: THERAPY DOGS IN THE CLINICAL CONTEXT

# The effectiveness of therapy dogs in a South African clinical context: A critical review

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**Abstract**

Therapy dogs within the South African clinical context are utilised to enhance the mental health of psychiatric patients. Therapy dogs act as a supplementary and inexpensive therapeutic technique; hence they can be used as an effective tool, as the South African clinical context does not have the necessary funds for additional therapeutic methods. Research on therapy dogs in the South African clinical context is scarce, resulting in a lacuna in studies on this topic. In this research study, a critical review of scientific literature was performed in order to synthesise findings and allow for a clearer understanding of this phenomenon. The research intended to determine the effectiveness of therapy dogs in the South African clinical context and whether it would be effective if implemented. For this critical review, computerised searches were conducted on numerous databases for peer-reviewed scientific literature on the implementation of therapy dogs in the South African clinical context. A method similar to SALSA (Search, AppraisaL, Synthesis and Analysis) was utilised for the search and analysis processes. In this critical review, a final sample of three published studies was included. The data were analysed thematically, and the following themes were identified for the effectiveness of therapy dogs in the South African clinical context: enhancement of health benefits; motivational tool or technique in therapy; the need for trained professionals; and the lack of research in South African clinical context. The research study concludes that therapy dogs are in fact effective in the clinical context of South Africa. However, more research is needed to quantify and affirm the benefits of therapy dogs for patients.

*Keywords:* Animal-assisted therapy, therapy dogs, psychology, South Africa, clinical context, critical review

## Introduction

The aim of this critical review research study was to determine whether there was a justification for animal-assisted therapy (AAT), more specifically therapy dogs, and whether it can be effective within the South African clinical context by critically reviewing what has been written and explored regarding therapy dogs in a clinical context in South Africa to date. According to Ramani and Leinster (2008), a clinical context is defined as a facility that is like a sanatorium or a private practice where patients are admitted by a certified mental health professional for psychological intervention and participate in therapeutic rehabilitation. In recent years, AAT has been gaining popularity. In 2011, statements from the United States Department of Health and Human Services, the Centres for Disease Control and Prevention, and the National Health Centre for Health Statistics showed that approximately 60% of sanatorium care professionals that provided unconventional therapies recommended therapy dogs to patients (Alliance of Therapy Dogs, 2018). Scientific studies regarding AAT, with specific emphasis on dogs, have acknowledged the effectiveness in different contexts, including psychiatry (Alliance of Therapy Dogs, 2018; Jalongo, Astorino, & Bomboy, 2004; Silva & Osório, 2018). Effectiveness in a clinical context is seen as a desired outcome after a therapeutic technique has been implemented (Godwin et al., 2003). Furthermore, effectiveness measures the degree of results that is beneficial in an actual clinical practice (Godwin et al., 2003).

### Animal-Assisted Therapy

The human-animal relationship has a long history in which ancient people appreciated the social, physical, and psychological benefits of human-animal interaction (Budahn, 2013; Walsh, 2009). Animals have, from the beginning of time, served as companions to individuals; however, only recently have researchers studied the human-animal relationship

(Budahn, 2013; Walsh, 2009). It was not until the 20th century that people began to recognise the potential effect AAT had on the overall wellbeing of humans (Le Roux & Kemp, 2009). The symbiotic relationship between animals and humans consists of a mutual connection that results in the satisfaction of the needs of both species (Knesl, Hart, Fine, & Cooper, 2016). Recently, research began to demonstrate the benefits AAT could yield, and professionals began to implement AAT (Le Roux & Kemp, 2009). Le Roux and Kemp (2009) define AAT as a goal-driven, controlled, planned, and recognised intervention where the animal meets specific standards and is an essential part of the treatment process which is delivered by a trained and qualified professional who is registered with the Health Professionals Council of South Africa. Cole (2009) declares that therapy integrated with AAT is a practical, effective, and worthwhile technique. Moreover, Coetzee, Beukes, and Lynch (2013) state that a therapeutic framework with the presence of an animal allows for a non-threatening, safe setting where the patient can disclose feelings and experiences that are personal. It is important to differentiate between AAT and animal-assisted activities (AAAs), as there may be a misunderstanding regarding the two terms. An AAA is aided by someone who does not have to be professionally qualified and may be only a volunteer (Van Heerden, 2018). AAA does not consist of therapeutic goals; instead, the animal acts as a social remedy in diverse environments (Buckle, 2015).

AAT has been practised in psychiatric and rehabilitation facilities, prisons, nursing homes, and burn units (Altschiller, 2011; Palley, O'Rourke, & Niemi, 2010). Within the clinical context, AAT has become more prevalent and general (Friesen, 2010). Patients with diverse psychiatric diagnoses, predominantly patients with psychotic disorders, who came into contact with AAT, show reduced anxiety levels (Fine, 2006). Hence AAT can be implemented in psychiatric inpatient units to aid therapists with evaluation and diagnosis, while creating social connections for lonely patients (Granger & Kogan, 2006). Referring to

the history in South Africa, AAT has been used in hospitals, residential facilities, care facilities, and special needs schools (Buckle, 2015). AAT in the clinical context can yield numerous physical, social, and mental advantages (Jalongo et al., 2004). Overall, therapists' perspective of AAT within the clinical context is that this type of therapy is effective with their patients, as they tend to show substantial changes (improvement) after such therapy (Budhan, 2013). Dogs are mostly incorporated in therapy because of their natural approachability and sympathy to the emotions of humans (Peluso et al., 2018).

**Therapy Dogs**

Dogs are one of the main species involved in AAT (Beck & Katcher, 2003). "Therapy dog", which falls under the umbrella term "animal-assisted therapy" or AAT, is a universally acknowledged term used for a dog that enhances and supports the therapeutic process (Davis, 2002). Therapy dogs were initially introduced by Therapy Dogs International's first registry in the United States of America, where dogs were involved in visits to units that encouraged health care (Davis, 2002). Over the past 30 years, research has shown that therapy dogs may offer aid to people who experience emotional, physical, social, and physiological problems (Friesen, 2010). A therapy dog is defined by Schoenfeld-Tacher, Hellyer, Cheung, and Kogan (2017) as a dog that delivers a therapeutic connection to humans, usually in a clinical context, to improve their cognitive, social, emotional, and physical functioning.

In therapy, dogs offer patients what is referred to as "non-judgement and unconditional acceptance" (Cole, 2009). According to Friesen (2010), including therapy dogs in treatment programmes in settings that are therapeutic in nature generally acts as a means of support. The breeds that are usually incorporated into therapy are the golden retriever and the labrador retriever, as they are calm, strong, and intelligent (Chandler, 2017). Therapy dogs should be thoroughly trained, registered, and assessed, which would allow them to be able to

adjust to numerous contexts (Chandler, 2005). In addition, they should have a suitable nature and be sociable, affectionate, and open to people of any gender, age, and ethnicity (Chandler, 2005; Jalongo et al., 2003). Training for therapy dogs takes approximately 18 months (Swall, Ebbeskog, Lundh Hagelin, & Fagerberg, 2014).

Recently, research on therapy dogs in the clinical context has become progressively predominant (Jones, Rice, & Cotton, 2018). In the clinical context, effective treatment may include therapy dogs as co-therapists (Jones et al., 2018). In addition, therapy dogs may reduce the anxiety that goes along with stressful conditions, such as clinical interviews in the clinical context for adults with major depression or schizophrenia. Dogs may lend support with the treatment of mental disorders by improving the rapport between therapists and patients and encouraging constructive and driven engagement in treatment (Jones et al., 2018). Hence therapy dogs can deliver the benefits of medicine without any adverse side effects (Van Heerden, 2018). Therapeutic interventions include being in the presence of a therapy dog and interaction with the dog. It should be noted that therapy dogs are used to improve treatment and not to deliver treatment (Jalongo et al., 2003). In South Africa, various organisations deliver therapy dog services in diverse settings, such as hospitals, magistrate courts, care facilities, and schools (Lubbe & Scholtz, 2013). However, in the South African clinical context, there is a gap in research on therapy dogs.

## Problem Statement

Both directly and indirectly, therapy dogs have been found to be advantageous for humans (Lubbe & Scholtz, 2013). Research has shown that even brief contact with a therapy dog can yield higher levels of healing and pleasure hormones and reduced levels of stress hormones (Jones et al., 2018). Symptomatology and primary diagnoses can be positively influenced by dogs, producing further benefits to typical treatments for internalising

disorders, post-traumatic stress disorder, anger, anxiety, and externalising disorders (Jones, Rice, & Cotton, 2019). Patients in a psychiatric unit who are diagnosed with schizophrenia and have to participate in clinical interviews can obtain substantial relief from interaction with therapy dogs (Jones et al., 2018).

In the South African clinical context, a major cause for admissions is substance abuse. In such cases, interacting with a therapy dog can increase therapeutic alliance and communication, thereby supporting the remedial process (Coetzee et al., 2013). Moreover, in the South African clinical context, many children have severe attachment difficulties and distrust people; consequently, incorporating a therapy dog can provide an environment that is secure, safe, and non-judgemental, where the child can experience unconditional acceptance and empathy (Jones et al., 2018). Overall, the severity of serious psychiatric disorders can be reduced and the global functioning of patients can be improved by interaction with therapy dogs (Jones et al., 2019). According to Jones et al. (2018), the impact a therapy dog can have in clinical assessment and intervention in South Africa is underestimated by mental health professionals.

Given the above-mentioned background, it would seem that in the clinical context therapy dogs can be effective. However, in the South African clinical context, it appears as if therapy dogs are being underutilised, which can be due to the lacuna in the research available. Consequently, the literature should be critically reviewed in order to broadly discuss the effectiveness of therapy dogs in the South African clinical context. This can also inform practitioners and researchers whether therapy dogs can be effective in the South African clinical context. Therefore, the following research question guided the research study: *What conclusions can be drawn from the literature in South Africa on the effectiveness of therapy dogs within a clinical context?*

# Method

## Research Approach

For the critical review, all databases were searched for literature regarding a South African context (cf. De Klerk & Pretorius, 2019). The following search engines were used to search for relevant literature: Academic Search Premier, PsycINFO, Africa-Wide Information, ScienceDirect, Library Catalogue, MEDLINE, SocINDEX with Full Text, African Journals, and CAB Abstracts User Limit. The primary reviewer also used Google Scholar and Pets as Therapy as search engines to access other literature that might not have been found in the initial search on the website of the North-West University library. The search was performed autonomously by the primary reviewer (first author), while the second reviewer (second author) supervised the process of the review and acted as the co-analyst of the extracted information.

The keywords included "dog assisted therap*" or "animal assisted therap*" or "pet assisted therapy", and "South Africa" and 'psychology". Search terms and keywords were combined or improved using Boolean operators such as "AND", "NOT", "*", and "OR" in order to further produce more suitable results. A librarian from the North-West University was consulted to assist in the process. The literature found provided the primary reviewer with other keywords that were used to extend the search. These consisted of the names of authors who had published works associated with the research topic.

The following literature was included in the critical review: all peer-reviewed literature published in books, university dissertations or theses, scholarly journals, and articles from 2000 to 2020 in a South African context and written in English or Afrikaans about therapy dogs or therapy dogs used as part of AAT done in a clinical context and which followed Lubbe and Scholtz's (2013) definition of AAT, that is, therapy delivered by a

registered professional who uses a trained dog to act as an aid for therapeutic treatment. Studies in which dogs were used as part of an AAA intervention were also included.

The search initially generated 13 studies, of which three were finally included. Figure 1 presents the search strategy approach and the inclusion and exclusion criteria. Table 1 below provides a summary of the data extracted.

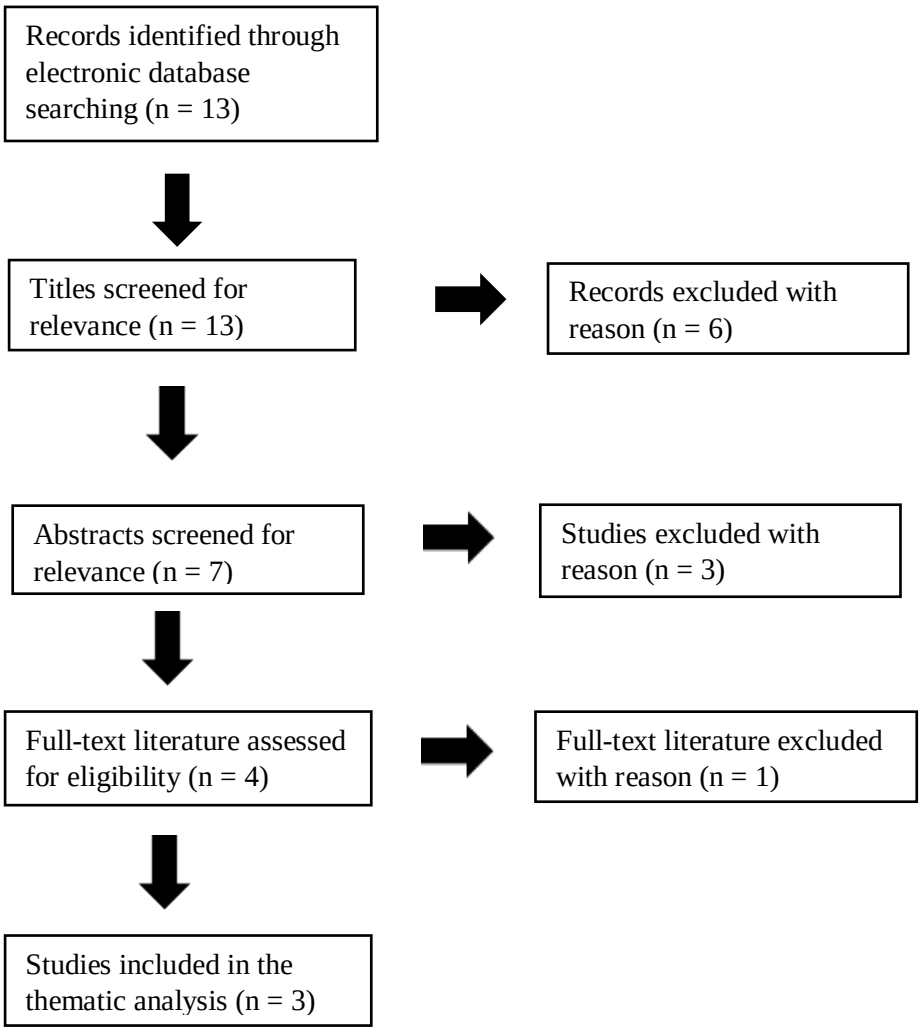


*Figure 1*. Search flow chart

**Table 1**

*Data Extraction Table*

| Author(s) and Title | Method | Sample | Findings (Recommendations) | Conclusions |
|---|---|---|---|---|
| Odendaal (2000)<br><br>Animal-assisted therapy – magic or medicine? | *Aim:* The purpose was to implement a method that had utilised similar physical limitations for positive human-animal contact as for positive intra-species contact. The limits chosen were b-endorphin, oxytocin, prolactin, b-phenylethylamine, dopamine, and cortisol.<br><br>*Design:* An experiment was designed. | Six neurochemicals related to blood pressure decreasing were measured in humans (n = 18) and canines (n = 18) before and after positive contact. | Results (P < .05) showed that in both species, the neurochemicals b-endorphin, oxytocin, prolactin, phenylacetic acid (metabolite of b-phenylethylamine), and dopamine significantly increased. In people, there was a substantial decline in cortisol levels.<br><br>The only statistically significant result in the variance before and after contact between the experimental and control canine groups was oxytocin.<br><br>With contact, both humans and canines have the same biological effects (feeling of wellbeing) when contact takes place.<br><br>A substantial decrease in blood pressure and thus all the other biological effects can be attained between five and 24 minutes of positive canine contact.<br><br>There is consensus that treatment is valuable for many patients, but further studies are required before it can be said with certainty that such treatment is more than a placebo. | Psychological difficulties to a great degree mirror an interruption of emotional order, and feelings can have both beneficial and pathological consequences. Individuals have little direct control over their feelings, and they often set up circumstances as external measures (e.g. positive canine contact) so that the stimuli that automatically activate feelings will be present.<br><br>This information can be used as a reason to implement AAT. |
| Lubbe and Scholtz (2013)<br><br>The application of | *Aim:* Gain a deeper understanding of the case. The individual case is a therapeutic intervention with | A 14-year-old male (Brandon).<br>The therapist and her therapy dog (Morkie). | Five themes were documented: “facilitating rapport building,” “empowering communication by working indirectly”, | It appears that AAT can indeed be used successfully as a therapeutic tool in psychology. |

| Author(s) and Title | Method | Sample | Findings (Recommendations) | Conclusions |
|---|---|---|---|---|
| of animal-assisted therapy in the South African context: A case study | A 14-year-old boy with whom the secondary author (therapist) engaged. The intervention was part of her master's training in Educational Psychology using AAT in the South African context.<br><br>*Design:* A qualitative approach, which was epistemologically anchored in interpretivism, was utilised in this study. An intrinsic case study design was employed. | | "Through the therapy dog, feeling physical affection", "skills of socialisation", and "boosted self-esteem".<br><br>The therapy dog made Brandon (14-year-old boy) feel calmer in the company of the therapist. Utilising the therapy dog in sessions permitted the therapist to form a deeper relationship with Brandon and represented a motivational tool. The accountability Brandon had of the therapy dog aided him to improve his control, self-efficacy, and individuality.<br><br>Brandon connected through the therapy dog that acts as a medium (as patients can trust dogs and feel calm in their presence). Utilising Morkie (therapy dog) in therapy allowed the psychotherapist to praise Brandon for his actions and relations with her, which might have improved his self-esteem.<br><br>It is recommended that further research be conducted in this field of research, with the objective of increasing and improving the existing knowledge base. The following areas of interest may be explored in future research: research that explores the application potential of AAT with a bigger sample of socioeconomically defenceless children; and the possibility of social workers and psychologists being qualified in and applying AAT in treatment in schools and private practices. | Using an animal (dog) in the therapeutic process appears to promote the formation of a personal and caring relationship between the therapist and the child. This is especially valuable with a child who is not keen on establishing a relationship with the therapist at first, where the dog provides a safe medium through which support can take place. Generally, it seems as if AAT can be purposefully applied to support the achievement of therapeutic goals. |

| Author(s) and Title | Method | Sample | Findings (Recommendations) | Conclusions |
|---|---|---|---|---|
| Simon (2014)<br><br>Participation and control experienced during animal-assisted activities by children hospitalised with cancer | *Aim:* The aim of this research study was to explore and describe the experiences of participation and control during animal-assisted activities (with dogs) by children hospitalised with cancer.<br><br>*Design:* A qualitative approach with a phenomenological research design. | The population from which the researcher obtained the participants consisted of children with cancer hospitalised in a specific hospital (clinical context) in South Africa. The children were between the ages of eight and 14.<br><br>Children were hospitalised, on either an inpatient or outpatient basis, in the oncology ward at the specific hospital.<br><br>The final sample size involved five children with any type of cancer and during any phase of cancer, who were hospitalised for any period during the time of the study, with the condition that the children were healthy enough to have contact with the dogs. | The initial changes observed in the participants' reactions from the first to the final sessions were in their interaction with and approach to the animals, including grooming, taking the lead and showing affection, as well as behaving spontaneously and laughing. The subsequent set of variations occurred in their body awareness, specifically concerning the protection of their bodies and the level of comfort they experienced. The third approach of changes involved the children's level of engagement during the sessions, often showed by initiative and choice. The fourth development was in their level of individuality. The fifth and final set of variations was in the children's communication, including the content of their verbal conversations and their non-verbal messages.<br><br>The outcomes of the research study strongly indicate that engaging in AAAs can improve the involvement and control of children hospitalised with cancer. It is suggested that AAT rather than AAA should be used, as AAT is a more goal-directed intervention that can be conducted only by a qualified health professional within his/her scope of practice. As a qualified health professional, the individual will have knowledge and proficiency in interacting with children in the clinical context and will therefore be able to use the animal in such a way as to encourage self-expression. | It became clear that the children's approaches to the animals changed over the development of the AAA sessions, which significantly contributed to their sense of wellbeing. Spontaneity, including laughter and pleasure, has been shown to improve quality of life and support with the adjustment to cancer, as showed by the children's enhanced approaches with the dogs. Their self-confidence and self-assuredness improved, as they received the trust and respect of the dogs over time.<br><br>Substantial evidence has shown that engaging in AAAs can have physical benefits, including reduced stress and anxiety levels. It is likely that while the children were interacting with the dogs during sessions, they were experiencing the physical benefits of AAA, which led to reduced body awareness and calmer body movements over time. |

## Analysis and Synthesis

Inclusive extraction was utilised, whereby all suitable data were extracted and included on a data sheet to avoid overlooking findings valuable to the synthesis (cf. Noyes & Lewin, 2010). Once this all-inclusive data sheet had been tabulated, thematic analysis was conducted. Thematic analysis is a data analysis method of a qualitative nature that allows for the academically flexible application of six steps, with the final purpose of categorising themes and patterns from the data linking to the research question (Clarke & Braun, 2013). In this research study, the thematic analysis included the identification of themes and patterns from the data extraction table for adequate understanding and clarification of meaning.

# Findings and Discussion

The following four themes emerged from the studies included: Enhancement of health benefits; Tool or technique in therapy; The need for trained professionals; and The lack of research in the South African clinical context. These themes and related studies are discussed below.

## Theme 1: Enhancement of Health Benefits

Mental health is the way one's thoughts, feelings, and behaviours affect one's life (American Psychological Association, 2000). Mental and physical health are closely linked; so, enhancing an individual's physical health can directly improve mental health. Through experiencing interaction with therapy dogs, evidence has shown that patients encounter enhanced health benefits (Cowell, 2017). Research studies indicate that therapy dogs provide advantageous results for patients in clinical contexts who suffer from physical and emotional problems (Cowell, 2017). It is evident that even from a brief interaction with a therapy dog, psychiatric patients can experience an increase in the hormone oxytocin, which results in a significant decrease in anxiety and fear (Mangalavite, 2014). According to Odendaal (2000),

patients can experience more positive emotions and a decrease in cortisol levels (stress), which directly affect their mood and result in enhanced mental and physical health. By spending time with therapy dogs, the patient's body acts in a physical way, and this translates to the patient's wellbeing (Simon, 2014).

Several research studies show that patients who interact with therapy dogs experience numerous physical health benefits (Cole, 2009; Jalongo et al., 2003; Mangalavite, 2014). In a study conducted with patients with a primary diagnosis of heart failure, walking with a healing assistant was offered with a therapy dog as the walking companion, which increased the probability of health recovery and improvement (Mangalavite, 2014). Mangalavite (2014) reported that through interaction with therapy dogs, patients were able to relax more, thus decreasing their blood pressure and heart rate. From the afore-mentioned studies, it is evident that patients can experience a decrease in blood pressure and pain relief from having interaction with therapy dogs (Knisely, Barker, & Barker, 2012; Van Heerden, 2018). Moreover, interaction with therapy dogs provides children with increased awareness, cooperation, and attention span, which can directly improve their engagement in a clinical context (Cowell, 2017). It is also evident that the presence of a therapy dog can decrease psychiatric patients' feelings of isolation or alienation (Mangalavite, 2014). Overall, research has indicated that interventions using therapy dogs can result in numerous health benefits and improvements in perceived quality of life, reducing loneliness, depression, and anxiety (Buckle, 2015; Le Roux & Kemp, 2009; Mangalavite, 2014).

**Theme 2: Tool or Technique in Therapy**

Therapy dogs can be used effectively as a therapeutic tool, as studies have shown that they can support the achievement of therapeutic goals and act as a safe medium through which support can take place in therapy (Friesen, 2010; Lubbe & Scholtz, 2013). Studies have revealed that in therapeutic environments, the presence of a dog can result in a sense of

emotional security and increased engagement (Cowell, 2017; Mangalavite, 2014; Pet Partners, 2014). Fine (2006) indicates that dogs encourage rapport in a therapeutic relationship, which is significant in creating trust. Oxytocin is increased during such interaction, which causes the formation of attachment between the therapy dog and the patient, resulting in the establishment of trust (Lubbe & Scholtz, 2013). Furthermore, therapy dogs act as a transitional object onto which patients can project their emotions and personal experiences (Lubbe & Scholtz, 2013).

Adults with substance dependence in a clinical context display an increase in therapeutic collaboration and interaction when they have contact with therapy dogs in therapeutic sessions (Jones et al., 2019). Also, therapy dogs have a natural predisposition that fosters empathy and quick rapport between them and children (Chandler, 2005). Jalongo et al. (2004) are of the opinion that therapy dogs offer a unique form of support for children's physiological health, learning, and mental wellbeing, which may not be possible through intervention and interaction with the psychotherapist alone. Children's sense of individuality, communication skills, self-esteem, positive emotions, and self-efficacy are enhanced through interacting with a therapy dog in therapy sessions (Lubbe & Scholtz, 2013; Simon, 2014). The evident and quantifiable beneficial effects of physical health on a patient's state of psychological health noted by professional health practitioners have attracted the awareness of the psychotherapeutic community, resulting in research specific to the mental benefits of including dogs in psychotherapy (Cole, 2009).

From the above-mentioned studies, it is evident that incorporating therapy dogs can be effective in a clinical context and act as a supplementary technique in therapy sessions. Moreover, it can provide an inexpensive therapeutic technique for healthcare professionals to use in the treatment of patients in the clinical context (Cowell, 2017). However, Lubbe and Scholtz (2013) mention that it is important to take into consideration that a therapy dog may

not be the only contributor to a patient's emotional healing and that there are other factors that also play a role, such as the therapist and medication.

**Theme 3: The Need for Trained Professionals**

Therapy dogs in the clinical context can be utilised as a complementary therapy that is implemented by a professional psychologist in conjunction with another form of evidence-based therapy (Mangalavite, 2014). It is the therapist's responsibility to provide ethical and safe therapy with a sound evidence base (Jones et al., 2018). It is evident that professional psychologists need to be qualified and trained before they implement therapy dogs in treatment interventions (Lubbe & Scholtz, 2013). According to Simon (2014), AAT, rather than AAAs, should be utilised, as AAT is conducted by a qualified health professional who has expertise in interacting with patients and will therefore be able to use the therapy dog as an assistant in therapy in the clinical context. Therapy dogs need to be used by professional psychotherapists who are attuned not only to the patient's emotions and needs but also the needs of the therapy dog (Mangalavite, 2014). Furthermore, the facility (hospital) needs to allow therapy dogs to interact with patients on a regular, reliable basis (Mangalavite, 2014).

**Theme 4: The Lack of Research in the South African Clinical Context**

The phenomenon of therapy dogs has not been widely researched in the South African clinical context, since it is a relatively new field (Lubbe & Scholtz, 2013). It became evident while reviewing the literature based on the South African context that some research has been done in the school context, especially on the effects of AAT on the reading rate of children. However, there is a lacuna in research on therapy dogs in a South African clinical context. Furthermore, during the review, it became evident that in South Africa, equestrian therapy is a widely used form of therapy. Lubbe and Scholtz (2013) mention that there is limited research in the field of AAT with therapy dogs as a therapeutic tool in the clinical context and

they recommend that further studies need to be conducted. Simon (2014) states that given the inadequate amount of research in South Africa, it is suggested that future research addresses this gap. Moreover, according to Coetzee et al. (2013), a longitudinal research study will be of significance in the South African clinical context to provide insight into the long-term effect of AAT with therapy dogs.

Research supports the indication that healthcare workers may avoid using AAT with therapy dogs as an *intervention* or *technique* due to a lack of knowledge (Cowell, 2017). Therapy dogs can be used as *assistants* to *enhance* the care within the clinical context in South Africa (Cowell, 2017). Pertaining to therapy dogs, it has been reported through numerous studies that AAT with therapy dogs has shown benefits in inpatient psychiatric facilities (Knisely et al., 2012). Many experts in the field of AAT believe that therapy dogs are undervalued and more research should be conducted to affirm the benefits of using therapy dogs (Alliance of Therapy Dogs, 2018).

## Limitations of the Research Study

The findings from this critical review of scientific literature are limited by the under-representation of studies in a South African clinical context. Overall, only three studies were found that could be used for the review process. It was also evident that most research conducted in South Africa involved horses, and research that involved dogs was usually in the context of AAAs or in conjunction with a reading programme at a school. Furthermore, although AAT is gaining popularity, the benefits thereof are difficult to measure and prove from a perspective of psychiatry, medicine, and psychology. Consequently, it is recommended that a long-term research study should be conducted in order to effectively show the effect therapy dogs have on patients in a clinical context. Hence, the researchers hope that the findings of this study will provide a baseline for introducing this new field of

therapy dogs and increase psychologists' awareness of therapy dogs as a therapeutic technique to implement in their clinical context.

## Conclusion

Enhancing mental health in the South African clinical context should be the goal of all healthcare professionals. Research has shown that implementing therapy dogs in a clinical context can aid in improving the mental and physical health of patients, increasing their sense of wellbeing and positive emotions, and subsequently decreasing loneliness, isolation, depression, and anxiety. Mental and physical health are critical facets of the clinical context in South Africa; hence therapy dogs should be incorporated into therapy and used by healthcare professionals. The studies in this critical literature review have validated the effectiveness of therapy dogs in the South African clinical context. Interacting with therapy dogs decreases cortisol levels (stress) and increases dopamine (mood); that is, it enhances the mental health of psychiatric patients. It is clear that psychiatric patients' mental health, engagement, and therapeutic collaboration can be improved through interaction with therapy dogs. However, there is a lacuna in research on this phenomenon, and more research needs to be done to affirm the health benefits of therapy dogs for humans.

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# SECTION 3: CRITICAL REFLECTION

Section 3 of this mini-dissertation consists of a personal reflection by the researcher who discusses her overall experience of this research study (2019-2020).

## Critical Reflection

The researcher's (Francis Jansen van Rensburg) experience is presented in this critical reflection with reference to the research procedure that was followed for the critical review of literature. The discussion involves the methods I, as the primary researcher and reviewer, have adhered to, including the collection of data, the data analysis, and the discussion of findings of the research study. In order to display that all-inclusive research of scientific literature has been done effectively and that the value thereof can be appraised critically, a critical review was conducted (cf. De Klerk & Pretorius, 2019).

A critical review is more than just a portrayal of particular scientific literature and should consist of theoretical innovation and a degree of analysis (De Klerk & Pretorius, 2019). According to Grant and Booth (2009), literature data from various sources is conferred, analysed, and synthesised through a critical review. The six steps described by Carnwell and Daly (2001) have been followed and implemented in this critical review. These steps are as follows: *defining the purpose of the review; defining the scope for the review; identifying the sources of relevant information for the review; reviewing the literature; writing the review; and applying the literature to the research study.* The critical review appraised what is of importance from previous research studies conducted on therapy dogs in a South African clinical context. It was also attempted to determine, through critical evaluation, whether therapy dogs could be effective and implemented in such a context. As the researcher, I guaranteed that during the research procedure, I followed firm ethical procedures and followed a rigorous process (see discussion in Section 1).

This research study did not execute any interventions or consist of any participants; thus, no ethical deliberations concerning participants needed to be observed. This critical review used existing or secondary information from primary studies. The emphasis of the critical review was to find, select, analyse, synthesise, and understand scientific literature in an ethically accountable way. It included following the procedure of rigour during the research process, which is essential to guarantee accuracy and diligence in developing the design and theory, implementing the research study, reporting the findings, and portraying conclusions (cf. Gnyawali & Song, 2016). I guaranteed that credibility, confirmability, and transferability were achieved throughout the process of the research (cf. Sharts-Hopko, 2002). Ethical procedures were established during the research by following procedures set out by Wager and Wiffen (2011). To increase the transparency of the research, I, as the primary researcher, directed the critical review and the work inside it. As the first and primary writer and reviewer, I am a registered master's student within the Master's Clinical Psychology Programme at the North-West University (2019-2020). In 2018, I completed the essential ethical training (TRREE) required by the North-West University. I was aided in the monitoring and coding of the research study by the second reviewer, Professor Werner de Klerk (my study leader and a registered research psychologist), who had experience and knowledge of the critical review process and thematic analysis (see De Klerk & Pretorius, 2019).

The final report (article, see Section 2) will not be issued in numerous publications. I made sure that plagiarism was evaded, and other authors' works were referenced both in a reference list and in the text (throughout this mini-dissertation) following the American Psychological Association, 6th edition, reference guidelines. No funding or support was arranged for the critical review; therefore, I was unbiased and not persuaded by competing interests. I guaranteed the precision of the research procedure, and I did not try to guide the

findings in a specific direction. The critical review was directed with a thorough understanding of the obligation of honesty and transparency of data, interpretation, and rigour (see Section 1).

**Data Collection**

For this critical literature review the data collection was an extensive procedure. Grant and Booth (2009) state that there are no official requirements to present approaches of search, synthesis, and analysis within a critical review; therefore, I used a clear systematic framework that is similar to SALSA (Search, AppraisaL, Synthesis and Analysis) to study the effectiveness of therapy dogs in a South African clinical context and how it was set forth in the scientific literature.

During the course of selecting and categorising sources, I used keywords to manage computerised searches of scientific literature that has been published. Initially, I found it difficult to articulate the keywords and manage the computerised search. Therefore, I communicated with Nestus Venter, a librarian at Ferdinand Postma Library of the North-West University, who provided guidance and assistance in selecting, merging, and altering the correct keywords by using Boolean search terms (“AND”, “NOT”, “*”, and “OR”). With his guidance, using the key phrases “dog assisted therapy”, “animal assisted therapy”, “pet assisted therapy”, “South Africa”, “psychology”, and “effectiveness”, I was able to abate my search from 150 key phrases to 13. This eased my anxiety regarding my critical review expedition. In order to give an in-depth view of the available scientific literature in South Africa regarding the above-mentioned keywords, I also used Google Scholar and Pets as Therapy as search engines to access other scientific literature that might not have been included in the original search on the website of the North-West University library. I, as the primary reviewer, was in charge of the literature search, while my study leader acted as the

secondary reviewer who supervised the review procedure and aided with co-analysis of the extracted information.

**Data Analysis and Interpretation**

Before conducting the actual data analysis, it was essential for me to appraise the scientific literature by assessing and evaluating the main list of research studies that had been carefully chosen in order to determine which ones could be used in the critical appraisal procedure. The appraisal procedure was not very time intense as there were only 13 studies to consider. I determined the relevance of the available scientific literature by reviewing all the research studies; furthermore, the purpose of the study, namely to determine the effectiveness of therapy dogs in the South African clinical context, was a determiner in selecting relevant scientific literature. The inclusion-exclusion criteria that were defined in the appraisal proposal stage of the research were used to form what scientific literature would be included. The title and abstract of each scientific literature work assisted me to determine which research studies to include and which to exclude. However, there were limited occasions where adequate data was not provided in the title and abstract alone, in which case I had to read the whole document. After excluding all the research studies that did not fit into the inclusion criteria, I was left with four research studies.

It was imperative to ensure that the selected research studies were of high value by evaluating methodical faults and the internal applicability and validity thereof (cf. Puks, 2016). I proceeded by analysing the complete document of each of the four selected research studies to further establish whether they should be included in the critical review. After appraising all of the documents, one study was omitted from the data pool, and I was finally left with three research studies that would be involved in the critical review.

Once I had reviewed the scientific literature, I continued with the last two stages, namely synthesis and analysis, which manage examining the selected literature studies,

drawing conclusions from them, and classifying the findings by extracting applicable information from the scientific literature collected (cf. Puks, 2016). I began the analysis of data procedure by analysis, which involved an initial scan of the summaries and the core body of literature in order for it to offer me with awareness into what had previously been completed, why it had been completed, and how it had been completed (cf. Carnwell & Daly, 2001). This stage permitted me to find lacuna in the research and categorise themes within the selected research studies. Through this process of work, some structure was added to the critical review procedure.

Once I had individually read through the selected research studies, I read each research study once more and commenced with the process of data extraction. It included reading the full text of each research study and extracting relevant data, including who the authors were, the publication date, the journal in which it was published, whether it was a book or university dissertation or thesis, what the research methodology and design were, and the codes and themes that answered the research question. For this process, I used all-encompassing extraction through which all the appropriate information were extracted and included in a data sheet to evade missing findings valued to the synthesis. It was a time-consuming and difficult task, as I was conscious that I had a massive obligation to guarantee that I had collected all the essential information from each of the research studies. This meant that I had to read each research study numerous times to guarantee that all the data were collected. All the appropriate data from each research study were placed into table format to review the data and ensure that all the essential material was included. This was a continual process, as I moved between appraisal of relevant literature, data extraction, analysis, and synthesis in numerous sequences as questions and themes arose from the synthesis.

As the primary reviewer, I then followed Clarke and Braun's (2013) six steps of thematic analysis to examine and synthesise definitions and implement the information on

therapy dogs in a South African clinical context. As soon as I had set up an all-inclusive information set, which included all the selected studies and was organised, I moved on to the procedure of thematic analysis according to the guidelines set out by Clarke and Braun (2013). For this stage, I had to categorise themes and patterns in the information in order to sufficiently comprehend and interpret the meaning of the text in each research study. By analysis and re-reading the information, I was able to code and determine underlying topics and themes (cf. Clarke & Braun, 2013).

The stages I followed in the thematic analysis procedure involved familiarising myself with the information or test, coding, searching for themes, revising themes, naming and defining themes, and writing up the report. The process of thematic analysis was an intimidating task, as it was required for me to go back and forth amongst the stages for thematic analysis. To guarantee it was done properly and comprehensively, I had to analyse my themes numerous times to establish that they were inclusive and clear. This phase of the critical review was quite complex and complicated, and at times it felt as if I was so absorbed in the information that I was not seeing it clearly. This daunting process seemed never-ending, and at times I thought I would never finish my mini-dissertation. As this work had to be of a standard that is high and had to be completed it in a specific time frame, I was under a lot of pressure, and at times my stress levels were elevated.

Using primary research studies means that I had the obligation of communicating the data precisely to ensure that I represented the work of diverse acknowledged authors broadly, precisely, and without permitting any preconceptions to contaminate my work. All of this was important for me to complete my mini-dissertation at a high degree.

**Findings**

Once I had successfully finished the analysis and synthesis phases, it was required for me to write the appraisal and implement the literature to the research study. I had to work

hard to demonstrate the findings of each reviewed scientific literature publication coherently, reliably, logically, clearly, non-repetitively, captivatingly, and in alignment with the objectives of the research (cf. Puks, 2016). Withing my article, I used a table to review each of the research studies (see Section 2), allowing the reader to see the significant data from each research study preceding to the findings of the thematic analysis. For the analysis in the final report, I implement a discussion that allowed for a clear understanding of the findings as well as conjecture on the significance thereof in further and future research in the field. The conclusion of the final report (article) consists of a summarising paragraph, defining any weaknesses or gaps as well as the findings of the research (cf. Puks, 2016). The findings from the critical literature review were fascinating and exciting to me, as they verified that therapy dogs were, in fact, effective within the South African clinical context.

All of the research studies showed similar findings, that is, that therapy dogs enhance health benefits for humans, whether physical or mental. When interaction has taken place with a therapy dog, numerous health benefits and improvements in the perceived quality of life and reduced levels of loneliness, depression, and anxiety were evident. Some of the research studies (e.g. Buckle, 2015; Cowell, 2017; Friesen, 2010; Lubbe & Scholtz, 2013) also proved that therapy dogs in a clinical context could be effective and implemented as a supplementary technique for therapists.

It is evident that more research is needed to prove the effectiveness of therapy dogs and quantify the health benefits they provide. One research study, namely Lubbe and Scholtz (2013), recommends that further research be conducted in this field, with the aim of enhancing and improving the existing knowledge base. The same research study also shows that the therapeutic relationship can be improved and engagement can be enhanced through implementing therapy dogs. However, at times, the benefits are not merely due to the therapy dog, and the therapist's role needs to be taken into consideration. One research study (Simon,

2014) also states that animal-assisted therapy (AAT), rather than animal-assisted activities (AAAs), needs to be implemented with regard to therapy dogs, as AAT uses a qualified professional who has undergone training.

I value the learning experience regarding therapy dogs and how they can be effectively implemented in a clinical context. I noted that two research studies (Coetzee et al., 2013; Van Heerden, 2018) advised that a longitudinal research study needed to be conducted in order to see the long-term effects therapy dogs could have in a clinical context. Studies done (e.g. Cowell, 2017; Jones, Rice, & Cotton, 2018; Jones, Rice, & Cotton, 2019; Lubbe & Scholtz, 2013; Palley, O'Rourke & Nieme, 2010; Simon, 2014) involving therapy dogs in the clinical context showed positive effects. From two research studies (Cowell, 2017; Palley, O'Rourke, & Niemi, 2010), I gathered that implementing therapy dogs was an inexpensive therapy technique that could be valuable in a South African clinical context. Health care can be expensive, and patients' accessibility to therapy dogs may reduce costs and meet the patients' needs (Cowell, 2017). For instance, therapy dogs can enhance patients' wellbeing (which forms part of their therapy), can encourage patients' commitment to their treatment, and improve the patient-therapist relationship (Cowell, 2017). These factors may eventually reduce the time spent in the clinical context, thereby saving costs.

I am optimistic that the findings from this research study can be used by healthcare professionals in the clinical context in South Africa to see the value of implementing therapy dogs. From conducting the research study, my interest has increased even more, and it has motivated me to consider conducting a longitudinal research study to determine the effects of therapy dogs in a South African clinical context as my doctoral study at a later stage.

## Conclusion

Although throughout this process, at times I felt that this research would never be complete, I truly appreciated seeing the findings and completing the research study. I am very passionate about implementing therapy dogs in the clinical context in South Africa, and my end goal is to be a clinical psychologist who uses a therapy dog in the clinical context, as I truly believe it may hold numerous health benefits and contribute to patients' mental health. This research study has had an immense impact on my life and has motivated me to incorporate a therapy dog into my work at a later stage.

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# APPENDIX A

Private Bag X1290, Potchefstroom
South Africa 2520

Tel: 086 016 9698
Web: http://www.nwu.ac.za/

**North-West University Health Research Ethics Committee (NWU-HREC)**

Tel: 018 299-1206
Email: Ethics-HRECApply@nwu.ac.za (for human studies)

22 August 2019

## ETHICS APPROVAL LETTER OF STUDY

Based on approval by the North-West University Health Research Ethics Committee (NWU-HREC) on 14/08/2019, the NWU-HREC hereby approves your study as indicated below. This implies that the NWU-HREC grants its permission that, provided the general conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

**Study title: The effectiveness of therapy dogs in a South African clinical context: A critical review**
**Principal Investigator/Study Supervisor/Researcher: Dr W de Klerk**
**Student: F Jansen van Rensburg - 25966316**

**Ethics number**:

| N | W | U | - | 0 | 0 | 4 | 8 | 4 | - | 1 | 9 | - | A | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Institution | | | | Study Number | | | | | | Year | | | Status | |

Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation

**Application Type: Single study**
**Commencement date**: **22/08/2019**
**Expiry date: 31/08/2020**

**Risk:** **Minimal**

**Approval of the study is provided for a year, after which continuation of the study is dependent on receipt and review of an annual monitoring report and the concomitant issuing of a letter of continuation. The monitoring report is due at the end of August annually until completion.**

**General conditions:**

*While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:*

- *The principal investigator/study supervisor/researcher must report in the prescribed format to the NWU-HREC:*
  - *Annually on the monitoring of the study, whereby a letter of continuation will be provided annually, and upon completion of the study; and*
  - *without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study.*
- *The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the principal investigator/study supervisor/researcher must apply for approval of these amendments at the NWU-HREC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited.*
- *Annually a number of studies may be randomly selected for active monitoring.*
- *The date of approval indicates the first date that the study may be started.*
- *In the interest of ethical responsibility, the NWU-HREC reserves the right to:*

- *request access to any information or data at any time during the course or after completion of the study;*
- *to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;*
- *withdraw or postpone approval if:*
  - *any unethical principles or practices of the study are revealed or suspected;*
  - *it becomes apparent that any relevant information was withheld from the NWU-HREC or that information has been false or misrepresented;*
  - *submission of the annual monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and/or*
  - *new institutional rules, national legislation or international conventions deem it necessary.*

- *NWU-HREC can be contacted for further information via Ethics-HRECApply@nwu.ac.za or 018 299 1206*

The NWU-HREC would like to remain at your service and wishes you well with your study. Please do not hesitate to contact the NWU-HREC for any further enquiries or requests for assistance.

Yours sincerely,

Digitally signed by Wayne Towers
Date: 2019.08.22 11:39:33 +02'00'

Prof Wayne Towers
Chairperson NWU-HREC

Digitally signed by Prof Minrie Greeff
Date: 2019.08.25 20:06:11 +02'00'

Prof Minrie Greeff
Head of the Faculty of Health Sciences Ethics Office

Current details:(13210572) G:\My Drive\My Documents 20190227\NWU-HREC\NWU-HREC_Applications\NWU-HREC_Applications-2019\Applications 07-20190814\NWU-00484-19-S1(W de Klerk-F Jv Rensburg)-SR\NWU-00484-19-S1(W de Klerk-F Jv Rensburg)-EAL\9.1.5.4.2_EAL_NWU-00484-19-A1_22-08-2019.docm
22 August 2019

File reference: 9.1.5.4.2

**Appendix B**

# CERTIFICATE OF LANGUAGE EDITING

Dr. L. Hoffman

Kroonstad

BA, BA(Hons), MA, DLitt et Phil, Certificate (English Grammar for Editors)

Member of South African Translators' Institute – No. 1003545

Cell no: 079 193 5256 Email: larizahoffman@gmail.com

Edited by Dr L Hoffman

## DECLARATION

To whom it may concern

I hereby confirm that I have proofread and edited the following mini-dissertation, excluding the references.

### Title of mini-dissertation

The effectiveness of therapy dogs in a South African clinical context: A critical review

### Student

Francis van Rensburg

Lariza Hoffman

Kroonstad

28 August 2020