



# Middlesex University

**PSY4222**

**Advanced Dissertation in Psychology**

**Department of Psychology  
School of Health and Social Sciences**

**Module Leader: Dr Ilhan Raman**

**Student Number: M00373150**

**MSc in APPLIED CLINICAL HEALTH PSYCHOLOGY**

**Supervisor: (Dr. Camille Alexis-Garsee)**

**Dr. Bahman Baluch**

**Title of Dissertation:**

**An investigation of the adolescents' experience of EAT, a qualitative approach**

## **SUBMISSION DECLARATION**

### **PSY4222 ADVANCED DISSERTATION IN PSYCHOLOGY**

**STUDENT NUMBER: M00373150**

**TITLE OF DISSERTATION: An Investigation of the Adolescents' Experience of EAT, a Qualitative Approach**

**DECLARATION:**

**This is entirely my own work and it has not been copied, cribbed or paraphrased from any published or unpublished material. It is written in my own words throughout, and all the sources used in the text are acknowledged in the appropriate reference section.**

**I also confirm that I met with my supervisor on at least three occasions to discuss aspects of my project.**

**Signed: \_\_\_\_\_ Date: 25. October 2012**

**Full Name: Tanja Simone Ecken**

## **Table of Contents**

Acknowledgement & Dedication.....	6
Abstract.....	7
<b>Chapter 1: Introduction.....</b>	<b>8</b>
Animal Assisted Activity & Animal Assisted Therapy.....	8
Benefits of Animal Assisted Therapy.....	9
How Animal Assisted Therapy works.....	10
Therapeutic interactions with horses: the Equine Assisted Therapy (EAT).....	10
Equine Assisted Therapy: introducing the EAGALA Framework.....	11
Why horses and how it works- a literature review.....	12
Review and analysis of EAT research literature.....	14
Klontz, Bivens, Leinart & Klontz (2007).....	14
Frewin & Gardiner (2005).....	15
The need for qualitative research within Equine Assisted Therapy.....	16
the need for linking health with Equine Assisted Therapy.....	16
the need for linking adolescents with Equine Assisted Therapy.....	17
the research question.....	17
predictions.....	18
<b>Chapter 2: Methodology.....</b>	<b>18</b>
Rationale for qualitative research.....	18
Thematic analysis: inductive-semantic-essentialist/realist approach.....	19
why thematic analysis.....	20
Participants.....	20
Settings.....	21
Materials utilized by Paardkrachtig.....	21
theoretical sessions: positive psychology.....	22
theoretical sessions: depression prevention.....	22
practical sessions: horse activities.....	23
horsefootball.....	23
getting to know the horse.....	23
taking care of the horse.....	23
Paardkrachtig's test: CES-D, HADS-A, HADS-D, and GELUK (happiness).....	23
Materials for the interview.....	24
interview content.....	24
Procedure.....	25
prior to the interview (consent forms and ethical approval).....	25
interview.....	25
translation.....	26
Paardkrachtig's test: CES-D, HADS-A, HADS-D, and GELUK (happiness).....	26

<b>Chapter 3: Findings</b> .....	<b>26</b>
Master themes.....	26
formation of master themes.....	28
First master theme: issues for joining the programme.....	29
sub theme: psychological.....	29
sub theme: health.....	30
sub theme: social.....	31
Second master theme: participants experience of Paardkrachtig.....	31
sub theme: helpful.....	31
sub theme: horses.....	33
sub theme: pro’s and contra’.....	34
Third master theme: changes (through the EAGALA experience at Paardkrachtig).....	35
sub theme: locus of control.....	35
sub theme: appliance of the experience.....	35
sub theme: psychological changes .....	37
sub theme: health changes.....	38
sub theme: social changes.....	40
EAT on substance abuse- revised.....	40
Quantitative results of Paardkrachtig.....	41
global data of all participants (N=42) from past Paardkrachtig programmes.....	41
data from participants which partook at interview.....	43
<b>Chapter 4: Discussion of findings</b> .....	<b>46</b>
Discussion of master themes.....	46
Issues prior the programme (first master theme).....	46
sub theme: psychological.....	46
sub theme: health.....	46
sub theme: social.....	46
Experience of Paardkrachtig (second master theme).....	47
sub theme: helpful.....	47
sub theme: horses.....	47
sub theme: pro’s and contra’s.....	48-49
Changes through Paardkrachtig (third master theme).....	50
sub theme: locus of control.....	50
sub theme: appliance of the experience.....	51
sub theme: psychological changes.....	51
sub theme: health changes.....	52
sub theme: social changes.....	52
Unconscious matching of participant’s issues with programme’s benefits.....	53-54
Discussion of quantitative results by Paardkrachtig.....	55
GELUK (happiness).....	56

CES-D.....	56
HADS-A/D.....	57
Paardkrachtig's research goals.....	58
Quantitative & Qualitative data discussed.....	58
Future research suggestions.....	59
Limitations.....	60
Reflexivity Section.....	60
Citation.....	62
<b>Appendix.....</b>	<b>67</b>
semi-structured interview.....	67
formal analysis for GELUK, CES-D, HADS-A, HADS-D.....	69-70

## **Acknowledgement**

With appreciation I would like to thank my first supervisor, Dr. Camille Alexis-Garsee, for her support and encouragement during my research endeavors. All the best to you and your family.

Dr. Bahman Baluch, I thank you for sharing your knowledge and wisdom of research and psychology. Your assistance and supervision truly made a difference, thank you for being an exceptional supervisor with expertise and kindness!

To the wonderful team at Paardkrachtig- Anne, Annabel and Annelies- your dedication and support to the programme and the children are far beyond standards! Your efforts have motivated and inspired me during the course of this dissertation. Your team makes the world a better place!

Deep gratifications go out to the adolescents who supported this study with their experience, trust, openness and authenticity. Your participation will help others!

Thanks to Middlesex University and all its staff.

## **Dedication:**

*One year of dissertation- one year of life!*

Mama, you have believed in me always. I thank you for all your support, freedom of choice, and love. Be assured, I am as content with life as I could possibly imagine! Wibke, apart from doing an excellent job as a translator, you have set an exceptional example of mastering one's challenges: You are inspiration! My solid home-base abroad and in the heart: Tzeni, Wibke, Rafa, Jojo who have been loyal life companions, being on my side during life's up's and down's. And Tati who has inspired me always with her-soul spirit and who has introduced me to the field of Equine Assisted Therapy in 2008. My London life has been as wonderfully great as it has been because of you: Yahyia, Sarah, and Avo.

You and many others, who made me the person I am today- thank you for being you!

## **Abstract**

Aim- the aim of the present study is to investigate the effectiveness of Equine Assisted Growth and Learning Association (EAGALA) in treatment of depression prevention of adolescents'. This process of treatment involves utilizing depression prevention and positive psychology in the theoretical sessions, and using horses within the practical sessions.

Participants – This programme consisted of 10 participants. Out of all the programmes which have run so far, forty two boys (n = 7 mean age 12.86, SD = 1.21) and girls (n = 35, mean age 13.60 , SD= 1.88) were given the following questionnaires (the GELUK, CES-D, HADS-D, HADS-A) at 3 time phases namely at the start of the treatment, at the end of the treatment and 3 months later. Furthermore, six of the participants (2 boys and 4 girls) were interviewed at the end of the programme using semi-structured questions. These 6 participants also filled-out the above questionnaires.

Results- the results show generally significant changes (increase) in GELUK (happiness) at all time phases for both the main sample (N=42) and for the six selected participants. For the global sample (N=42), the following counts: the CES-D scores show a significant decrease of depressive complaints across all three time phases. The HADS-A scores show a significant decrease of anxiety across all time phases, and the HADS-D shows a decrease of depressive symptoms across all time phases as well.

The qualitative interviews consisted of 6 participants and showed the following changes within the participants after they have partaken at Paardkrachtig's programme: internal locus of control, the intent to apply what they have learned in the programme, psychological changes (more self-confidence, feeling calmer, feeling more like one's self, knowing how to be happy & enjoy), health changes (feels better in her skin, calmer, better eating habits, exhausted/relaxed), and social changes (less arguments with classmates, is part of the group now, made a good friend at Paardkrachtig, more sociable).

## Chapter 1: Introduction

The therapeutic benefits of animal assisted therapy within the healthcare environment have been acknowledged as early as 1792, where a psychiatric hospital in England was the first one to document its utilization of animal assisted therapy with its patients. The psychiatric inpatients cared for small farm animals as part of their treatment plan (Baldwin, 2011). Since then, animal assisted therapy has been used to accompany treatment plans of patients with psychiatric and neurologic problems (Baldwin, 2011), patients who are in demand of critical care nursing (Miller, Connor, Deal, Weber-Duke, Stanley-Hermons, Varnell, Hartman & McLarty, 2003), and for the homebound elderly (Harris & Levicoff, 2003). The aim of the present dissertation is to examine the significance of this in relation to Equine Assisted Therapy.

This study incorporates and discusses both qualitative findings and quantitative data in the later chapters.

The following paragraphs will introduce the general idea of animal therapy, leading to the core area of this dissertation: Equine Assisted Therapy. Animal assisted therapy is an adequate introduction to the research topic for it employs similar mechanisms.

### ***Animal Assisted Activity and Animal Assisted Therapy***

According to Miller et al (2003), a clear cut-off between animal assisted activities (AAA), and animal assisted therapy (AAT) exists. An example of AAA would be an interaction with one's 'home-pet' in the hospital or hospice. This is a non-structured interaction with one's personal and non-trained animal. AAT, on the other hand, is outlined below. Animal assisted therapy (AAT) is conducted by a health care specialists who is trained in AAT. He or she will evaluate the physical, psychological, and cognitive needs of the patient; an AAT trained animal will be 'the tool' to achieve, and through which the AAT specialist can evaluate, and process the patient's path to a satisfactory outcome. The process is measured and documented, the visits with the therapeutic animal regularly scheduled (Baldwin, 2011). The animals, usually dogs, will have undergone 50 hours of patient-interactions prior to being scheduled for regular AAT sessions. Their character and behaviour will be tested for their suitability in a therapeutic setting, and the hospital staff, and the patient will have given their consent.

The interactions of patient and animal during the AAT sessions can be in the format of the patient petting, feeding, playing, holding, grooming, or walking the animal. The animal can also be utilized in group-sessions, to facilitate interaction among the group members (DeCoursey, Russel & Keister, 2010). This may occur via the group members' discussion of the animal's characteristics, and/or the animal being passed around among the group members. Therapeutic animals are also an excellent source of distraction for patients experiencing chronic pain, and for patients undergoing frightening procedures (e.g. children receiving an injection). Further, therapeutic animals can offer assistance as they walk beside a patient's wheelchair, and as they offer assistance for patients attempting to keep their balance as they walk (Miller, et al 2003).

### ***Benefits of Animal Assisted Therapy***

AAT sessions have clear superior benefits over sessions with a human-volunteer, and usual care (Cole, Gawlinksi, Steers & Kotlerman, 2007). In this study, Cole et al evaluated the neurohormone levels and state anxiety in patients hospitalized for heart failure, after 3 separate interventions, of 12 minutes each. The outcome is the following: the AAT group had better results than the human-volunteer group and the usual-care group in regards to lower pulmonary capillary wedge pressure, lower systolic pulmonary artery pressure, lower epinephrine levels, and lower norepinephrine levels. When measuring state anxiety sum scores, the AAT group had the lowest scores in comparison to the human-volunteer group and the usual-care group. Anxiety is known to inhibit learning and memory; therapeutic effects of AAT thereby indirectly facilitate learning, memory, and a possibly faster rehabilitation after the hospital stay. Lekarczyk & Hill (1969) found self-esteem to be negatively related with anxiety, and self-esteem positively related to test performance. Barker & Dawson (1998) states other physiological/health benefits of AAT, e.g. improved fine motor skills, improved wheelchair skills, improved standing balance, lower blood pressure, less disruptive behaviours, and better eating habits. Consequently following such achievements, but also separately thereof, are the following psychological benefits through ATT: increased attention skills, increased self-esteem, reduced anxiety, reduced loneliness, increased willingness to be involved in activities, and

increased interactions with others (Baldwin, 2011). Similar results were found by Sobo, Eng & Kassity-Krich (2006), underpin these results, pointing out that the human-animal bond is an effective tool in the treatment and management of emotional pain.

### ***How Animal Assisted Therapy works***

One of the key factors in AAT's route to success seems to be the animals' ability to offer unconditional love and attention to the patient (DeCoursey et al, 2010). It's available 'on-demand', without the need to ask, and without any fear of rejection. The animal offers a non-judgmental platform, where the patient feels free to give and receive; no inhibitions exist in regards to worthiness or being able 'to pay back the attention received'. This sort of attention and care poses a sharp contrast to the human kind. One clear, yet under-researched and poorly-understood advantage, that any sort of animal assisted therapy has, is the intuitive component. This becomes apparent by a testimonial stated by DeCoursey et al (2010):

*'The (handler) asked him, do you feel any pain? The dog's neck started to twitch and my son said some in my neck. (The dog) moved his front leg. My son said it hurt some in his shoulder too. Then (the handler) took the dog off the bed. (The dog) seemed to be tired and weak. The man laid him on the floor and massaged the dog and rubbed him down. My son's pain was gone. I have never seen anything like this before.'* (p.213).

This underlying, intuitive, and empathic mechanism seems to be one of the key tools in alleviating the patients' distress, both physiologically/health and psychologically. Posing a fascinating and yet avant-garde topic, research still needs to be done in order to scientifically explain and ascertain the human-animal bond (DeCoursey et al, 2010, Roberts, Bradberry & Williams, 2004).

### ***Therapeutic interactions with horses: The Equine Assisted Therapy***

This section introduces the concept of equine assisted therapy to the reader. Equine assisted therapy utilizes horses within its therapeutic framework. The horses' size and sensitive nature evoke an increased being-in-the-now, and provide a real time feedback. These assets, among others, pose therapeutic superiority to animal assisted therapy. Further, animal assisted therapy focuses mainly on the ill patient whereas equine assisted therapy has preventive potentials as well (e.g. depression prevention). Hence, it is the equine assisted therapy experience that this study investigates.

Equine assisted therapy is yet another form of alternative, animal assisted therapy, where underlying mechanisms of human-animal bonding and empathic animal behaviours facilitate human betterment. For various definitions of this approach and its tools, refer to [www.EAGALA.com](http://www.EAGALA.com) or the book 'Horse Sense and the Human Heart' by McCormick & McCormick (1997). Therapeutic benefits are multiple, ranging from psychological to health betterment; current qualitative and quantitative research findings are outlined below. Different forms of Equine assisted therapy (EAT) exist, e.g. Equine Assisted Psychotherapy (EAP), the North American Riding for the Handicapped Association (NARHA), the Equine Assisted Growth and Learning Association (EAGALA) (Roberts et al, 2004), and with all respect many other tailored programmes of EAT. They all share similar characteristics: a health care specialist, a trained horse handler, horses, a stable or barn, and the participants. Neither does the type of EAP programme seem to impede with its therapeutic benefits.

### ***The EAGALA (Equine Assisted Growth and Learning Association) Framework***

The Equine Assisted Growth and Learning Association (EAGALA) is an international, non-profit organization, working with humans and horses to alleviate mental distress and facilitating human development. With training centers in 41 countries, the EAGALA programme works with trained and certified professionals, along with their horses, to those individuals or groups suffering from depression, trauma, addiction, dysfunctional families, and family violence ([www.EAGALA.org](http://www.EAGALA.org)). The EAGALA framework offers a standard with a broad structure, in which Equine Assisted Therapy or Equine Assisted Learning takes place. This open model ensures the preservation of key values and beliefs, and yet it offers the professional therapist and horse handler enough professional freedom to tailor the programme in accordance to therapeutic needs and facilitating styles demanded. The key values and beliefs within the EAGALA framework are the therapeutic triad of the horse, the equine specialist, and the mental health professional; together their work is non-mounted, the participants will solely work with the horses from the ground; the therapeutic triad places trust into the participants' efficacy, truly believing in and facilitating each individual in their journey towards discovering the best solution for themselves; lastly, each EAGALA center adheres to a strict code of ethics, an ethics committee and regular protocols ensure the well-being of the participants ([www.EAGALA.org](http://www.EAGALA.org)).

In what follows, is a brief introduction of three different programmes within the EAGALA framework:

**Carina Prantl** - *Zentrum für pferdeunterstütztes Wachstum und Lernen - Goetzens, Tirol, Austria*-The EAGALA programme focuses on personal growth, life-reflection, relationships, conflicts, family, poorly-behaved adolescents, group-work, and leadership training for CEO's ([www.carina-pratl.at](http://www.carina-pratl.at))

**Cobboboonee Horse Riding, Australia**- This EAGALA programme focuses on mental health, relationships, and goal setting for individuals from the corporate background, groups, youth, and schools. Tailored programmes for serving other issues or groups are available as well ([www.cobboboonee.com](http://www.cobboboonee.com)).

**Minds-n-Motion, LLC, Germany**-The EAGALA programme is specialized to work with service members and their families, focusing on PTSD, stress- and anger management, grief, transitional issues, marital problems, couples, and family counselling. The format of the programme can be of individual or group format ([www.mindsnmotion.net](http://www.mindsnmotion.net)).

Clearly, the EAGALA programme is constructed in a way that caters to a multitude of individuals with a diversity of mental issues and emotional needs. The EAGALA framework gives enough 'space' for professional creativity, in order to design a tailored-programme with the horses that targets specific needs (e.g. grief, marital problems, or personal growth).

### **Why horses and how it works- a literature review**

The EAGALA and other formats of Equine Assisted Therapy have designated horses as an aid to human betterment for multiple reasons: the horse's size has the power to challenge the perception one holds of him/herself abilities, and may lead to a more authentic assessment of one's true efficacy (Roberts et al, 2004). Gaining a sense of mastery and confidence within the human-horse interaction increases self-esteem, self-efficacy (MacKinnon, Noh, Lariviere, MacPhail, Allan & Laliberte, 1995, Bizub, Joy, & Davidson, 2003, Iannone, 2003, Glazer, Clark & Stein, 2004, Frame, 2006, Hemenway, 2007, MacDonald, 2007), self-confidence and trust (MacKinnon et al, 1995, McCormick & McCormick, 1997, Kohanov, 2001, Kersten & Thomas, 2003, Levinson 2004, Glazer et al, 2004). Additionally, becoming skilled in horsemanship develops self-support & independence (Klontz, Bivens, Leinart, & Klontz, 2007), increased attention span (MacKinnon et al, 1995, Lehrman & Ross, 2001), as well as verbal (Lehrman & Ross 2001) and non-verbal communication (Kohanov, 2001, McCormick & McCormick, 1997). According to the EAGALA philosophy, these newly-learned assets 'spill over' to other areas in life which seem demanding and challenging ([www.EAGALA.org](http://www.EAGALA.org), Roberts et al, 2004, McCormick & McCormick, 1997): studies have linked resilience (Hayden, 2005), vocational skills (Iannone, 2003), sensorimotor skills (Splinter-Watkins & Calhoun, 1999, Kaiser, Smith, Heleski & Spence,

2006) increased life-functioning (Shambo, Seely & Vonderfecht, 2006), improvement in psychosocial, cognitive areas (Splinter-Watkins, et al 1999), self-worth (Kaiser, Spence, Lavergne & Vanden Bosch, 2004), locus of control (MacDonald, 2007) to EAT intervention. Horses are social animals, living in groups with distinct roles assigned to them. Naturally, their characters' and moods' will differ. Hence, they offer an educational platform to the participants, demanding an attitude which needs to perceive, embrace, and approach differences in social settings ([www.EAGALA.org](http://www.EAGALA.org), McCormick & McCormick, 1997). Studies have shown relationship improvement (Russel-Martin, 2006), improvement in positive behaviours (Trotter, Chandler, Goodwin-Bond & Casey, 2008), and improvement in children' and parents' perception (Kaiser et al, 2006) as a result of an EAT programme. The underlying assumption behind any Equine Assisted Therapy programme is that the horse is a 'metaphorical' teacher, with the ability to 'mirror' the participants' behaviours. Through mirroring our human body language, the horses show our very shortcomings and strengths. This very key factor in the efficacy of EAT is still relatively under-researched. However, one of the reasons for the existence of this ability seems to be nature of the animal: prey animals (Roberts et al, 2004, McCormick & McCormick, 1997). By instinct, they need to be extremely sensitive towards their environment, and this enables them to be immensely responsive towards human feelings, intentions, needs and emotions. Fear, for example, is reflected in human body language (Hutchinson, 2007). By sensing the fear, and reflecting it back to the participant, he /she is then able to face it. Hence, the horse can be a tremendous therapeutic aid when participants' needs are still in the unconscious, or when participants try to mask their emotions (McCormick & McCormick, 1997). Another important factor in the learning process during EAT is the non-verbal component: since it is the horse that mirrors the participants' behaviours and emotional states, the participants will 'see' and 'feel' their own behaviours directly in front of them. E.g. if the participant is uneasy around the horse, the horse will pick up his/her mood and portray it. Hence, little arguing, defending, or rationalizing takes place. The horse is a living biofeedback in real time (Roberts et al, 2004, McCormick & McCormick, 1997). Negative emotions, such as depression (Bowers, MacDonald & Cappo, 2003, Shambo et al, 2006, Seely, Vonderfecht, 2007, Hemenway, 2007), isolation (Frame, 2006), dissociation (Shambo et al, 2006), anger (Kaiser et al, 2004, Kaiser et al, 2006), resentment, guilt, fear of the future (Klontz et al, 2007), aggression (MacDonald, 2007), psychological distress (Klontz et al 2007), and a decrease in negative behaviours (Trotter et al, 2008) have been linked to EAT interventions with its underlying ability of mirroring.

According to the McCormick & McCormick's, the nature of the human-horse interaction is a distinctly unique one that also offers hope for hard-to-reach participant groups, e.g. intellectually disadvantaged,

deaf, mute, youth gang-members (Frewin & Gardiner, 2005), and for those from a culturally different background, where a language barrier could impede the therapeutic process. Mental-wellness and well-being is commonly experienced as a result of EAT interventions (Graham, 2007, Klontz et al, 2007). Few existing studies found no improvement in physical well-being after an EAT intervention (Graham, 2007). Iannone (2003) found no internal locus of control after equine assisted therapy. Hemenway (2007) found negative effects on participants' self-esteem after EAT.

### ***Review and analysis of EAT research literature***

A literature review in the English-speaking domain of the field of Equine Assisted Therapy has yielded promising therapeutic results in various aspects. In what follows, is a presentation of one EAT studies, and one review of EAP.

#### **'The Effectiveness of Equine-Assisted Experiential Therapy: results of an Open Clinical Trial'**

**by Klontz, B., Bivens, Leinart and Klontz T. (2006)**

In the treatment plan, the study tries to explain how to bring about betterment for their participants. Equine activities are explained (grooming and choosing a horse, some mounted work), the kind of mental betterment expected (living in the now, less destructive behaviours, increased psychological well-being), and activities of existential therapy are listed (role-playing, role-reversal). Klontz et al describe what kind of mental distress can be alleviated through EAT; unfinished business. To lay-people understandable, the genesis and magnitude of unfinished business is explained. The role of the horse is also comprehensively explained: it acts as a non-judgmental mirror to trigger the hidden emotions of unfinished business. The individual then has the opportunity to face these. However, it is still not clear, what the exact problems of the participants are. Do they all suffer from unfinished business? Is that their reason for joining the programme? The role of unfinished business in relation to the participants is not clear. The authors further didn't specify how extent of unfinished business will be measured.

Following the treatment plan, a reference to the appendix A is made. In the appendix, instructions and questions for future EAT programmes are attached. Three questions arise from the appendix:

- 1) It is not clear, whether or not these questions (& answers) were incorporated into the Klontz et al study.
- 2) The nature of the questions is qualitative; how were they incorporated into the results?

3) No. 2 of the procedure section could possibly cause bias (elaborated in the section 'weaknesses' below). As a major shortcoming, no direct link can be found between the actual quantitative findings and the conclusions. It is not clear at all, how Klontz et al got these conclusions. Klontz et al's study contributes poorly to the field of psychology, and to the field of EAET: the study attempts to demonstrate that psychological betterment can be achieved through alternative forms of therapy. It is noticeable that in Klontz et al research the methodology is very poor and whatever results came out of this study lack significance. It is a missed opportunity to show how a broader spectrum of therapies could have been beneficial. If this study had been executed properly, it could have shown the benefits of EAET for patient groups which are difficult to access for one reason or another; patients who are mute, autistic, PTSD affected individuals, or individuals who have a speech impediment for example. The horses' remedial mechanisms of mirroring can reach these patient groups. The issues targeted (procrastination, fear, distraction, and lack of independence) apply to many people across different cultures, which increases the utility of this study (keeping in mind its strong limitations). However, the way of demonstrating psychological betterment through EAET is rather poor and unscientific. Although this study is quantitative, it lacks scientific credibility for the reasons explained above. The results are not linked with the discussion; the major weakness is that the results are not credible. Due to reasons explained, one may argue it's not a credible contribution to the research literature.

**'New Age or Old Sage? A review of Equine Assisted Psychotherapy'**  
**by Karen Frewin and Brent Gardiner (2005)**

Frewin & Gardiner (2005) offer a comprehensive and well-rounded review of the field of Equine-Assisted Psychotherapy (EAP). Their review begins with anecdotal meanings of horses, followed by the horses' nature in relation to EAP/EAT. The paradox of power and fearfulness of the horse is related to their ability to mirror, perceive, and to offer an opportunity for learning. The horses' non-judgmental, hyper vigilance, authentic and intuitive manner is stated to promote a heightened feeling of being in the now, self-esteem, confidence, non-verbal communication, and to a truer and more authentic perception of one's self. The therapeutic mechanisms (mirroring) and their spill-over effects are explained. Frewin and Gardiner's review continues with the forerunners of EAP/EAT, and gives the reader a solid impression of EAP/EAT's longstanding tradition of therapeutic benefits. The review continues with describing the current (2005) EAP situation in Australia; sparse amount of local EAT training facilities, and funding issues are mentioned. Finally, given the therapeutic benefits and scope of issues, Frewin and Gardiner propose a

continuing future. Carefully criticizing their review, their work contributes to the research field of EAT by addressing two issues: One, by pointing-out the lack of EAT research in the English research literature; and two, by describing the activity and therapeutic effects of vaulting. Vaulting is another form of an equine activity, and fairly widespread among primary and secondary school students. Yet rarely mentioned in therapeutic contexts so far, Frewin and Gardiner add a new perspective to the field of EAT.

Frewin and Gardiner mention the interplay of the therapist' behaviour and motivation, and how it affects the clients' therapy outcome. However, their proposal of future research doesn't account for this important aspect of therapy. Studying not only the client, but the therapists' perception and experience of EAT as well, could potentially lead to an improved experience on behalf of the therapist and his/her impact on the client. The second shortcoming of Frewin and Gardiner's review refers to the nature of their proposed research. Although the emotive and personal nature of EAT is clearly recognized, the need for qualitative research hasn't. With mechanisms of a mainly implicit-processes, and still poorly explainable, qualitative studies could be a key to understanding to unquestionable therapeutic effects of EAT.

### ***The need for qualitative research within Equine Assisted Therapy***

Considering the both the lack of qualitative research in the field of EAT, and the nature of EAT, a qualitative investigation of the participants' experience would pose a sound contribution. It serves two functions: Firstly, filling the qualitative research gap- the scarcity in qualitative research within EAT has not been able to fully grasp the participants' emotional experience. New ways of how exactly EAT and its mechanisms work may be discovered. Secondly, it would fill the gap of EAT studies in the English language

As Ewing, MacDonald, Taylor & Bowers (2007) said:

*'Although the quantitative results did not show statistical significance, qualitative analyses were illuminating' (p.66).*

It is assumed that rich detail and in-depth information will be extracted through a qualitative approach.

### ***The need for linking health with Equine Assisted Therapy***

The research gap has been highlighted through a careful literature review: Trotter et al (2008) present the only study that links EAT to health behaviour. They found a decrease in conduct problems, with

alcohol/drug use as a sub category, as a result of EAT. Alcohol/drug use is linked to health behaviours: higher caffeine & tobacco intake, excessive use of over-the-counter drugs, illegal drug use, and sexual activity (Kim, Larimer, Walker & Marlatt, 1997). Trotter's et al (2008) study bridge the gap of linking EAT with health issues. These are few and yet promising results for the field of psychology and health, which successively demonstrate EAT's potential in other areas relevant to human health. Trotter's et al results raise the questions how EAT relates to other maladaptive health behaviours, e.g. smoking, drinking, and cravings for sweets. One's coping mechanisms in stressful situations can be unhealthy as well (e.g. drinking, or aggressive behaviours). Avant-garde investigation on how EAT effects an individual's coping mechanism, for example, might broaden EAT's areas of therapeutic benefit, and if it holds true, add to the research literature.

### ***The need for linking adolescents with Equine Assisted Therapy***

It is assumed that especially adolescents will be susceptible to and will benefit from EAT interventions because of two reasons: Firstly, problems innate to the period of adolescence (hormonal changes, identity issues, peer pressure, family arguments) elevate the chances of depression, substance abuse, and other forms of distress (Costello, Swendsen, Rose, Dierker, 2008, Pharo, Sim, Graham, Gross, Hayne, 2011). Hence, EAT can be enormously beneficial for adolescents. Secondly, as adolescents face both the challenge and the beauty of taking a stance in life, pushing one's boundaries, and establishing healthy boundaries; they can benefit from activities that is assumed to facilitate those challenges (EAT). It is expected that EAT will have an impact on depression and self-esteem. Previous studies (Tetreault, 2006, Klontz et al, 2007, Trotter et al, 2008) have demonstrated lowered depression rates after EAT. Depression is linked to addictions and substance abuse (Correa- Fernandez, Ji, Castro, Heppner, Vidrine, Costello, Mullen, Cofta-Woerpel, Velasquez, Greisinger, Cinciripini & Wetter, 2012, Lydecker, Tate, Cummins, McQuaid, Granholm & Brown, 2010).

### ***The Research Question***

The literature review has demonstrated a qualitative research gap, especially in relation to adolescents and health, that leads to formulating the following research question, namely: An investigation of the adolescents' experience of EAT, a qualitative approach.

## ***Predictions***

The assumed effects of EAT on its participants are better psychological well-being (confidence, boundary-setting, self-esteem, improvements in social behaviours, better coping mechanisms) and better health behaviours (better eating habits, feeling good about one's body, less drinking/smoking, healthier choices).

## **Chapter 2: METHODOLOGY**

### ***Rationale for qualitative research***

Considering the emotive nature of EAT and its participants' diversity, a qualitative study design appreciates the cornucopia of issues, and the differences in participants and their experiences. As summarized, the participants' reasons for attending any EAT programme can be due to relationship issues, (McCormick & McCormick, 1997), academic and/or social failure, entailing externalizing, internalizing, maladaptive, and adaptive behaviours (Trotter et al, 2008), PTSD (EAGALA programme by Ilka Parent), substance abuse (Rector, 1992), behavioural and motivational issues (Tedeschi, 1991), bullying (EAGALA programme at Paardkrachtig, Netherlands), or issues related to being a juvenile offender (Mann, 2001), to name a few. Needless to say, each of the participants will have a different history in respects to needs, emotions, and challenges. Vice versa, it is possible that EAT works in different ways for each of the circumstances. In attempting to disentangle EAT's efficiency, a detailed qualitative study investigating the participants' experience of the programme can offer invaluable insight to this relatively new field of research (DeCoursey et al, 2010, Roberts et al, 2004). For example, the horses have the asset to mirror the participants' feelings. Real time feedback offers the participants the opportunity to work through 'unfinished business' (Klontz et al, 2007). Each experience of mirroring, perceiving, feeling, and facing one's issues is unique. Each participant's route to emotional healing is different. How can standardized tests and questionnaires rightfully embrace these highly personalized experiences? A qualitative investigation of the participants' experience of an EAT programme has a more adequate perspective in appreciating this very diversity. Additionally, the intricate mechanisms of the human-animal bond have not been fully understood. Therefore, utilizing the rather unique approach of a qualitative study within EAT has the potential to productively contribute to the research literature. This vote for a qualitative standpoint shall

not underestimate the demand and necessity for objective, comparable numbers and figures. Yet, seeking empirical explanations sometimes falls short of valuing and accrediting the fine and fragile processes in the human-horse relationship.

### ***Thematic Analysis: inductive-semantic-essentialist/realist approach***

Thematic Analysis will be utilized to analyze the participants' data taken during the interviews. The data will be coded and grouped into themes, reducing the data to analytical themes (Braun & Clarke 2006). Careful reading and re-reading between interview script and thematic map will ensure no meaningful experience/data is lost. Meaningful themes and subthemes will be created as a result of the individual, as well as the collective experience. Reoccurring themes across all participants will be themed up, as well as unique yet important statements to the EAT experience of one individual participant will be resembled in the thematic map. The participants' statements may be utilized in more than one theme, if applicable. For example, if the participants say they were amazed about the different characters of the horses at the stable Paardkrachtig, then this statement may feed into the themes 'pro's about Paardkrachtig' and 'participants' experiences with the horses'.

As this study is interested in the authentic experience of the participants, patterns and themes in their experience will be analyzed with the inductive approach. The themes identified are directly linked to the data itself, meaning no interpretation on behalf of the researcher will be made (Patton, 1990). The data isn't 'made to fit' into pre-existing concepts; rather, the participants' story and meaning thereof unfolds as their data is processed (Braun & Clarke, 2006). The data has been especially collected for the purpose of this study, thereby conforming to the inductive criteria. However, as much as the inductive approach is data-driven, the researcher cannot be completely freed from 'theoretical or epistemological commitments' (Braun & Clarke, 2006). Although it is the goal of this study to fully grasp the participants' experience, equally attending to all aspects of their experience, some questions (and their resulting data) will allude specifically to the potential changes EAT has caused to the participants.

The identification of themes will be on a semantic level, meaning what has been explicitly said will be grouped into themes (Boyatzis, 1998). No deep level interpretation of what's been said will occur; solely the recorded word will be taken into consideration for the thematic analysis. For example, if the data states 'participant XY said he/she feels drawn to the small, filthy and unattended horse, despite of the majority of the group going for the large, golden mare', then it would be noted that most participants liked

the beautiful mare, and one participant favoured the small on. It would not be theorized as to why participant XY favoured 'the underdog', or what the motives could be why he/she felt most comfortable with a horse inferior in size.

The meaning of the data will be theorized with the essentialist/realist approach in mind. This approach is a relatively straightforward one, in theorizing the motivations, experiences, and meanings of the participants. The basic premise underlying the essentialist/realist approach is that a unidirectional relationship exists between what an individual articulates (language) and his/her experience, feelings, and meanings of a situation (Potter & Wetherell, 1987, Widdicombe & Wooffitt, 1995). In this approach, the individual is seen on its own, not as a product of society (Braun & Clarke, 2006).

### ***Why Thematic Analysis***

Thematic Analysis will be the method of choice to analysis the data retrieved from the audiotaped semi-structured interviews. Thematic Analysis (inductive, semantic, essentialist/realist approach) will offer a framework in which the participants' experience can unfold (inductive), where the participants' statements will determine the themes extracted – and not the researchers precognitions- (semantic), and where the outcome is rather straightforward and transparent, focusing on the individual's stance, and placing trust in the accuracy of his/her statement (essentialist/realist approach). For the study's intention of giving a detailed and personalized account of participants' experiences of EAT, the Thematic Analysis will offer the matching guidelines for this research purpose.

### ***Participants***

The participants of this study are partaking at an 8-week EAGALA programme in the Netherlands. The programme is led by Anne and Annabel, along with others who help facilitate the programme. The participants of this EAGALA programme consist of 10 adolescents, ages 12 to 15. Out of these participants, 6 agreed to partake at the semi-structure interview, the qualitative interviews are hence based on these 6 participants. In relation to the quantitative data, these 6 participants also completed the GELUK, CES-D, HADS-D, and HADS-A tests. The global data (N=42) consist of all participants who have participated in the last 8 programme at Paardkrachtig: boys (n = 7 mean age 12.86, SD = 1.21) and girls (n = 35, mean age 13.60 , SD= 1.88). The reasons for attending the programme vary among the participants; some have been

bullied at school, some have poor eating habits, some suffer from ADHD, and experience symptoms from the autistic spectrum, many 'didn't feel like themselves' anymore, and feelings of not 'being part of the group', along with other behavioural and social issues were prevalent among the participants as well. Some participants witnessed beneficial changes in their siblings, who had attended this EAGALA programme before. Others were encouraged by their parents, mentors at school, or friends to attend the programme. The underlying assumption on behalf of the parents and/or instructor is that differing events in the past or present may cause a degree of depression-proneness within the participants. No diagnose exists however, and no labeling thereof is voiced during the programme. Despite the underlying possibility of depression and shared history of one unfortunate event or the other, most participants attended the programme in a positive, cheerful, and excited manner. According to the interviews, most see their attendance at the programme as something they look forward to, something they will miss in their lives once it's over, and as something greatly recommendable and beneficial. When asked to describe the progamme, the most commonly stated words were 'fun, it's great the way it is, made good friends here'. The atmosphere seemed to be truly relaxed, comfortable, and cherished. The participants come from the same local area in the Netherlands. The funding structure of the stable equally grants access to all participants across all social economic statuses. Two thirds of the participants are female.

### ***Setting***

The setting of this EAGALA programme, named Paardkrachtig, consists of one large stable, and a few bordering barns. The stable offers an open space with tables, chalk boards, and chairs. The barns outside contain different horses. The location is a calm and nature-bound one, away from the big city, with much bright and lush green pastures. Dogs and birds contribute to an atmosphere where the one can truly focus on his/her self and the work with the horses. The stable is used for the theoretical part of the programme. Each week, a new topic is introduced, and homework is discussed and assigned. When applying theory to praxis, the group moves outside to the barns. This is where the practical work with the horses takes place. For example, grooming, caring, and playing-out different theoretical topics together with the horses.

### ***Materials utilized by Paardkrachtig***

Anne's and Annabel's theoretical work at Paardkrachtig is mostly based on positive psychology and depression prevention. Bending negative thoughts, a cognitive-behavioural based approach, has also been applied on this course which is partaking at this study.

### ***Theory: Positive Psychology***

Positive psychology is the study of positive emotions, and positive character traits. Seligman et al (2005) argue positive psychology is intended to complement existing knowledge and interventions of suffering and disorders. This is a holistic approach that both accepts and validates the necessity of therapies aimed at both sides of the emotional spectrum: suffering and happiness. Researching different 'character strengths and virtues' (CVS), Park, Peterson & Seligman, M. (2004) showed that strengths 'of the heart'- zest, gratitude, hope, love- are associated with life satisfaction (Park, Peterson & Seligman, 2005). According to Seligman (2002), the study of 'happiness' entails a three-parted route: a) positive emotions and pleasure (the pleasant life), b) engagement (the engaged life), c) meaning (the meaningful life). Individuals directing their lives and lives' endeavors around these three routes are the most satisfied (Peterson, Park & Seligman, 2005). The perspective of positive psychology is that 'happiness' is not an epiphenomenon, but that it is subjected to causality (Seligman et al, 2005). Happiness is associated with better health, more success, and more social engagement (Lyubomirsky, Sheldon & Schkade, 2005). Outlined below are exercises of positive psychology that are utilized within the 8-week EAGALA programme under investigation of this study. Three good things- for one week, participants are asked to contemplate about three things that went well during the day. At night, they are asked to write them down and think about their causes. They are further asked to think about the causality of their occurrences. Gratitude visit- participants have got one week to write a gratitude letter to someone in their lives who has been exceptionally kind towards them. It should be someone who has never been properly thanked for his/her good deed. Using your strengths in a new way- participants receive feedback about their top five strengths, which will have been determined during the theoretical session of the EAGALA programme. For each day of the following week, they are then asked to apply each of this strength in a new way (Seligman et al, 2005).

### ***Theory: Depression Prevention***

The effectiveness of depression prevention has been widely demonstrated (Jaycox et al, 1994, Clarke et al, 1995, Seligman, Reivich, Jaycox & Gillham, 1995). Smit (2006), states the protective factors that foster resilience and health: self-awareness, realistic self-appraisal, self-esteem, improved interpersonal relationships, a sense of mastery, strengthening the internal locus of control, engaging in pleasurable activities, and physical exercise. Additionally, improved coping, cognitive and social skills, social participation, and better relationships with parents facilitate the process of depression prevention. In

accordance with recent research, Paardkrachtig utilizes this knowledge in two ways: one, discussing and reviewing the above skills with their participants as part of the theoretical sessions; two, offering scheduled activities with the horses that promote the above skills. Horse activities in correspondence with goals of positive psychology and depression prevention are introduced in the next section.

### ***Practical sessions: horse activities at Paardkrachtig***

#### *Horsefootball*

In groups, participants interact with a horse. The goal is to get the horse to kick a ball into a goal. This activity fosters group work, leadership and team-player skills, problem solving-skills, creative thinking, the appliance of non-verbal communication skills, conveys a feeling of mastery, and it deepens the human-animal bond.

#### *Getting to know the horse*

In this activity, the participants are encouraged to explore the horse as an individual, as a social being. Activities can include naming the different horses, and attributing different character traits to the horse; e.g. friendly, lazy, hungry, cuddly, depending on the horses' nature. This exercise teaches to appreciate the differences within another being, and how to manage these differences. For example, horses with differing temperaments need to be approached differently. In order to do so, the individual needs to be able to perceive these differences and to slightly adjust his/her own ways. McCormick & McCormick (1997), and Frewin and Gardiner (2005), theorize the acquired skills in this exercise to 'spill-over' into other areas of life, facilitating healthy social development and emotional growth.

#### *Taking care of the horse*

This exercise involves the grooming, cleaning, and petting of the horse. It deepens the human-animal bond, and creates trust between the participants and the horses. A sense of mastery and increased confidence and self-esteem can be achieved when adolescents learn how to handle and care for a 1,000lbs. animal (Trotter et al 2008).

### ***Paardkrachtig's test: CES-D, HADS-A, HADS-D, and GELUK (happiness)***

In order to assess the success of their work and the progress of their participants, Paardkrachtig makes use of a short questionnaire which contains the CES-D, the HADS-A, the HADS-D, and the GELUK test at the

beginning (week 1) and end (week 8) of the programme. The HADS tests for anxiety and depressive symptoms, the GELUK tests for overall life happiness. Among achieving personal goals of their participants, Paardkrachtig is committed to achieve the following benefits: enhancing psychological resilience, decreasing depressive complaints, preventing depression, and increasing happiness.

### ***Materials for the interview***

For this study, the following materials were used: a semi-structured interview designed in cooperation with the first supervisor of this study, Dr. Camille Alexis-Garsee, an audio recording device, and Wibke Kamps, simultaneously translating German into Dutch and Dutch into German. Wibke Kamps is a native German-speaker who had lived in studied in the Netherlands for a few years.

### ***Interview content***

Based in previous research, and the significance of each item, the subsequent questions are designed and chosen for the interview: The semi-structured interview contained a total of 21 questions. The questions inquired about the participants' health (2 questions), locus of control (1question), coping mechanisms (1 questions), family/friends (3 questions), the EAGALA programme (10 questions), prior programmes (1 question), changes through EAT (2 questions), and asked about final points the participants wish to voice (1 question). Most of the questions are open-end questions. During the process of designing the questions, emphasize was placed on how EAT affects participants' health, their feeling of being in control (determination and self-efficacy), how EAT has impacted their lives, how the experience of EAT was in general, and if they have any anxiety about the end of the programme. Most questions were straightforward and direct, whereas questions investigating locus of control, and coping mechanisms were asked in an implicit manner. For example, to probe for coping mechanisms, the implicit question was 'what do you crave when you get stressed'. The question 'do you believe you are the creator of your own luck, or do you think that it is someone else' inquires about internal/external locus of control. The second question is further a good example of the idiosyncratic way of translating: The phrase 'being the creator of one's luck' is a common saying for the act of taking charge for the good in your life to come; it means that one is responsible for the good things to happen. The meaning of this question is commonly known in both Dutch and German. The reason for the implicit way of asking is the participants' age (12 to 15): it was assumed that a direct way of asking about locus of control and coping mechanisms would be too abstract and incomprehensible for this age group. The implicit way of asking appeared to make good sense for them,

and their answers resemble this. The nature of the semi-structured interview allowed for follow-up questions, which were both explicitly or implicitly asked (refer to appendix for details). An audio-recording device documented the interviews. The translator, Wibke Kamps, had translated the interviews, the consent and information forms from English into Dutch prior to travelling to the Netherlands. Due to this translation work, she had been able to familiarize herself with the topic at hand, as well as with the terminology needed for a quick and efficient simultaneous translation.

### ***Procedure***

#### *Prior to the interview (consent forms and ethical approval)*

After receiving the participants' parental and personal consent forms, they individually joined us to a table with enough privacy to conduct the interviews. The interviews were scheduled on two consecutive days by the instructors of Paardkrachtig, and occurred one week after the 8week programme. Each participant was approximately interviewed for 25-35 minutes. The purpose of the study was read to each participant, confidentiality was ensured, and they were asked for permission to record. The recording started after the participant gave permission. No monetary or material incentive was given or promised. Instead, appreciation for their participation, and assurance that their contribution to this research will be of great help to this study and other studies to come was articulated to each participant after the interview. Ethical approval has been given by Middlesex University, NW4 4BT, London, UK

#### *Interview*

Following the participant's permission, the interview began. The questions were read out-loud in German to the participant, Wibke Kamps translated into Dutch, and the participant's answer was then translated from Dutch into German. The frequency of translation was approximately in a 2-3 sentences sequence. The frequent back-and-forth translation ensured a continuous understanding of the participant's story. If discrepancies occurred, both the interviewee and the interviewer had the opportunity to check on them instantly. After reading in detail about the field of Equine Assisted Therapy, special attention was placed around the questions alluding towards the intricate mechanisms innate to experience: follow-up questions were applied after one participant stated she liked how the horses pick-up on her mood and take it on (mirroring), or when another girl said she made a special connection with the horse (human-animal bond). Noticeable statements about e.g. the participant's health, problems in school or with family, and their cravings when under stressful situations were follow-up upon as well in the later part of the

interview. The participant’s biographical statements (first part of the interview), were probed for a possible relationship with the EAT experience. Equally allowed the interview structure for the story naturally to unfold and gave the participants the opportunity to voice what they found essential to their experience.

*Translation*

Once completed, the interviews were first typed in German and thereafter translated into English. The English version was then compared again with the original German version, ensuring completeness. All translation for this study (both during the interview and during the translation back to English) was done in the best idiosyncratic way possible. Every attempt has been made to convey meaning and content of the participants’ stories as authentically as possible. However, possible loss of data and the limitations of three-way translation (Dutch-German-English) are stated in the ‘limitation’ section below. See Appendix for the English translation. As stated in the design section above, the interview was analyzed with the Thematic Analysis. Qualitative findings from the interviews, thematically analyzed, will follow in the next section.

Chapter 3: Findings

This section will first display the qualitative data extracted from the interviews, followed by the quantitative results taken by Paardkrachtig. Global data (N=42), and data taken from the interviewees’ (N=6) will be portrayed.

Overview and duration of interviews taken in June 2012 at Paardkrachtig, Netherlands:

<i>Interviewee</i>	<i>Interviewer</i>	<i>Interview length (min)</i>
<b>Interviewee #1</b>	Tanja &Wibke (Translator)	24 min
<b>Interviewee #2</b>	Tanja &Wibke (Translator)	43 min
<b>Interviewee #3</b>	Tanja &Wibke (Translator)	20 min
<b>Interviewee #4</b>	Tanja &Wibke (Translator)	29 min
<b>Interviewee #5</b>	Tanja &Wibke (Translator)	29 min
<b>Interviewee #6</b>	Tanja &Wibke (Translator)	44 min

**Master themes**

The thematic analysis leads to three master themes: ‘Issues prior to programme’, ‘Participants’ experience of Paardkrachtig’, and ‘Changes (though EAT)’. The first master theme ‘issues prior to programme’ is parted in three: the ‘psychological’, the ‘health’, and the ‘social’ subtheme. This section of

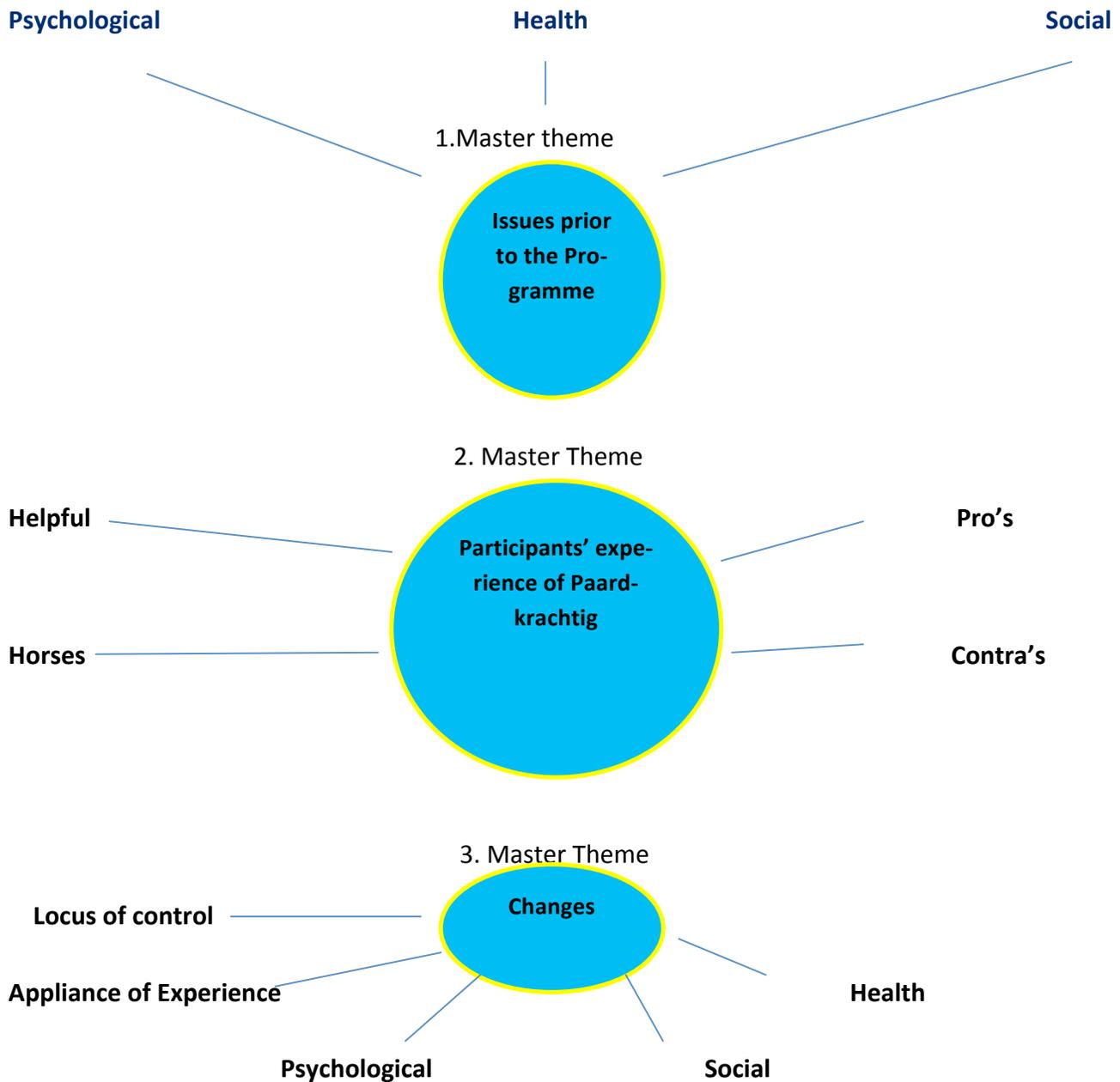
the interview inquired about participants' biography in relation to health, their mental well-being, and their family and social environment. Question of this section investigated about participants' health, reactions to stress, their psychological well-being, their relationships with friends and family, and their reasons for joining the EAGALA programme at Paardkrachtig.

'Participants' experience of Paardkrachtig' has the sub-themes 'helpful', 'horses', 'pro's' and 'contra's'. This second section of the interview asked about the details of the EAGALA programme, and how the participants experienced it. Participants were specifically asked if and why they found the assignments and homework to be helpful. Further questions asked about their experiences with the horses: whether they liked it or not, and what the best part was about the horses. Participants were further asked what the best and worst part of the programme was to them. These answers further shaped the sub themes of this section.

The last master theme , 'Changes', is further parted into 'locus of control', 'appliance of experience', 'psychological', 'social', and 'health'. This master theme was extracted from different parts of the interview that indicated a change in the participants through their experience of EAT. Inquiring about changes related to psychological, health, and social issues. Participants were either asked directly about how the programme has changed their lives and ways of being. Or, issues that surfaced in the first part of the interview (school/family/health), were put into perspective of the EAT experience. For example, if the first section yielded many arguments with classmate, the last part of the interview included a 'probing' of e.g. 'how was the programme changed your relationship with your classmates'. Information about 'Locus of control' was one specific, idiosyncratic question. 'Appliance of experience' was either inquired about explicitly, or implicitly, e.g. by asking 'in what situations do you imagine you will look into the folder again?'. For clarification purposes, an illustration of master themes and sub themes follows now:

Figure 1.

Thematic Mind Map of quantitative interview data:



Formation of master themes

In what follows is a more thorough illustration of interview extracts and how they were analyzed into themes and sub-themes. Interview extracts will be supported by quotations. The quotations' meanings will

be discussed comparatively to other participants' views (similarities and contradictions), and in respects to contradictions evident to one particular view. The sub-themes will be discussed in relation to their significance to research.

### FIRST MASTER THEME: 'ISSUES PRIOR TO THE PROGRAMME'

#### **SUB-THEME: 'PSYCHOLOGICAL'**

The first master theme, 'issues prior to the programme', has the sub-themes 'psychological', 'health', and 'social'. The sub-theme 'psychological (issues)' is supported by interview extracts:

*'..and I am autistic..and I have Asperger.' (I#1, l.5), 'I am partaking at this programme, also because of my health..because I have little self-esteem' (I#3, l.2-3), '(...)and I found it very helpful that it deals with my low self-esteem. That had made me curious.' (I#4, l. 46-47), '(...) at school I am the most insecure because I have gotten bullied there.' (I#4, l. 119-120), '(...) we both had gotten bullied at school' (I#5, l. 74), 'for a time being, I was pretty insecure, and ahm..i met a lot people here, which had helped me to ... ahm, have a conversation (I#5, l. 67-78), 'I used to have some problems with eating, I used to eat a little bit too little' (I#6, l. 7), 'I am just really wired at times... a little bit hyperactive' (I#6, l. 32), 'When we (parents and her) argue it mostly goes like that: we had an argument, and afterwards, everyone continues with what they were doing (...) for me however, it is the case, that sometimes my thoughts still dwell on the issue we were fighting about..but my parents just want to continue with what they were doing. (..) it's just that the parents say, that they are done with the fight, it's over, done. And I want is to continue with it..i can't find a stop.' (I#6, ln 60-63, 65-66). 'I had been in a programme, where I had talked with other children, who had ADHD and autism as well.' (I#6, ln. 95-96).*

Additional statements on behalf of the participants shaped the sub-theme 'psychological' (issues prior to the programme): one participant witnessed a betterment in his brother who had attended the same programme before- he had gotten happier, quieter, calmer, and his temper is more-balanced, the brother doesn't flip out as much (I#1, l. 45, 47-48, 50-51, 55-57, 60-62). Interviewee #2 stated he wasn't himself anymore (prior to the programme), he had been talking a lot of very confusing things, and others were afraid he would go nuts (I#2, l. 73-77, 79-80). The parents of interviewee #4, and the interviewee herself thought the programme was a good match to her lack of self-esteem (I#4, l. 45-47). For interviewee #5, additional reasons for joining the programme were her insecurity, a re-gain her self-esteem, and her

feelings of being 'lost' (I#5, l. 71-72, 75, 68, 71, 82-83). The different mental health issues, as well as psychological reasons for joining, were then grouped into themes.

#### Outcome of Analysis:

The sub-theme 'psychological' (issues prior to programme) entails these psychological distresses the participants were suffering from prior to joining the EAGALA programme: autism (I#1, l.4-5, I#6, l. 95-96), Asperger (I#1, l. 4-5), low self-esteem (I#2, l.90-92, I#3, l. 2-3, I#4, l. 47, I#5, l. 68-69), bullied at school (I#2, l. 91, I#4, l. 119-120, I#5, l. 74-76), ADHD (I#6, l. 32, 95-96), eating disorder (I#6, l. 7), not feeling one's self/feeling lost (I#2, l. 73-74, 79-80, 83-84, I#5, l. 71-72, I#6, l. 13-16)

#### **SUB-THEME 'HEALTH'**

The next sub-theme, 'health' (issues prior to programme) derived from the following responses:

*'I have problems with some products.. I have got allergies. I also have asthma' (I#1, l. 4), 'once I had a pretty big epileptic seizure. To be honest, I don't know more about it...in the morning and in the evening I take medicine for it. Since then, I don't have any more problems with it' (I#2, l.2-4), 'I used to have some problems with eating, I used to eat a little bit too little, but now it is much better' (I#6, l. 6-8)*

Participant #2 mentioned he feels wired and under pressure in times of stress. The participants' physical health prior to attending the programme can be summarized as: food allergies (I#1, l. 4-5), epileptic seizure (I#2, l. 2-4), asthma (I#1, l. 4-5), and eating too little (I#6, L. 6-8).

#### **SUB-THEME 'SOCIAL'**

The sub-theme 'social' (issues prior to programme) is illustrated by the following quotations:

*'(...) at school I am the most insecure because I have gotten bullied there.' (I#4, l. 119-120), '(...) we both had gotten bullied at school' (I#5, l. 74), 'That's how it (arguments) is in school with the other girls as well- I want to continue. I do talk about it then, but the girls then get even madder at me and so I have to stop then' (I#6, l. 66-68), 'we (her sister and herself) are very different... my sister is very social, and I am just not so social, I am a bit more special and like to be on my own..but my sister wants to have the entire community around her' (I#6, l. 52-53).*

Underlying social issues to the lives of the adolescents were further demonstrated by a change of school, due to the fact that school had a 'negative influence' on the interviewee (I#2, l. 79-80). Prior to the programme, interviewee #6 could not find much enjoyment in social settings. Initially, she came for the horses, and found out later, that interactions with other, making contact with others can be enjoyable for her (I#6, 77-80, 82-87).

Outcome of analysis:

The above citations and summaries demonstrate the participants experiencing social friction, social apprehension at school or in the family. Consequently, this led to the sub-theme 'social' (issues prior to programme).

### **SECOND MASTER THEME: 'PARTICIPANTS' EXPERIENCE OF PAARDKRACHTIG'**

The second master theme intends to grasp the participants' experience of the programme, sub-theming the interviewee's perspective in 'helpful', 'horses', 'pro's', and 'con's'. The information/quotations forming the sub-themes for the second master theme stem from five questions.

#### ***SUB-THEME: 'HELPFUL'***

*homework and folder*

This sub-theme summarizes what interviewee perceived to be helpful in the programme:

*'yeah it (homework) is pretty helpful, it is about theory and that helps..that helps me to be more self-secure' (I#3, l. 82-82), ' (it was helpful) because you are then totally immersed in it, and that's how you continue to feel good in your skin. Because you then are occupied, concentrated, with it' (I#3, l. 123-124), 'yes it (homework) did help me, because I could always look back at what we did and I could turn back and re-read. I think that's pretty good' (I#4, l. 82-83), 'yeah..found it (homework) very helpful...because sometimes I would forget things, and then I could always go back and re-read..what we did and I will do that again every now and then' (I#4, l. 129-130), 'yeah, it (homework) strengthened my positive feelings, because they had been brought into focus during the homework assignments, and that actually did help me- to write them down and think about them again. Through that, I understand it better and clearer' (I#5, l. 113-115), 'well every homework dealt with a different topic, and ahm, you were able to transform your negative*

*emotions into positive ones, into qualities of your own' (I#6, l. 190-191).*

The participants stated similar benefits relating to the folder they received and continuously worked on:

*'I: ok, so do you look into the folder again, during the week? P: yeah, I do that regularly, especially when I don't comprehend something, then re-read it and then I usually understand it better, most of the times. I: and is there a special occasion when you look into the folder? Did then something happen, or do you do that spontaneously? P: well it is not the case that something special had happened, or anything like that, but rather when it comes down to how do I react to others..then I re-read it, and then I know better how I should/can react instead.'* (I#5, l. 116-123).

*'yes it (folder) did help me, because I could always look back at what we did and I could turn back and re-read. I think that's pretty good' (I#4, l. 82-83), 'I received a folder, where I can collect everything, and that is....well in the folder is written a lot about how to be happy, what makes one happy, what happiness is, and when you work and do what's written there... it just works' (I#6, l. 185-186).*

Outcome of analysis:

The above citations strongly suggest the benefit of homework and the folder at Paardkrachtig to its participants. The many statements, across interviewees 3-6, about the positive effects of homework and the folder make it worth mentioning 'homework' and 'folder' as something explicitly 'helpful'. As stated by the interviewees above, the benefits are of these two mechanisms (homework & folder) are: 'feeling more self-secure', 'it makes you feel better in your skin', 'it helps your mind stay focused on the process', 'being able to go back and re-read gives security', 'it strengthened positive feelings', 'it helped me to know how I reacted', 'it transforms your negative emotions into positive one', and 'it helps you to be happy, it's a manual that works'.

*assignments and pro's/contra's*

The experience of working on the assignments are perceived by the participants to be 'helpful' and to feel 'secure' (I#3, l. 81-82). The combination of both practical and theoretical assignments 'work pretty well' (I#6, l. 100). Especially interviewee 6 benefited from these, through the assignments, she is finally able to enjoy her feelings (I#6, l. 185-186). The participants' experience of the usage of pro/contra arguments had a clarifying and soothing effect on the mind: the thoughts stopped from 'going in circles' (I#3, l. 71).

## Outcome of Analysis:

The interviewees straightforward description of their experience leads to the following summary: Feelings of security, enjoyment of feelings, and being able to 'organize' one's thoughts in the mind is the experience 2 interviewees had when asked about details of the EAGALA programme.

### **SUB-THEME: 'HORSES'**

Asking interviewee 4 how exactly the interactions with the horses helped her to enjoy (I#4, l. 94-99), the reply was:

*'...that I don't know, but I am just getting the trust from the horses that they want to help m.'* (I#4, l. 100)' When asked how interviewee 5 felt about the interactions with the horses, her first response was:

*'And ahm, what fascinates me the most, is that the horses feel when you are scared. They then become scared and anxious as well'* (I#5, l. 135-137).

Asking interviewee 6 what she will miss once the programme is over, she replied:

*'The most I will miss the interactions with the instructors.. and that I am seeing the horses in a manner that I see humans.. I have developed a kind of bond, between me and the horses. And that's what I will miss- the contact with the horses'* (I#6, l. 166-168), (that bond was created in the following manner)' *ahm...in that I got to know the horses in different ways, that you really know they are different. One was really playful, tossed around a lot, the other was really quiet and a bit older..and then we stepped into contact with the horses by touching them, brushing them..to see how they react differently'* (I#6, l. 72-75).

Interviewee 3 response on why she liked the interactions with the horses was the following:

*'the horses accept you the way you are, that's why I like it, to do things with the horse'* (I#3, l. 89).

Her general likes about animals was that 'they treat you the way you treat them' (I#3, l. 56).

Further experiences of the interactions with the horses were: enjoyable (I#1, l. 101-102,), soothing (I#1, l. 104), gentle (I#1, l. 101-102), they have differences (I#4, l. 91-92, I#6, l. 160-161), they are a good match to her problem (I#4, l. 46-47), they are like humans: you need to ask them you cannot demand (I#6, l.61).

### *acceptance-mirroring-enjoyable*

The interviewee's perception of the horses as trusting (Interviewee 4), accepting (interviewee 3), and the interaction with the horse as a bonding-process (where trust and acceptance of each other is surely a part of) (Interviewee 6) leads to theme formation of *acceptance* within the human-animal relationship. The interviewee's perception of the horses' ability to pick up on their mood and take it on (I#5), resembles the widely-mentioned therapeutic ability of the horses: *mirroring*. This experience stretches across other interviews as well: the perception the horses are like humans (I#6), that they have differences (just like humans) (I#6), and that commonalities between the horses and the participant's issues exist (I#4). Half of the interviewees experienced situations with the horses that have the underlying notion of mirroring. The common experience across interviewees 1,2,4, and 5 is that the horses are 'nice', 'gentle', 'soothing', 'fun'. Therefore, the last sub-theme of the 'horse' theme is *enjoyable*.

### **SUB-THEME: 'PRO'S AND CONTRA'S'**

Interviewees' response to what they enjoyed at Paardkrachtig was the following:

horses (I#1, l. 79-80,4), outside assignments (I#1, l. 76-77), fun (I#1, l. 74, I#2, l. 103, I#3, l. 60, I#4, l. 60, I#5, l. 85, I#6, l. 177-178)), learned a lot about herself/behaviours/thoughts (I#3, l. 62), assignments with the horses (I#4, l. 55), speaking/being with others (I#3, l. 103-104, I#4, l. 55, 110-111, I#5, l. 86), Paardkrachtig feels safe (I#4, l. 59), made a good friend here (I#1, l. 90, I#5, l. 99-100, I#6, l. 30-33), dares to speak-up (2,5), collective development from shy to outspoken (I#5, l. 94-97), practical parts (I#6, l. 98-100), seriousness of instructors (I#6, l. 104-105), communication style of instructors (I#6, l. 104-105), instructors' boundary setting (I#6, l. 24-25, 27-19, 118, 120-122, 124-125) -> better relationships with others, being able to air-out everything (I#6, l. 107-109, 111-113, 115-116), experience at Paardkrachtig gives security (I#1, l. 127-128, I#5, l. 158-159).

When investigating what the interviewees did not like about Paardkrachtig, their statements were:

irregular attendance of others (I#1, l. 83-85, I#2, l. 103-104), inside work (I#2, l. 184-185, 192, I#3, l. 76-77), theoretical work (I#2, l. 184-185), groups too big (3), duration of program: too short (3), unexplained back-questioning (I#4, l. 63-65, 67-68, 70), some games (I#1, l. 82-83).

Outcome of Analysis:

The common and individual themes underlying the above responses are:

*Pro's of Paardkraachtig-*

nature and horses (I#1, l. 76-77, 79-80, I#4, l. 55), a fun and safe environment (I#1, l. 74, 127-128, I#2, l. 103, I#3, l. 60, I#4, l. 59-60, I#5, l. 85, 158-159, I#6, l. 177-178), learning material (I#1, l. 76-77, I#4, l. 55, I#6, l. 98-100), other participants (I#1, l. 90, I#3, l. 103-104, I#4, l. 55, 110-111, I#5, l. 86, 99-100, 94-97, I#6, l. 30-33), learning/reflection/processing (I#3, l. 62, I#5, l. 94-97, I#1, l. 127-128, I#5, l. 158-159), instructors (I#6, l. 104-105)(I#6, l. 104-105)(I#6, l. 24-25, 27-19, 118, 120-122, 124-125) (I#6, l. 107-109, 111-113, 115-116).

*Contra's of Paardkraachtig-*

Attendance of others (I#1, l. 83-85, I#2, l. 103-104), structure (I#1, l. 82-83, I#2, l. 184-185, 192, I#3, l. 76-77), instructors (I#4, l. 63-65, 67-68, 70).

**THIRD MASTER THEME: CHANGES (THROUGH THE EAGALA PROGRAMME AT PAARDKRACHTIG)**

This section, the third and last master theme of the qualitative investigation of participants experience at Paardkrachtig, inquires of the changes that occurred after the 8week programme.

***locus of control***

As part of the semi-structured interview, an idiosyncratic question was asked if participants believed 'they were the creators of their own luck'. As outlined earlier, this question refers to whether or not participants believed they are in charge/responsible, for the good things to come in their lives. From a psychological perspective, this question inquires about locus of control- whether it is internal or external. Three participants replied they believe they are the creators of their own luck (internal locus of control) (I#2, l. 60-61, I#3, l., 29-30, I#4, l. 38, 40, 42-43). The follow-up question 'since when do you believe that you are the creator of your own luck?' was answered with 'since the programme at Paardkrachtig' by two participants (#3, 4). Therefore, some participants experience internal locus of control as a result of the EAGALA programme.

***appliance of the experience***

Positive answers in regards to the interviewees' experience with e.g. the folder, the homework, or

other productive processes facilitated through Paardkrachtig (e.g. boundary-setting), were followed-up with a question whether or not the participants will apply what they have learned at Paardkrachtig. Interviewees #1 and 4 replied 'they will look back into the folder or think about it' (I#1, l. 127-128, I#4, l. 82-83, 85,). Participant #4 stated: 'she thinks she will consciously apply what she has learned' (I#5, l. 117-118, 121-123, 128, 130-131, 161), and participant #6 said 'she will apply boundary-setting' (I#6, l. 127-129, 132). Participant #6 pointed-out the excellent boundary-setting style on behalf of the instructors:

*'P: here you are able to determine your own boundaries. That is real nice. I: hmm h. P: you SHOULD determine your own boundaries. Before, they were always determined by someone else 'until here and no further'..here of course they do say 'alright you can do this, and you can't do that..' but how far you actually go, is your very own thing. I: and did you feel comfortable, to determine your own personal boundaries? P: yeah, you feel free enough, to learn more...ahm, you do know that there is a boundary, but you don't focus on challenging the boundary...you just feel it, it comes from within. I: does that make the interaction easier with the instructors? P: well, I think they do a great job, the instructors, ahm...it's the case that they tell you very clearly, where their boundaries start and end, and through that, one just knows. Because they stress their boundaries all the time, I just know where mine are.'*(I#6, l. 118-129).

The follow-up question thereto was whether or not this will help her at school and at home (I#6, l.130-131). The interviewee stated 'yeah, definitely' (I#6, l. 132). The background of this follow-up question derived from the biographical part of the interview: interviewee stated that she has prolonged and re-occurring arguments with her family and classmates. The dialogue suggests that the interviewee applies what she has learned at Paardkrachtig. Although just one participant speaks about the boundary-setting style of the instructor, it is worth a sub-theme for two reasons: one, because healthy boundary-setting is essential in every single interpersonal relationship. Two, because it demonstrates that the way the instructors conduct their programme, and how they carry themselves, matters to the participants.

Participants 1 (I#1, l. 127-128) and 5 (I#5, l. 117-118, 121-123, 128, 130-131, 161) state they will look into the folder again, and participant 4 says she will think about what she has learned in the future (I#4, l. 134-135). The benefits of the folder are outlined above ('strengthening of positive feelings', 'being able to go back and re-read', 'a means to assure herself in regards to her behaviours towards others', 'a manual on how to be happy'). The overt theme here is that participants not only benefitted from the programme momentarily, but plan to continuously draw from their experiences. Summarizing these benefits, and the

participants' attempt to apply them in the future posits an important aspect to this study: the changes experienced by the participants have the potential to last.

### **PSYCHOLOGICAL CHANGES THROUGH THE PROGRAMM**

This section combines the psychological changes extracted from different parts of the interview: questions relating to how the participants *embrace life* differently after the programme, how the programme has changed their *leisure time*, and from various follow-up questions, e.g. when bibliographical questions revealed problems at school, a question towards the end of the interview would have been 'how is the situation at school, now that you have attended the programme?'. Additionally, one question explicitly asked for any changes the participants themselves perceive as a result of the programme. What follows is a summary of changes from the above areas mentioned:

*'...more sociable (I#1, l. 106-107, I#2, l. 121, 161, 163, 167-168, I#3, l. 99, 112-113, I#4, l. 110-111, 116-117, I#5, l. 142-144, 167, I#6, l. 177-178), more open towards life (I#1, l. 106-107, I#2, l. 161), feels more self-confident (I#1, l. 106-107, I#2, l. 161-162, I#3, l. 12, 82-83, 92, I#4, l. 102, 116-117, I#5, l. 70-71), feels more him/herself again (I#2, l. 121-122, I#6, 111-121), thoughts more controlled (I#3, l. 69-72), feels better in her skin (I#3, 119, I#5, l. 163-165), knows how to enjoy now (I#4, l. 94-96, I#5, 167, #6, l. 91, 181-184, 188), calmer (I# 1, l. 118, I#4, l. 106, I#5, l. 92-94, 155-156), is part of the group now (I#2, l. 61,63, I#5, l. 143-144), knows how to be happy now (I#5, l. 167, I#6, l. 135-137), less arguments with classmates (participants assume its most likely due to the programme) (I#2, l. 137, I#6, l. 148-149, 151), exhausted/relaxed after programme (I#2, l. 149-152, 154-155), enjoys her feelings now (I#4, l. 94-96, I#6, l. 181-183, 188).'* now knows how to have fun (6) calmer (2,3,4,5), knows how to be happy now (5,6), better boundary-setting (#6).

#### **Outcome of Analysis:**

Some responses are straightforward: feeling more self-confident, calmer, feeling more yourself, and knowing how to enjoy and be happy. As Potter & Wetherell (1987) and Widdicombe & Wooffitt (1995) stated, a unidirectional relationship between language and experience can be assumed to exist. Therefore, with responses such as: 'I feel more self-confident', or, 'I am calmer now' (in response to how the programme has changed them), the process of analysis is quiet straightforward. Additionally, some responses stretched across most participants when asked about any changes as a result of the programme. E.g. 'feeling more self-confident' is stated by participants 1-5, 'knowing how to enjoy now'

is experienced by participants' 4-5, and 'feeling calmer' is the experience of participants 2-5. Theming out further changes, that are a bit more abstract or broader ('more sociable', 'more open towards life'), are analyzed more collectively. What follows is a description how the theme 'more sociable' was determined: Interviewee 1-6 stated:

*'yes. I don't cause so much trouble anymore during the lessons (school)..i, I approach people more often. And I talk more' (I#1, l. 106-107) 'yeah. Now I have much less arguments, since I am doing it (programme)..i am just myself again since I am doing it' (I#2, l. 121-122), 'yeah, it is easier for me now to approach people, I dare more to speak' ..exactly, it is much easier for me, to approach people, to meet people, I dare to say more, and it is these people with whom I play football' (I#2, l. 161, 166-167), 'ahm..that I now get to know people, and that I stay in touch with them. and that I can handle them' (I#3, l. 112-113), 'Before, I used to worry a lot about what I could actually say, how I am supposed to say it..i didn't dare to voice certain things..and, ahm.. that is better now' (I#4, 116-117), 'yeah, definitely. I dare to say more, and I feel much more comfortable being with other people. In the past, I'd always sit in a quiet corner, distanced from everybody...now I talk and I am part of the group' (I#5, l. 142-144), '..that I am able to have lots of fun, that I am able to have a lot of fun with others here at Paardkrachtig' (I#6, l. 177-178).*

#### Outcome of Analysis:

Within the above, the common experiences are: experiencing/ causing less negative social encounters, experiencing more communication/approaches with others, and experiencing more comfort-ability with one's self in social setting. Changes mentioned refer to changes within the individual, in regards to his/her ability to approach others, and in the 'outcome' that is being able to create positive social encounters. It appears that these changes impact all parts of the social interaction: the self, the ability, and the others. As a result of the programme, participants 1-6 appear to engage more in social activities. Sequentially, the sub-theme 'more sociable' formed.

#### **HEALTH CHANGES THROUGH THE PROGRAMME**

This section summarizes the health changes as a result of the EAGALA programme. Due to their nature, some health changes overlap with 'psychological changes': 'feeling better in your skin' and 'feeling calmer'. The health changes are:

*'feels better in her skin (I#3, 119, I#5, l. 163-165), calmer (I# 1, l. 118, I#4, l. 106, I#5, l. 92-94, 155-156), better eating habits since the programme (I#6, l. 7-8, 10, 13-16, 18-21), exhausted/relaxed after programme (I#2, l. 149-152, 154-155).'*

Interviewee #6 says her eating habits have improved since she has been partaking at the programme at Paardkrachtig:

*'P: I used to have some problems with eating, I used to eat a little bit too little, but now it is much better. I: ahm, and since when is that better? P: since I have done this course.'* (I#6, l. 7-10).

Outcome of Analysis:

This is a straightforward response, and doesn't necessitate much analysis. Interestingly, when looking at the entire interview of participant #6, it shows that her response to a stressful situation ('playing music and playing on the computer simultaneously to deflect from stress' I#6, l. 25-26), is the same when dinner time comes around and she has to sit with her family ('I just want to leave the table and play music and go to the computer' I#6, l. 25-26). Therefore, it appears that eating at the table is a stressor for her. Her experience of improved eating habits as a result of the programme implies that she is now able to handle this stressor. This leads to two assumptions: One, the programme at Paardkrachtig raises one's tolerance for stress; and/or two, the programme leads to better coping mechanisms within its participants (e.g. not running away and seeking for deflection, but managing to stay in the situation and handle it; participant 3 also said that now she can 'handle' other people). In the context of participant #2, experiencing changes of 'feeling exhausted/relaxed' after the programme is an important health change when looking at his responses to biographical questions: one of the reasons for joining Paardkrachtig was that he 'felt wired', that he 'throws stuff around when he gets mad' that he 'spoke so much and such confusing thing that others worried he would go nuts'. His response to stressful situations is:

*'when I feel stressed, I become pretty amped and feel wired. .under pressure. .it may happen that I throw stuff around..' (I#2 l. 11-12).*

Hence, feeling exhausted/relaxed after the programme, actually improves his reactions to stress, and caters to his reasons for joining the programme.

## **SOCIAL CHANGES THROUGH THE PROGRAMME**

This section themes-up the social betterment the participants experienced as a result of the 8-week long EAGALA programme. Some psychological overlap will occur, as better social functioning cannot be separated from psychological processes. The summary of social changes are as followed:

*'less arguments with classmates (I#2, l. 137, I#6, l. 148-149, 151), is part of the group now (I#2, l. 61,63, I#5, l. 143-144), made a good friend at Paardkrachtig (I#1, l. 90, I#5 l. 99-100, I#6, l. 30-33),...more sociable (I#1, l., 106-107, I#2, l. 121, 161, 163, 167-168, I#3, l. 99, 112-113, I#4, l. 110-111, 116-117, I#5, l. 142-144, 167, I#6, l. 177-178).'*

### **Outcome of Analysis:**

The experience of being 'more sociable' has already been analyzed above, as this change is of both psychological and social nature. Other changes, 'is part of the group now', 'has less arguments with classmates', and 'made a good friend at Paardkrachtig' are straightforward and do not necessitate much analysis.

## **EAT ON SUBSTANCE USE- REVISED**

Note: it is assumed that EAT will have a positive impact on smoking/drinking behaviours on its participants. However, none of the participants interviewed stated engaging in smoking or drinking. Therefore, EAT's impact on these health behaviour cannot be investigated, as the participant group does not have this characteristic.

In what follows now are the quantitative results of Paardkrachtig: firstly, the global data (N=42) of all former participants, secondly the data of the participants interviewed at week 20 (N=6). The aim of the display of quantitative data is to see what kind of commonalities/ differences can be seen in the two different kinds of data (quantitative and qualitative).

**QUANTITATIVE RESULTS OF PAARDKRACHTIG –  
GLOBAL DATA OF ALL PARTICIPANTS (N=42) FROM PAST PAARDKRACHTIG PROGRAMMES:**

**Table 1- Mean Happiness scores together with corresponding standard deviations for boys and girls at pre, post and follow up stages**

Gender	Overall happiness (pre)	Overall Happiness (post)	Overall Happiness (follow-up)
Girl Mean	5.991	7.557	7.679
N	35	35	35
Std. Deviation	1.4265	1.0966	1.0839
Boy Mean	6.400	8.000	8.214
N	7	7	7
Std. Deviation	1.2261	.8660	1.4100
Total Mean	6.060	7.631	7.768
N	42	42	42
Std. Deviation	1.3897	1.0653	1.1428

As can be seen in the above table overall boys score higher on happiness than girls at all 3 stages. Furthermore there is an improvement in happiness scores in three time phases.

Formal analysis of the variance using a 2 Gender by 3 Time (pre –post and follow-up) Mixed ANOVA was conducted on the data which showed a significant main effect for TIME with  $F(1, 40) = 27.18$ ,  $p < 0.0001$ . Other main effect and interaction was not significant (for formal analysis, refer to table 1 in appendix).

**Table 2- Mean CES-D scores together with corresponding standard deviations for boys and girls at pre, post and follow up stages**

Gender	CES-D score(pre)	CES-D score(post)	CES-D score (follow-up)
Girl Mean	23.46	15.20	14.29
N	35	35	35
Std. Deviation	11.840	8.831	9.021
Boy Mean	20.43	15.43	12.86
N	7	7	7
Std. Deviation	4.577	7.678	9.564
Total Mean	22.95	15.24	14.05

N	42	42	42
Std. Deviation	10.983	8.562	9.009

As can be seen in the above table both genders show a steady decrease of depressive symptoms across all three times of testing. Furthermore it shows that girls have higher depression scores than boys at pre- and follow-up testing.

Formal analysis of the variance using a 2 Gender by 3 Time (pre –post and follow-up) Mixed ANOVA was conducted on the data which showed a significant main effect for TIME with  $F(1, 40) = 8,71$ ,  $p < 0.0001$ . Other main effect and interaction was not significant (for formal analysis, refer for table 2 in appendix).

**Table 3- Mean HADS anxiety scores together with corresponding standard deviations for boys and girls at pre, post and follow up stages**

Gender	HADS Anxiety (pre)	HADS Anxiety (post)	HADS Anxiety (follow-up)
Girls Mean	8.80	6.51	6.00
N	35	35	35
Std. Deviation	3.724	3.776	3.565
Boys Mean	9.14	7.29	6.14
N	7	7	7
Std. Deviation	2.795	2.498	2.734
Total Mean	8.86	6.64	6.02
N	42	42	42
Std. Deviation	3.558	3.581	3.411

As can be seen in the above table both genders show a steady decrease of anxiety scores from pre- to post- to follow-up testing. Furthermore there seems to be a difference in gender: boys have higher anxiety scores than girls.

Formal analysis of the variance using a 2 Gender by 3 Time (pre –post and follow-up) Mixed ANOVA was conducted on the data which showed a significant main effect for TIME with  $F(1, 40) = 13.07$ ,  $p < 0.001$ . Other main effect and interaction was not significant (for formal analysis, refer for table 3 in appendix).

**Table 4- Mean HADS depression scores together with corresponding standard deviations for boys and girls at pre, post, and follow up stages.**

Gender	HADS Depression Scale (pre)	HADS Depression Scale (post)	HADS Depression Scale (follow-up)
Girl Mean	5.83	3.20	2.89
N	35	35	35
Std. Deviation	3.356	2.816	2.518
Boys Mean	8.14	6.29	4.86
N	7	7	7
Std. Deviation	3.288	3.592	2.968
Total Mean	6.21	3.71	3.21
N	42	42	42
Std. Deviation	3.418	3.133	2.664

As can be seen in the above table, both genders show a steady decrease of anxiety scores across all three times of testing. Furthermore there seems to be difference in gender: boys have higher depression scores than girls. Formal analysis of the variance using a 2 Gender by 3 Time (pre –post and follow-up) Mixed ANOVA was conducted on the data which showed a significant main effect for TIME with  $F(1, 40) = 17.43$ ,  $p < 0.0001$ . Other main effect and interaction was not significant (for formal analysis, refer to table 4 in appendix).

**Quantitative data from participants which partook at interview (N=6)**

**Mean CES-D scores together with corresponding standard deviations for boys and girls at pre, post and follow up stages**

Gender	CES-D score (pre)	CES-D score (post)	CES-D score (follow-up)
Girls Mean	20.50	18.00	15.50
N	4	4	4
Std. Deviation	9.469	7.616	7.594
Boys Mean	21.50	10.00	16.00
N	2	2	2
Std. Deviation	2.121	12.728	22.627
Total Mean	20.83	15.33	15.67
N	6	6	6
Std. Deviation	7.414	9.180	11.708

The above table shows a steady decrease of depressive symptoms in girls from pre-, post- to follow-up testing. Boys show a strong decrease of depressive symptoms from pre- to post, with a subsequent increase of depressive symptoms from post- to follow-up testing. The Mean scores show a decrease of depressive symptoms from pre- to post testing, with a subsequent slight increase at times of follow-up testing.

**Mean GELUK (happiness) scores together with corresponding standard deviations for boys and girls at pre, post and follow up stages**

Gender	Overall happiness (pre)	Overall happiness (post)	Overall happiness (follow-up)
Girls Mean	6.750	7.250	8.000
N	4	4	4
Std. Deviation	1.5000	.9574	.0000
Boys Mean	6.650	8.000	7.250
N	2	2	2
Std. Deviation	.2121	.0000	2.4749
Total Mean	6.717	7.500	7.750
N	6	6	6
Std. Deviation	1.1669	.8367	1.1726

This table shows an increase of happiness scores in girls from pre- to post- to follow-up testing. Boys show an increase from pre- to post testing, with a subsequent drop in happiness scores from post- to follow-up. The Mean scores show an increase from happiness from pre- to post- to follow-up testing.

**Mean HADS-A scores together with corresponding standard deviations for boys and girls at pre, post and follow up stages**

Gender	HADS Anxiety scale (pre)	HADS Anxiety scale (post)	HADS Anxiety scale (follow-up)
Girls Mean	8.50	9.00	7.25
N	4	4	4
Std. Deviation	4.796	4.397	2.872
Boys Mean	9.00	6.50	5.00
N	2	2	2
Std. Deviation	.000	4.950	4.243
Total Mean	8.67	8.17	6.50
N	6	6	6
Std. Deviation	3.724	4.262	3.146

This table shows an increase of anxiety symptoms in girls from pre- to post testing, followed by a strong decrease of anxiety symptoms at follow-up testing with values lower than at pre-testing. Anxiety scores for boys decrease steadily from pre- to post- to follow-up testing. The Mean scores show a decrease of anxiety symptoms from pre- to post- to follow-up testing.

**Mean HADS-D scores together with corresponding standard deviations for boys and girls at pre, post and follow up stages**

Gender	HADS Depression scale (pre)	HADS Depression scale (post)	HADS Depression scale (follow-up)
Girls Mean	5.00	3.25	4.00
N	4	4	4
Std.Deviation	4.546	2.062	1.414
Boys Mean	6.00	7.00	4.00
N	2	2	2
Std.Deviation	2.828	7.071	1.414
Total Mean	5.33	4.50	4.00
N	6	6	6
Std.Deviation	3.777	4.037	1.265

This table shows a decrease in depressive symptoms in girls from pre- to post testing, followed by an increase in depressive scores at follow-up testing. Boys’ depressive symptoms increase from pre- to post testing, with a decrease of depressive symptoms at follow-up testing. The Mean scores show a decrease of depressive symptoms from pre- to post- to follow-up testing.

Summarizing the quantitative findings shows that participants’ issues prior to the programme were psychological, health, and social issues. The participants’ experience of the programme is that it is helpful, the experience of the horses in itself, and their experience of pro’s and contra’s. In relation to the changes, the participants experienced psychological, social, and health changes; most experience an internal locus of control as a result of the programme, and most intend to apply what they have learned at the programme in their lives. The quantitative results of the global data reflect the qualitative data: a continuous increase across of GELUK (happiness), and a continuous decrease in CES-D scores (depressive complaints), HADS-A (anxiety) scores, and HADS-D (depressive symptoms) can be seen across time. Therefore, the qualitative findings of this study appear to be supported by the quantitative data taken from several programmes across the year at Paardkrachtig. Note: the smaller sample (N=6) statistically supports the wider sample (N=42), the latter is more relevant when relating quantitative to qualitative data.

In what follows, is a discussion of these findings and result, also in relation to gender differences.

#### Chapter 4: Discussion of findings

##### ***Discussion of Master themes:***

The aim of this study is to investigate adolescents' experience of equine assisted therapy, with an empathize of EAT's effects on psychological well-being and health. Thematic analysis of participants' interviews has formulated master and sub-themes, which have been presented in the preceding section. In what follows is a discussion of the findings, in relation to the literature reviewed, in the light of the other interviewees, and how they contribute to the field of research in EAT. This section will also discuss the quantitative research results by Paardkrachtig: the global data (N=42) and the participants interviewed (N=6), the latter is a small sample, but it statistically supports the global data.

Note: Paardkrachtig utilizes positive psychology and depression prevention in their theoretical framework; this is their specific approach and not commonly-used within EAT/EAGALA. All data (qualitative and quantitative) should be read and acknowledged in the light of this specific theoretical approach.

##### ***ISSUES PRIOR TO THE PROGRAMME (FIRST MASTER THEME)***

Investigating the participants' reason for joining the programme are of psychological and social nature: 'feeling not one's self', 'low-self-esteem', and 'being bullied at school'. Additional underlying issues are issues are relating to health: food allergies, one epileptic seizure, asthma, and an eating disorder. In relation to existing research, these findings support the notion that EAT is a form of therapy that embraces a broad participant group. The findings align with studies by MacKinnon et al (1995), Bizub, Joy, & Davidson, (2003), Iannone (2003), Glazer et al (2004), Frame (2006), Hemenway (2007), and MacDonald (2007), who have investigated the impact of EAT on self-esteem, and also found a relation between EAT and self-esteem. The issue of 'not feeling one's self' hasn't been specifically investigated, however, Shambo et al (2006) has investigated the impact of EAT on *dissociation*, whereas one of the symptoms are 'not feeling one's self'. Currently, no study has been done linking EAT to 'being bullied at school'. Discussing the findings in the light of all participants, it shows that issues overlap across participants: 'low self-esteem' is a shared experienced (participants 2,3,4,5,), 'not feeling one's self/ feeling lost' is experienced by participants 2,5,6, being subjected to 'bullying' has been experienced by participants 2,4,5, and participants 1 and 6 said they are on the autistic spectrum. Individual experiences are 'eating disorder' (I#6), and (one) 'epileptic

seizure' (I#2). Interviewee #6 states she is hyperactive and has ADHD. When looking at the interviews, it shows that participant #2 also experiences situations whereas he feels 'wired and amped', to an extent where he throws stuff around.

### **EXPERIENCE OF PAARDKRACHTIG (SECOND MASTER THEME)**

#### *What was helpful at Paardkrachtig?*

The findings show that the theoretical tools of Paardkrachtig, that is homework, pro/contra arguments, folder, and assignments, are experienced as *helpful* by its participants. Pre-existing issues prior to Paardkrachtig (low self-esteem) are tackled the folder and homework (as demonstrated in the next master theme 'changes'). Participants 3,4,5,6 report the benefits of *homework*, one reason is that it keeps your mind focused on the emotional process. The pro/contra arguments bend negative thoughts, meaning they give participants a more 'objective' idea about e.g. how they perceive themselves. The folder and the assignments appear to be a collection of the experience of Paardkrachtig, as well as a manual to handle every-day issues. The overall experience of these theoretical mechanisms is perceived as *helpful* across all participants.

No existing research literature in the English language has shown the participants' experience of EAT. More specifically, no study has attempted to find out *what exactly* has helped participants of an EAT programme in dealing/tackling their emotional/health issues. Therefore, these findings cannot be discussed in the context of prior findings. The qualitative approach of this study enables a deeper understanding of *why* these four theoretical tools are experienced as helpful: participants are able to look back into the folder and re-read, e.g. how to be happy, what makes one happy (I#6), and to check whether they have reacted actively or passively (I#5). An underlying notion of security is achieved there through (I#1, I#5). These findings suggest the utility of the theoretical tools in the road to betterment. They are of importance to other current, and prospective studies conducting EAGALA or other EAT forms of therapy.

### **WHAT WERE THE INTERACTIONS WITH THE HORSES LIKE**

#### *Mirroring*

The experience of the interactions with the horses are themed into *mirroring*, *trusting* and *enjoyable*. The participants' experience of mirroring supports studies by McCormick & McCormick (1997) and many others working or researching in the field of EAT. Mirroring is one of the key factors in the effectiveness of

any EAT therapy: it is the horse's ability, through their sensitive nature, to pick up on the mood and emotions of others surrounding them. The mood/emotion is then adapted by the horse, thereby providing a real time feedback to the participants in regards to their emotional state of mind. This allows the participant to face and challenge their dormant issues.

These findings contribute to the field of research in two ways: one, this study poses the first qualitative approach in explaining how mirroring is perceived by the participants. Two, the interviews show that the participants are actually aware and recognize the 'real time feedback'. It demonstrates that for the participants, certain emotions transition from the unconscious to the conscious.

### *Trusting*

Participants 3,4,6 perceived the horse interactions as trustworthy. One participant (#6) stated she had created a bond with the horses. When inquired about *how* exactly she had created that bond with the horse, she gave a comprehensible response. Developing trust in any therapeutic relationship is a necessity for betterment. These findings align with studies by Roberts et al (2004) that speak about trust in the human-horse relationship. These findings add to the research literature of EAT for the following reason: the qualitative approach offers insight about how exactly the human-horse bond can be facilitated. This contributes to a better understanding of the therapeutic benefits underlying EAT. Currently practicing stables as well as prospective ones can benefit from these findings: by specifically incorporating activities that participant #6 perceived as trust-facilitating.

### *Enjoyable*

The horses are experienced as soothing, gentle, fun. Horse activities, such as horse-football, are not only fun, they are experienced as a great group-work platform (participant #2). The findings of 'enjoyment' add a recreational component to the Equine Assisted Therapy. It adds to the research literature by making a point that EAT mustn't only be seen in the light of therapy and disorders, but also in respects to enjoyment.

### **PRO'S OF PAARDKRACHTIG**

For the aim of this research, two specific sub-themes belonging to 'pro's of Paardkrachtig' will be discussed here. The reason for this is that these two sub-themes are most relevant for the purpose of this study, how EAT affects participants in regards to health and psychological health:

Firstly, Participants experienced the benefit of other participants with similar problems. They feel

understood and safe by being with others who face a similar hardship. These findings are useful again for practicing and prospective stables: Grouping people with similar problems together appears to increase the experience of trust, feeling safe, and facilitate therapeutic betterment in the interviewees. Secondly, participants value to theoretical aspects of the programme and perceive the written assignments as helpful. Participants stated that they will look again into the folder and plan to think about things learned at Paardkrachtig in times of trouble or insecurity (I#4). In the light of possibly applying the EAT experience in the future (as stated by the participants), theoretical work within EAT gains of importance.

As no study has utilized a qualitative approach in investigating the participants' experience (their perspective) of EAT, these findings contribute to the research literature by a) explaining what exactly is helpful during an EAT programme, and by b) increasing lasting, long-term effects of EAT with appropriate theoretical work (folders, or other collections).

### ***Contra's of Paardkrachtig***

#### *attendance of others*

The interviews yield information about the importance of others (with similar problems) attending the programme (as mentioned in the pro's sub-theme above). Vice versa, participants did not like when others did not attend (interviewees 1 and 2). However, if someone cannot make it to the programme for a good reason, then it is understandable (interviewee # 2). Gender differences on this perspective seem to exist: only male participants (#1 and #2), criticized irregular attendance by others. This can mean two things: Firstly, girls attend more regularly than boys (the boys' friends who attended irregularly were boys). Secondly, irregular attendance of others doesn't disturb girls as much as boys. These findings are relevant to EAT stables, or any programme, that deals with group dynamics, and different genders.

#### *structure*

Minor criticism is voiced in relation to the structure of the programme: interviewees 1 and 2 did not like to engage in theoretical work; they preferred to engage in practical assignments outside the stable. Gender specificity is apparent again: these interviewees' are boys; the girls did not mention that. These findings are small, however, they can certainly be food-for-thought when setting up groups.

#### *instructor style*

Interviewee #4 criticizes one aspect of the programme: the instructors' back-questioning in regards to

the participants' opinion. The participant would have liked to know the reason why the instructors back-question. Working with groups makes it difficult to accommodate everyone; a confrontational style may work for some and not for all. The entire section 'Participants' experience of Paardkrachtig' does not confirm any prior findings. The participants' experience or their perspective of the programme has not been considered in prior studies. As the findings of this study have shown, they can be of value to other stables and ultimately to the improvement of the EAT experience. It is suggested, that future qualitative research investigates the structure of EAT programmes and how it is perceived by its participants.

### **CHANGES THROUGH PAARDKRACHTIG (THIRD MASTER THEME)**

This section discusses the findings of the last master-theme, also in relation to existing research, and in the light of future research. The interview questions this section refers to are designed to inquire about locus of control, appliance of the Paardkrachtig experience, psychological changes, social changes, and health changes.

#### *locus of control*

Interviewees 2,3,4 state they are the creators of their own luck. This is an idiosyncratically phrased question, and translates into 'interviewees 2,3,4 have an internal locus of control'. Follow-up question, since when they believe that, was answered with 'since the programme at Paardkrachtig' (Interviewees 3 and 4). Developing an internal locus of control as a result of EAT confirms studies by MacDonald (2007). Studies by Bowers et al (2003), and Ewing et al (2007) did not find a relation between EAT and a changed locus of control. These findings are supported by two out of six participants. However, they are contributions to the research literature for two reasons: One, challenges innate to adolescence (e.g. boundary-setting, making choices for life, and taking a stance for one's self) will have a better outcome if the locus of control is internal: Acquiring internal locus of control is related to the ability to delay instant gratification for the sake of something 'more valuable' in the future (Strickland, 1973). Internal locus of control in combination with social support is a stronger mediator against stress than an external locus of control along with social support (Lefcourt, Martin & Saleh, 1984). Two, internal locus of control is not commonly mentioned as a result in the EAT literature. Future research should consider explicit and implicit ways of probing for a changed locus of control as a result of EAT.

### *appliance of the experience at Paardkrachtig*

When asked if participants will look into e.g. the folder in the future, interviewees 1,4,5,6 said they would try to apply it, either by looking directly into the folder, or by 'looking it up mentally'. This finding is essential to EAT's efficacy: if participants intent to do what they say, then the benefits of EAT will have a lasting impact on the lives of the participant. In addition, this would certainly increase the value of the therapy. In regards to probing whether or not the participants appear to apply the learned techniques, qualitative follow-up research certainly exists. However, a change (or no change) in number does not explain why the participants did or did not implement the acquired skills of the programme. Therefore, a future research suggestion is to conduct a qualitative follow-up interview with participants of an EAT programme. Investigating, why or why not the participants utilized what they have learned will a) explain an increase or decrease of quantitative values, and b) will attempt to explain why participants utilized their knowledge or not. Information of the later question (b), can offer invaluable insight to how to design EAT programmes with a likelihood of lasting effects.

### **PSYCHOLOGICAL CHANGES THROUGH PAARDKRACHTIG**

#### *Boundary setting*

The interviews yielded the experience of the following psychological changes after the 8week EAGALA programme: more sociable, more open towards life, feels more self-confident, feels more him/herself again, thoughts more controlled, knows how to enjoy now, knows how to be happy now, knows how to have fun now, better boundary-settings, and feeling calmer. These findings confirm the following studies: increased self-confidence after an EAT programme has also been found by Wilkins (1994), MacKinnon et al (1995) McCormick & McCormick (1997), Gatty (2001), Kohanov (2001), Kersten & Thomas (2003), Lacoff & Levinson (2004), and Glazer (2004). These findings disconfirm findings by Ewing et al (2007) who did not find an increase of self-esteem/ self-confidence after an EAT intervention.

Shabo (2006), found decreased feelings of dissociation as a result of EAT; this study's findings of 'feeling more one's self again' thereby indirectly support Shabo's study because 'not feeling one's self' is a symptom of dissociation (DSM-IV, <http://allpsych.com/disorders/dsm.html>). Splinter-Watkins et al (1999) found an increase of psychosocial (and cognitive areas), which is confirmed by this study's findings of 'being more sociable'. The findings 'knowing how to be happy and knowing how to enjoy' did not confirm any existing study. The reasons for that could be that prior studies didn't intent to investigate this. Nonetheless, this finding is important as it demonstrates again the usefulness of equine assisted therapy. In

addition, due to the qualitative approach, this study found out a novel aspect in that participants now actually *know* how to be happy. These findings are of importance to currently practicing stables and to the EAGALA's long-term efficiency. The subsequent findings further contribute to the research literature by linking EAT to: being more open towards life, thoughts more controlled, and better boundary-setting. These findings are important as self-contained findings, and as a group: they counteract depression, and addiction. Being more open towards life implies better social networks, which counteracts depression. Controlled thoughts are also related to better mental-health. Better boundary-setting leads to less stress, better coping mechanisms and hence less addiction-proneness. Participant #6 experience of the instructors' excellent boundary-setting motivates her to a) not challenge the instructors' boundaries, and b) set her own boundaries. When inquired, participant #6 stated she finds this very experience useful in her life and thinks she will apply it at home and at her school. The notion of EAT's benefits in relation to healthy boundary-setting exists in a book on EAT. However, no existing qualitative study has yielded insights of how exactly better boundary-setting is implemented within the participants. This finding contributes to the research literature on EAT; future research would benefit from elaborating on this aspect. Increased sociability and self-confidence are linked with engaging in social activities, a larger network of friends and hence lead to more social support. Social support is linked with better coping mechanisms, better emotional support, and less depression. Better coping mechanisms have been found to counteract substance abuse.

The qualitative approach reveals that e.g. participants are not only happier, but that they also know *how* to be happier. The knowledge thereof can potentially ensure a prolonged therapeutic effect of EAT.

### **HEALTH CHANGES THROUGH PAARDKRACHTIG**

This section investigates the therapeutic benefits of EAT in relation to health changes. The interviewees' stated the subsequent betterment in relation to health as an experience of the EAT programme: feels better in her skin, better eating habits, and exhausted/relaxed after programme. The finding of 'feeling better in one's skin' is a broad term, yet it refers to an improved general better well-being. This finding confirms studies by Graham (2007), and Klontz et al (2007). Future research would benefit from other qualitative studies specifically inquiring what the phrase 'feeling better in one's skin' specifically means to the participants.

'Better eating habits' as a result of EAT supports the study by Baldwin (2011). It also confirms the assumption made by Lentini and Knox (2009), that the eating-disordered, usually not reacting to office-

therapies, can benefit from EAT. However, the findings of this study contribute in the following way: the qualitative approach of this study reveals *why* the participant (I#6) had poor eating habits: when comparing her responses to stressful situations, with her behaviours at the table during dinner time, the two overlap: in both situations, the participant wants to be on her own, seeking distraction by playing games on the computer and simultaneously listening to music. Having dinner with her family appears to be a stressor for her. As a result of the programme, either her threshold for stress has increased, and/or her coping mechanisms have improved. The field of EAT would benefit from future qualitative research investigating *why* and *how* improved eating habits are an experience of an EAT programme. Methodologically, future research would also benefit from larger groups with eating disorders who partake at an EAT programme; in this study, only one participant had an eating disorder prior to the programme.

‘Feeling exhausted/relaxed’ after the EAT programme was the experience of one participant (I#2). As the EAGALA programme involves physical activity, this is certainly a logical result. However, looking at the biographical section of interviewee #2, it shows that he has had one epileptic seizure and that his reaction to stressful situation is ‘feeling wired’ and ‘throwing stuff around’. Therefore, ‘feeling exhausted and relaxed’ as a result of EAT appears to accommodate his issues. This ‘accommodation of issue’ becomes apparent as well in the light of other interviewees’:

It is the qualitative approach that’s able to discover a striking point: comparing the interviewees’ responses from the biographical section with their responses of the ‘changes through EAT’ section, a link becomes apparent: although every participant was part of the same programme, it appears as though every participant extracted what they needed:

Figure 2. ***Unconscious matching of participants’ issues with programme’s benefits***  
*(author of this study coined this term)*

<b>Interviewee</b>	<b>issues prior to Paardkrachtig</b>	<b>experienced changes through Paardkrachtig</b>
<b>Interviewee 1</b>	Not having many friends, on the autistic spectrum	Made a good friend at Paardkrachtig
<b>Interviewee 2</b>	Bullied at school Used to be quiet in the corner Feels wired & under pressure in stressful situations Low self-esteem	More sociable & feels himself again Is part of the group now feels calmer feels more self-confident

<b>Interviewee 3</b>	Low self-esteem Thoughts used to go in circles	More sociable thoughts controlled now
<b>Interviewee 4</b>	Low self-esteem Bullied at school/ Bad things happened to her	More sociable feels save at Paardkrachtig
<b>Interviewee 5</b>	Low self-esteem Shy, didn't speak up  Not feeling herself/Bullied at school	More sociable collective development from shy to outspoken a totally different girl from what she used to be
<b>Interviewee 6</b>	Eating disorder (didn't eat enough) Hyperactive No friends  Prolonged arguments with female classmates	Feels like she <i>wants</i> to eat now feels calmer made good friends at Paardkrachtig & stays in touch & plans things with these friends arguments have gotten briefer, & now she's friends with the lads as well

This finding of 'unconscious matching of participants' issues with exactly what they need' (in the context of multiple participants), has not been pointed out by other studies. It is strongly suggested, that future research elaborates on this aspect of EAT: does this 'matching of issues and changes' occur at other programmes we well? How exactly is it achieved (e.g. how do the participants extract what they need? Do the instructors pick up on it? And how do the horses facilitate the right change?)? Investigating these issues would raise the value of EAT as a successful therapy and give insights about its therapeutic mechanisms. The above table also illustrates the social changes that have been experienced after the 8week EAGALA programme at Paardkrachtig: made a good friend at Paardkrachtig, is part of the group now, more sociable, less arguments with classmates, and the collective developmet from shy to out-spoken. As mentioned, some of these 'social changes' overlap with 'psychological changes'. These findings partially confirm studies by Trotter et al (2008) who found a decrease in negative behaviours, and studies by Russel-Martin (2006) who found relational improvement as a result of EAT. The findings of 'less arguments with classmates' have not been found by existing studies. Reasons for that could be differences in the participant population or differences in the theoretical approach.

The therapeutic benefits of being together with participants of similar problems (Interviewees' 2,5,6) appear to have further advantages: participants begin to bond and develop friendship. Especially for participant #6 is it a supportive experience: the only friend she has had wasn't allowed to hang out with her

anymore due to the participant's hyperactivity (see biography), yet at Paardkrachtig she made close friendships. Another participant experienced the collective development from 'shy to outspoken'. This experience emphasizes again the power of a group with mutual challenges. These findings are of importance to conductors of EAT or others programmes, as well as parents/friends of individuals who feel lonely as a result of their mental/health differences. Future research would benefit from investigating group dynamics of an EAT programme to ultimately understand & increase the therapeutic effects of EAT. These qualitative findings contribute to the research literature by again emphasizing the potential benefits of grouping participants of similar issues together.

In summary, the findings of this qualitative study confirmed the initial predictions of better psychological well-being (confidence, boundary-setting, self-esteem, improvements in social behaviours, better coping mechanisms) and better health behaviours (better eating habits, feeling good about one's body). Whether or not EAT has on drinking/smoking behaviours could not be determined as this study's participants neither smoke nor drink. Further, this study did not find explicit healthier habits as a result of this study. The reasons for this could be multiple: firstly, designed questions did not target unhealthy behaviours; and/or secondly, participants did not display unhealthy behaviours. It is suggested, that future research further investigates EAT in relation to health choices.

The qualitative approach enables the participants to voice what's important to them and it is ultimately important in investigating the many benefits of the EAGALA programme. Some important findings of this study would have been lost in a quantitative approach. Not only does this relationship of '*Unconscious matching of participants' issues with programme's benefits*' strengthen the qualitative approach as a valid approach, it also underpins the horses' ability to truly mirror the participants' needs: although all participants partook at the same programme, it was according to *their* needs that betterment took place. For example, the 'hyperactive' ones got calmer, the 'shy' ones became more out-spoken. Therefore, different emotions (e.g. restlessness and fear) surfaced and were worked on. From the design of this study, it is not clear how exactly this occurred. Future research is strongly suggested in this area: in a group-setting, how are different participants' needs a) detected and b) considered by the instructors and the horses within EAGALA or EAT.

### ***Discussion of Quantitative results by Paardkrachtig (N=6 & N=42)***

Paardkrachtig utilized the CES-D, HADS-A, and HADS-D standardized tests to measure depressive symptoms, and anxiety and depression symptoms within the participants. The tests are taken at the start of

the programme (week1), at the end of the programme (week 8), and at a three months follow-up (week 20). Paardkrachtig further utilizes their self-designed 'GELUK' test, which measure happiness in life. The results are displayed in chapter 3 and are discussed in the following:

### **GELUK (HAPPINESS)**

The test results show an increase of happiness from pre to post to follow- up testing. It appears that the effects of the programme last: The effects of the theoretical and practical assignments endure over time and increase participants' happiness at week 20 (in comparison to week 8). Although participants have not attended the programme for three months at the time of follow-up testing, EAT's mechanisms appear to continuously have a positive effect on the participants. The global data shows an increase from GELUK scores across time as well.

The qualitative data shows a similar trend: increased happiness is experienced as a result of the programme. In the light of the qualitative data derived from the interviews, the GELUK test results may be explained: Participants stated they now *know* how to be happy; the folder serves as a manual on how to be happy. Other participants are now *able* to enjoy their feelings. The detailed interviews yield another picture whereas the theoretical assignments are seen as a manual on how to be happy. When asked if participants would apply the learned, most answers were *yes* (which attempts to explain increasing happiness results at follow-up). The qualitative approach therefore offers a plausible explanation, or an alternative perspective in interpreting and understanding the GELUK test result. Qualitative and quantitative data support each other.

In relation to gender differences, girls show an increase of GELUK scores at follow-up, whereas boys show a slight decrease. The qualitative data explains: when asked whether or not participants planned to apply what they have learned, one of the boys answered *yes*.

### **CES-D**

The test results show a decrease in depressive symptoms across time. Again, it appears that the effects of the programme are lasting. Opponents may argue that it is the environment, filled with positive memories that account for decreased CES-D scores at follow-up. However, an alternative explanation could be the theoretical assignments: they are based on depression prevention; targeting better self-awareness, realistic self-appraisal, improved relationships, and a sense of mastery in order to prevent and overcome depressive symptoms. The global data also shows a decrease of CES-D scores across time.

The qualitative data portrays a similar trend: better emotional, mental well-being and better social

networks are experienced as a result of the programme. Considering the qualitative data from the interviews, a continuous decrease of CES-D scores can be explained: at week 8, participants stated they made good friendships at Paardkrachtig, they are now much better at initiating and maintaining social contact, they have more self-confidence, and their thoughts are more controlled. These interviews clearly illustrate how exactly Paardkrachtig has changed their social life. It can be assumed that this change within the participants accounts for less depressive symptoms even at week 20 due to the long-lasting effects of improved self-confidence and improved social skills.

In relation to gender differences, girls show a decrease of CES-D scores across time (pre, post, follow-up); whereas boys show an increase of CES-D scores at follow-up. The reason can be again, that boys at interviews said they don't intend to apply what they have learned.

### ***HADS-A / HADS-D***

The HADS-A test show a decrease in symptoms across time. Again, the numbers show a continuous decrease of anxiety symptoms even at time of follow-up testing. Theoretical assignments attempt to master anxiety by improving self-confidence; interaction with the horses attempt to increase self-efficacy and decrease fear. This data supports the global data, which shows a decrease of HADS-A scores as well. Gender differences exist: girls' HADS-A scores increase at week 8, followed by a decrease at week 20. The qualitative data portrays a similar trend as the global data does: participants experience increased self-confidence, and an internal locus of control after the programme; they are more open towards life. Considering the participants' experience, they learned to interact with a large animal, they developed collectively from shy to out-spoken, and they made good friendships at Paardkrachtig. EAGALA theory assumes a 'spill-over' effect: mastering EAGALA activities translates into mastering other areas of life.

The HADS-D test measures depressive symptoms within the participants. The test indicates a decrease in depressive symptoms across time. It can be assumed that the depression prevention tools utilized by Paardkrachtig (realistic self-appraisal, self-awareness) account for the decrease of depressive symptoms even at post-testing. Global data shows a decrease in HADS-D across time as well. Gender differences to exist in that boys show an increase of HADS-D scores at week 8.

The qualitative data portrays a partially similar trend as the global data: participants experienced more self-confidence, better social behaviors, and knowing how to be happy. These attributes mediated depression. Therefore, the qualitative data gives an explanation to the decrease of depressive

symptoms, even at follow-up testing. It is assumed, that these experiences are lasting and buffer against depression.

One discrepancy seems to arise from the global data table in chapter 3: the CES-D shows higher depression scores for girls than it shows for boys, whereas the HADS-D shows higher depression scores for boys. As the quantitative data does not parallel this, future research suggestion would be to investigate as to why these gender differences exist in relation to tests that both attempt to measure similar symptoms (depression).

### ***Paardkrachtig research goals:***

Paardkrachtig's goals for its participants are 1) enhancing psychological resilience, 2) decreasing depressive complaints, 3) preventing depression, and 4) increasing happiness.

The quantitative data clearly has demonstrated a lasting decrease in depressive complaints, and increase of happiness. Follow-up scores of depressive symptoms have shown a decrease in depressive symptoms; therefore it can be assumed that their goal #3 (preventing depression) has been reached as well. Therefore, the quantitative data confirms Paardkrachtig's research goals #2, 3, and 4.

The qualitative data confirms the quantitative findings in that less depressive complaints are present at week 8 (time of post-testing), and an increase of happiness is present at week 8. When asked, participants stated they plan to apply the learned skills from the programme in their lives; which lead to a prevention of depression (supported by quantitative follow-up at week 20). Qualitative data has also shown an improvement of coping skills within its participants, better social networks, enjoyment of emotions, and the courage to voice one's thoughts and opinions. It can be assumed that these skills acquired lead to better psychological resilience. Hence, the qualitative data confirms Paardkrachtig's research goals #1,2,3, and 4.

### ***QUALITATIVE AND QUANTITATIVE DATA DISCUSSED-***

Discussing the quantitative results in the light of the qualitative findings offers a comprehensible understanding of *what* happened during the EAGALA programme at Paardkrachtig. Numerical changes can now be soundly explained and underpinned. The qualitative approach not only describes the participants' experience (and makes sense of objective data), but also has an applicable value: Future EAT programmes can apply the participants' experience in conducting and designing future EAT programme.

Qualitative and quantitative data both have shown an increase in happiness and a decrease of depression (and anxiety), and are the results of the Paardkrachtig programme which has also utilized positive psychology and depression prevention. Therefore, these findings indirectly confirm the work and studies of Park et al, 2004, Park et al, 2005, Peterson et al. 2005, Seligman et al, 2002, Seligman et al 1995, Seligman et al 1999, Seligman et al 2005, who have developed and coined the very field of positive psychology and depression prevention.

The findings discussed have clearly demonstrated the effectiveness of the EAGALA programme at Paardkrachtig, Netherlands. Quantitative data has shown the effectiveness from pre- to post testing, with continuous improvements in the follow-up testing. Qualitative data has complimented the results by explaining *how* and *why*. Most therapies cease to work as the therapeutic interventions ends, however, the effectiveness of this approach continuous even after a 12week abstinence of therapy. Therefore, the data proves the EAGALA programme to be a successful and effective therapy.

Critics of the thematic analysis say 'it is a poorly demarcated, rarely-acknowledged' method (Braun &Clarke, 2006). However, this study shows that the qualitative approach is not only a scientific approach (as it yielded similar results/tendencies as the quantitative data), but also compliments the quantitative data set with something it is lacking of: insight and comprehension of *why* the numerical numbers are of a certain value.

### ***Future research suggestions***

The findings of this study lead to the following future research suggestions:  
Firstly, qualitative investigation of successful EAT/EAGALA programmes, to find out how and why they are successful. Comprehension thereof offers understanding of the intricate, and under-researched EAT mechanisms and leads to improvements of the equine assisted therapy. Secondly, investigating if participants think they will apply what they have learned. A negative response can be followed-up by asking what could be improved. Thirdly, investigating '*Unconscious matching of participants' issues with programme's benefits*': it appears that EAT is even more intuitive and naturally tailored to the specific needs of the client population. Fourthly, as gender differences do appear to exist (both qualitatively and quantitatively), a further exploration thereof is suggested. Lastly, the field of Equine Assisted Therapy will benefit from complimenting quantitative data with qualitative interviews. This ensures a continuous improvement, understanding, and acknowledgement of the field of equine assisted therapy, which has not

only shown to be successful, but cost-efficient, and of preventive value as well.

### **Limitations**

This study entails the following limitations; from a qualitative perspective:

Firstly, the three-way translation of this study and the possible loss of data is one of the limitation of this study. The quantitative data generally supports the qualitative data, yet some data may have been lost. Secondly, the participant group had diverse issues and reasons for joining the programme. Although the qualitative approach appreciates differences, a participant group that shares similar disorders (e.g. eating-disorder), could yield a clearer picture about EAT's effectiveness. Thirdly, Paardkrachtig utilizes positive psychology and depression prevention in theory; this is not commonly-used in the field of equine assisted therapy. Therefore, the results of the CES-D, HADS-A/D, and GELUK test must be interpreted in the light of a specific theoretical approach.

From a quantitative perspective, the limitation is the small sample size of the interviewed participants (N=6). Although the data statistically supports the global data (N=42), a larger sample size would have yielded a stronger picture.

### **Reflexivity Section**

*Critical evaluation of conscious and unconscious impacts on the topic of this study-* As the study and semi-structured interview were designed, the research gap has been kept in mind. This may have unconsciously impacted the study. The choice of Paardkrachtig as the stable where the effects of EAT will be investigated, also impacted the study: its participants' age and issues are reflected in the study (e.g. in the way the questions were phrased age-appropriately). *Reflection on the topic of this study-* Although some specific questions are entailed in the interview, the approach is rather general. The aim, to get insight about the participants' experience, has certainly been achieved. Their responses portray a diverse experience, giving food-for-thought for future research: inquiring about a specific experience, or investigating the experiences of participants with a specific mental/health issue. *Impact on the adolescents-* Although the researcher and translator attempted to not influence the participants' answers, the researcher's intent may have been reflected unconsciously in e.g. the tone of voice, body language, pauses and silences. Some participants may have felt an unconscious pressure to comply with e.g. the prominent opinion of the group regarding an issue. In times of uncertainty (e.g. how do you feel different now after the programme?), participants may have simply repeated the learned words from the theoretical sessions

(e.g. happy, grateful, joy). The interview situation may have excited some participants, or may have made others nervous, hence impacting their feelings and responses. Additionally, some may sympathize with the instructors/stable, and phrase their statements on their favour.

Considering the qualitative and quantitative data, however, similar changes (within the participants) and experiences (of the programme) appear to exist across participants and across both sets of data. This similarity speaks for a certain consistency among the participants' responses across time and hence confirms the study's authenticity and trustworthiness.

## Citations

### Electronic Journals

Baldwin, K. M. (2011) 'Animal-assisted intervention- Animals helping' Nursing made incredibly Easy! November/December 2011. [www.Nursingmadeincrediblyeasy.com](http://www.Nursingmadeincrediblyeasy.com) Lippincott Williams &Wilkins. Accessed September 2012.

Barker, S., B. & Dawson, K., S. (1998) 'The Effects of Animal-Assisted Therapy on Anxiety Ratings of Hospitalized Psychiatric Patients' *Psychiatric Services* 1998. 49(6): 797-801.

<http://ps.psychiatryonline.org/article.aspx?articleID=81469>. Accessed September 2012.

Bizub, A., Joy, A, & Davidson, L. (2003) 'It's like being in another world': demonstrating the benefits of therapeutic horseback riding for individuals with psychiatric disability. *Psychiatric Rehabilitation Journal* 26 (4), 377-384. Accessed September 2012.

Bowers, D. MacDonald, P. M., & Cappo, J. (2003). Equine-facilitated therapy with "at-risk" youth: Does it work? *Strides*, 9(3), 30–31. Accessed July 2012.

Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, CA: Sage. Accessed July 2012.

Braun, V. & Clarke, V. (2006) 'Using thematic analysis in psychology.' *Qualitative Research in Psychology*, 3 (2). pp. 77-101. ISSN 1478-0887. Accessed November 2011.

Cole K.M, Gawlinks A., Steers, N., Kotlerman, J. (2007) 'Animal Assisted Therapy in patients hospitalized with heart failure' *Am J Crit Care*. 16:575-585. Accessed July 2012.

Correa- Fernandez, V., Ji, L., Castro, Y., Heppner, W. L., Vidrine, J. I., Costello, T. J., Mullen, P. D., Cofta-Woerpel, L., Velasquez, M. M., Greisinger, A., Cinciripini, P. M., & Wetter, D. W. (2012) 'Mediators of the Association of Major Depressive Syndrome and Anxiety Syndrome with postpartum Smoking Relapse' *Journal of Consulting and Clinical Psychology*. Advance online publication. Doi: 10.1037/a0027532 Accessed February 2012.

Costello, D., M., Swendsen, J., Rose, J., S., Dierker, L., C. 2008. 'Risk and Protective Factors Associated With Trajectories of Depressed Mood From Adolescence to Early Adulthood', *Journal of Consulting and Clinical Psychology*.

Vol. 76, No. 2, 173-183. Accessed February 2012.

DeCoursey, M., Russel, A.C., Keister, K.J (2010) 'Animal-Assisted Therapy' (*Dimens Crit Care Nurs.* 2010; 29(5): 211-214). Accessed July 2012.

Ewing, C.A., MacDonald, P.M., Taylor, M., & Bowers, M.J. (2007). Equine-facilitated learning for youths with severe emotional disorders: A quantitative and qualitative study. *Child & Youth Care Forum*, 36, 59-72. Accessed July 2012.

Frame, D. (2006) 'Practices of therapists using equine facilitated/assisted psychotherapy in the treatment of adolescents diagnosed with depression: A qualitative study'. NEW YORK UNIVERSITY, 2006, 160 pages; 3204151 Accessed July 2012.

Frewin, K. & Gardiner, B. (2005) 'New sage or old age? A review of equine assisted psychotherapy' *The Australian Journal of Counselling Psychology*, 6, pp.13-17. Accessed July 2012.

Glazer, H. R., Clark, M. D., Stein, D. S. (2004) 'The impact of hippotherapy on grieving children' *Journal of Hospice & Palliative Nursing*: July/August/September 2004- Vol.6 (3)- pp.171-175.  
[http://journals.lww.com/jhpn/Abstract/2004/07000/The\\_Impact\\_of\\_Hippotherapy\\_on\\_Grieving\\_Children.13.aspx](http://journals.lww.com/jhpn/Abstract/2004/07000/The_Impact_of_Hippotherapy_on_Grieving_Children.13.aspx)  
Accessed April 2012.

Graham 2007: as cited in Lentini & Knox. Accessed July 2012.

Hayden, A.J. (2005) 'An exploration of the experience of adolescents who participated in equine-assisted psychotherapy: a resilience perspective.' Unpublished doctoral dissertation. Alliant International University: San Diego. Accessed July 2012.

Hemenway, J. (2007) 'Effects of horseback riding on depression and self-esteem in adolescent girls'. Unpublished Thesis. Alliant International University: San Francisco. Accessed July 2012.

Hutchinson, J. (2007) *Equine Assisted Psychotherapy: Horses are still helping us today'* unpublished manuscript. Pioneer Pacific College. Accessed July 2012.

Iannone, V. N. (2003) 'Evaluation of a vocational and therapeutic riding programme for severely emotionally disturbed adolescents' Unpublished doctoral dissertation. The Catholic University of America, USA: Washington

Accessed September 2012.

Kaiser, L., Spence, L. J., Lavergne, A. G., &Vanden Bosch, K. L. (2004) 'Can a week of therapeutic riding make a difference? A pilot study'. *Anthrozoos*, 17, 63-72. Doi: 10.2752/089279304786991918. Accessed July 2012.

Kaiser, L., Smith, K. A., Heleski, C. R., &Spence, L.J. (2006) 'Effects of a therapeutic riding program on at-risk and special education children' *J AM Vet Med Assoc* 2006; 228(1): 46-52. Accessed May 2012.

Kersten, G. & Thomas, L. (2003) 'Why horses?' In L. Thomas and G. Kersten (Eds.), *equine-assisted mental health resource handbook*. USA: Eagala Inc. Accessed September 2012.

Kim, E. L., Larimer, M. E., Walker, D. D., & Marlatt G. A. (1997) 'Relationship of Alcohol Use to Other Health Behaviors Among College Students' *Psychology of Addictive Behaviors*, Vol. 11, No.3, 166-173. Accessed September 2012.

Klontz, B.T., Bivens, A., Leinart, D., & Klontz, T. (2007). The effectiveness of equine-assisted experiential therapy: Results of an open clinical trial. *Society and Animals*, 15, 257-267. Accessed November 2011.

Kohanov, L. (2001) 'The tao of equus: A woman's journey of healing and transformation through the way of the horse' Novato, CA: New World Library. Accessed July 2012.

Lacoff, S. L., &Levinson B. M. (2000) 'a historical perspective. A focus on his work involving animal-assisted psychotherapy.' *Dissertation abstracts International: Section B. Sci Eng* 2000; 61 (5-B): 2767. Accessed July 2012.

Lehrman, J. & Ross, D. B. (2001)' *Therapeutic Riding for a Student with Multiple Disabilities and Visual Impairment: A Case Study.*' *Journal of Visual Impairment & Blindness*, v95 n2 p108-09 Feb 2001.[http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?\\_nfpb=true&\\_ERICExtSearch\\_SearchValue\\_0=EJ626470&ERICExtSearch\\_SearchType\\_0=no&accno=EJ626470](http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_ERICExtSearch_SearchValue_0=EJ626470&ERICExtSearch_SearchType_0=no&accno=EJ626470) Accessed April 2012.

Lekarczyk, D., T., Hill, K., T. (1969) 'Self-esteem, Test Anxiety, Stress, and Verbal Learning' *developmental psychology*, Vol. 1, No.2, 147-154. Accessed September 2012.

Lentini, J. A. &Knox, M. (2009) 'A Qualitative and Quantitative Review of Equine Facilitated Psychotherapy (EFP) with Children and Adolescents' *The Open Complementary Medicine Journal*, 2009, 1, 51-57. Accessed November 2011.

- Lefcourt, M., Martin, R. A., & Saleh, W. E. (1984) 'Locus of Control and Social Support: Interactive Moderators of Stress' *Journal of Personality and Social Psychology*, 1984. Vol. 47. No. 2. 378-389
- Levinson, F. (2004) 'Equine facilitated learning: a natural way to improved mental health, successful relationships and balance in one's life'. [www.wayofthehorse.org/articles/equine-fac-learning.html](http://www.wayofthehorse.org/articles/equine-fac-learning.html). Accessed May 2012.
- Lydecker, K. P., Tate, S. R., Cummins, K. M., McQuaid, J., Granholm, E., Brown, S. A. (2010) 'clinical outcomes of an integrated treatment for depression and substance use disorders' *Psychology of addictive behaviors*, Vol. 24, no. 3, pp.456-465. DOI: 10.1037/a0019943. Accessed May 2012.
- Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005). *Pursuing happiness: The architecture of sustainable change*. *Review of General Psychology*. Accessed July 2012.
- MacDonald, P. M., & Cappo, J. (2003) 'Equine-facilitated therapy with "at-risk" youth: Does it work?' *Strides*, 9(3), 30–31. Accessed July 2012.
- MacDonald, 2007: as cited in Lentini & Knox. Accessed July 2012.
- MacKinnon, J. R., Noh, S., Lariviere, J., MacPhail, A., Allan, D. E., Laliberte, D. (1995) 'A Study of Therapeutic Effects of Horseback Riding for Children with Cerebral Palsy' 1995, Vol. 15, No. 1, p.17-34. [http://informahealthcare.com/doi/abs/10.1080/J006v15n01\\_02](http://informahealthcare.com/doi/abs/10.1080/J006v15n01_02). Accessed September 2012.
- Mann, D. S. (2001). In L. Thomas, 'horse-play can be therapeutic: Equine assisted psychotherapy' [www.strugglingteens.com/opinions/horseplay/html](http://www.strugglingteens.com/opinions/horseplay/html). Accessed September 2012.
- Miller, J., Connor, K., Deal, B., Weber Duke, G., Stanley-Hermans, M., Varnell, G., Hartman, K., Mc Larty, J. (2003) 'How animal-assisted therapy affects discharge teaching: A pilot study' *Critical care choices*. 2003 - Volume 34 - Issue 1 – pp. 36-40. Accessed July 2012.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage. Accessed November 2012.
- Park, N., Peterson, C., & Seligman, M. E. P. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology*, 23, 603–619. Accessed July 2012.
- Park, N., Peterson, C., & Seligman, M. E. P. (2005). Strengths of character and well-being among youth. Unpublished manuscript, University of Rhode Island. Accessed July 2012.
- Peterson, C., Park, N., & Seligman, M. E. (2005). Orientations to happiness and life satisfaction: The full life versus the empty life. *Journal of Happiness Studies*, 6, 25–41. Accessed July 2012.
- Pharo, H., Sim, C., Graham, M., Gross, J., Hayne, H. (2011). 'Risky Business: Executive Function, Personality, and Reckless Behavior During Adolescence and Emerging Adulthood', *Behavioral Neuroscience*. Vol. 125, No. 6, 970-978. Accessed May 2012.

- Potter, J., & Wetherell, M. (1987). *Discourse and social psychology: Beyond attitudes and behaviour*. London: Sage. Accessed July 2012.
- Rector, B. K. (1992) 'Connecting body language with feelings'. *NARHA News*, 5(3),8. Accessed September 2012.
- Roberts, F., Bradberry, J., Williams, C. (2004) 'Equine-Facilitated Psychotherapy Benefits Students and Children' *Holist Nurs Pract*: 18 (1): 32-25. Accessed September 2012.
- Russell-Martin, L.A. (2006). *Equine facilitated couples therapy and Solution Focused couples therapy: A comparative study*. Doctorate of Philosophy, Northcentral University. [http://www.eagala.org/Research/Academic\\_Papers](http://www.eagala.org/Research/Academic_Papers). Accessed July 2012.
- Seligman, M. E. P., Reivich, K., Jaycox, L., & Gillham, J.,(1995). *The optimistic child: A proven program to safeguard children against depression and build lifelong resilience*. New York: Houghton Mifflin. Accessed July 2012.
- Seligman, M. E. P., Schulman, P., DeRubeis, R. J., & Hollon, S. D. (1999). The prevention of depression and anxiety. *Prevention & Treatment*, 2, Article 8a. Available at <http://content.apa.org/journals/pre/2/1/8a.html>. Accessed July 2012.
- Seligman, M. E. P. (2002). *Authentic happiness*. New York: Free Press. Accessed July 2012.
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005) 'Positive Psychology Progress' *American Psychologist* Copyright 2005 by the American Psychological Association Vol. 60, No. 5, 410–421 DOI: 10.1037/0003-066X.60.5.410. Accessed July 2012.
- Shambo, L., Seely, S. K. & Vonderfecht, H. R. (2006) 'Equine –facilitated psychotherapy for complex PTSD' as cited by Lentini & Knox (2008). Accessed September 2012.
- Smit F. (2006) *Prevention of depression (Dissertation)*. Amsterdam: Faculty of Medicine, Vrije Universiteit. Accessed July 2012.
- Sobo, E. J., Eng, B., Kassity-Krich, N.,(2006) 'Canine Visitation (pet) therapy: pilot data on decreases in child pain perception' *J Holist Nurs*. 24(1): 51-57. Accessed July 2012.
- Splinter-Watkins, K. L., & Calhoun, S. C. (1999). 'Benefits of therapeutic horseback riding: An effective occupational therapy intervention for persons with developmental disabilities.' *Developmental Disabilities Special Interest Section Quarterly*, 22, 1-3. Accessed February 2012.
- Tedeschi, P. (1991) 'Applications for horse-facilitated psychotherapy' *NARHA News*, 4(2), 6. Accessed September 2012.
- Tetreault, A. (2006). *Horses that heal: The effectiveness of Equine Assisted Growth and Learning on the behavior of students diagnosed with Emotional Disorder*. Unpublished Masters Thesis. Governors State University, University Park, IL. Accessed November 2012

Trotter, K.S., Chandler, C.K., Goodwin-Bond, D. & Casey, J. (2008). Comparative study of the efficacy of group equine-assisted counseling with at-risk children and adolescents. *Journal of Creativity in Mental Health*, 3(3), 254-284. Accessed November 2012.

Widdicombe, S., & Wooffitt, R. (1995). *The Language of Youth Subcultures: Social Identity in Action*. London: Harvester Wheatsheaf. Accessed November 2012.

Internet sources:

www.carina-pratl.at

[www.cobboboonee.com](http://www.cobboboonee.com)

www.eagala.com

www.mindsnmotion.net

http://allpsych.com/disorders/dsm.html

Book:

McCormick, A., McCormick, M. (1997). *'Horse Sense and the Human Heart*. Florida, USA. Health Communications, Inc.

**Appendix 1: semi-structured interview questions**

***Draft Interview Schedule – To investigate the experiences of those on the EAT programme and to examine the role of the programme on participants perceptions of health***

***Introduction (5 minutes)***

∅ ***Introduce myself***

∅ ***Recording***

∅ ***Purpose of interview – find out your thoughts on the EAT programme, the interaction with the horses and the tasks you are required to do and the impact this may have on your health***

∅ ***Timing – around 30 minutes***

***Biography (10 minutes)***

**Can you tell me about your health?**

**Do you smoke, drink?**

**How long have you been doing this?**

**When did you start and why?**

**What do you feel like doing when you feel stressed?**

**If they have a serious health condition, then ask follow-up questions such as how did you feel when you were diagnosed with x? What do you know about the condition? How are you coping with it? How is your family coping with it?**

**Can you tell me about your friends?**

**Can you tell me about your family?**

**Any brothers or sisters?**

**Do you get along with them?**

**What is your relationship like with your parents?**

**Do you believe you are the creator of your own luck, or is it in someone's else's hand?**

#### **Questions on EAT (15 minutes)**

**Why did you decide to come to this EAT programme?**

**Did you try any other programmes before this one?**

**What were your experiences with the other programme? Did you enjoy it? What did you find useful? What didn't help?**

**Did you enjoy EAT? What was best part of the programme and why? What didn't you enjoy?**

**The programme also comprised of exercises that you had to do on your own. Did you find them useful? Why?**

**Did you enjoy the interaction with the horses? Why?**

**Have you seen any changes in yourself since doing the programme?**

**How do you think EAT has influenced your drinking/smoking/leisure time activities?**

**Do you feel any anxiety now that the programme has ended? Why?**

*How do you think EAT has influenced the way you approach/embrace life?*

*o Any changes in your health since being on the programme?*

*If received advice*

*☒ What did you think of the advice you received*

*o P – was it helpful? In what ways?*

*o How could it have been more helpful?*

*If received any leaflets/written materials or advice*

*☒ What did you think the leaflets you received? (If did not read then why not)*

*o P – were the leaflets helpful? In what ways?*

*o How could they have been more helpful for you? What sort of info?*

*∅ How do you think EAT could be improved?*

- PROBE – information given, length of programme, structure, format, style, information source*
- Conclusion*

*∅ Any final points you would like to make about how this programme can be used to help others?*

*∅ Thank you for participating*

**Table 1**  
**Formal Analysis for GELUK (happiness) scores**

Source	prepostfollowup	Type III Sum of Squares	Df	Mean Square	F	Sig.
prepostfollowup	Linear	35.758	1	35.758	27.186	.000
	Quadratic	7.786	1	7.786	11.568	.002
prepostfollowup	* geslacht	.047	1	.047	.036	.851
	Linear	.003	1	.003	.005	.944
	Quadratic					
Error(prepostfollowup)	Linear	52.613	40	1.315		
	Quadratic	26.924	40	.673		

**Table 2**  
**Formal Analysis for CES-D scores**

Source	prepostfollowup	Type III Sum of Squares	Df	Mean Square	F	Sig.
Prepostfollowup	Linear	683.610	1	683.610	8.713	.005
	Quadratic	106.628	1	106.628	4.042	.051
Prepostfollowup	Linear	10.293	1	10.293	.131	.719
	Quadratic	10.514	1	10.514	.399	.532
Prepostfollowup	Linear	3059.902	39	78.459		
	Quadratic	1028.787	39	26.379		

**Table 3**  
**Formal Analysis for HADS-D scores**

Source	prepostfollowup	Type III Sum of Squares	df	Mean Square	F	Sig.
Prepostfollowup	Linear	96.338	1	96.338	13.070	.001
	Quadratic	6.557	1	6.557	1.727	.196
Prepostfollowup	Linear	.728	1	.728	.099	.755
	Quadratic	.508	1	.508	.134	.716
Prepostfollowup	Linear	287.467	39	7.371		
	Quadratic	148.029	39	3.796		

**Table 4**  
**Formal Analysis for HADS-A scores**

Source	prepostfollowup	Type III Sum of Squares	df	Mean Square	F	Sig.
Prepostfollowup	Linear	113.152	1	113.152	17.431	.000
	Quadratic	7.314	1	7.314	1.522	.224
Prepostfollowup	Linear	.343	1	.343	.053	.819
	Quadratic	3.457	1	3.457	.719	.401
Prepostfollowup	Linear	259.657	40	6.491		
	Quadratic	192.210	40	4.805		