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## **Interaction during Equine-facilitated Rehabilitation from the Rehabilitates' Perspective - a Phenomenological Study**

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## **Interaction during Equine-facilitated Rehabilitation from the Rehabilitees' Perspective - a Phenomenological Study**

Introduction: Interaction has a multidimensional role in equine-facilitated rehabilitation. Purpose: The aim of this study was to understand rehabilitees' experiences of interaction during equine-facilitated rehabilitation. Methods: Six children and four adults with individual diagnoses or reasons to participate in equine-facilitated rehabilitation were included in this qualitative study. Data were collected by interviewing individually the rehabilitees. A phenomenological Spiegelberg's seven-phase meaning analysis was performed to reveal the meanings. Results: Seven meanings were identified: I Trust, II Friendly horse, III Mirror of feelings, IV Inspiring riding, V Feeling competent, VI Rehabilitree-oriented approach and VII Uniting experience. In addition, the essential meanings of the phenomenon form three different circles: circle of recognition, circle of supporting active agency and circle of empowerment. Conclusion: Interaction during equine-facilitated rehabilitation is essential to rehabilitees in many ways that have important roles in the entire rehabilitation process that aims for empowerment in the rehabilitees' daily lives.

Keywords: Meaning analysis, equine facilitated therapy, hippotherapy, sociopedagogical horse activity, interaction.

## **INTRODUCTION**

Rehabilitation requires an intensive relationship between professionals and rehabilitees (O’Keeffe et al, 2016), but how does the relationship change when we add a horse and stable community to the rehabilitation team? The aim of rehabilitation is to affect the rehabilitee’s daily living where one needs all types of abilities and skills. World Health Organization (2021) defines rehabilitation as “a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment”. The goal of rehabilitation is to help people to function as best as they can within their functional limitations, and to prepare them to function in their homes and communities(Cott 2004). The challenge is still how to transfer the achievements conducted in rehabilitation to daily living. More focus should target to the importance of rehabilitation outcomes that are meaningful and relevant to the rehabilitee and to support translation (Cott, 2004; Maribo, Jensen, Madsen and Handberg, 2020). According to the rehabilitees, this means partnerships with professionals who understand and respect their individual needs (Cott, 2004) and who exhibited unconditional acceptance and are non-judgemental (Morera-Balaguer et al. 2021). To create a person-centered rehabilitation setting, more attention should be paid on relationship between rehabilitee and professional and thus on the interaction (Morera-Balaguer et al. 2021).

Alliances between rehabilitees and professionals are positively correlated with treatment outcomes in rehabilitation (Yorke et al. 2008; Hall et al. 2010; Morera-Balaguer et al. 2021). Additionally, it has been found that a rehabilitee-oriented approach can facilitate rehabilitees’ motivation and engagement in goal setting and support the achievement of successful rehabilitation goals (Alanko et al, 2019). Creating a rehabilitee-oriented alliance between professionals and rehabilitees requires interaction and

communication. Interaction can be seen from different approaches (Trenholm and Jensen 2008; McLeod 2009). According to O’Keeffe et al, (2016), interaction is cooperation between a rehabilitee and a professional that is constructed by mutual understanding, goals, interventions, and emotional bonds between them. In equine-facilitated rehabilitation, which includes a rehabilitee, professional, horse and stable community, interaction occurs in different ways. First, cooperation with a horse entails different requirements for the interaction. How do you interact without words? How does the horse respond to you? Additionally, the stable community creates interesting surroundings for rehabilitation.

Equine-facilitated rehabilitation arises from practical needs. Theories and concepts have not yet been defined properly, and there is considerable variation among professionals and their educational backgrounds or ways of performing equine-facilitated rehabilitation (Laine, Laitinen, Mäki-Tuuri and Raento, 2015). Equine-facilitated rehabilitation has been found to improve rehabilitee’s balance, motor function, posture, gait, muscle symmetry, pelvic movement, psychosocial parameters, and overall quality of life (Stergiou et al, 2017), but more research is needed. In particular, there is a need to better understand rehabilitees’ points of view.

It is already known that the relationship with horse is essential to rehabilitee in equine-facilitated rehabilitation (Kern-Godal, Brenna, Arnevik and Ravndal, 2016) Rehabilitees have stated that they experienced that the horse understood them and that working with the horse empowered them (Kern-Godal, Brenna, Arnevik and Ravndal, 2016). In addition, the stable environment had an important role in equine-facilitated rehabilitation (Kern-Godal et al, 2016). Rehabilitees felt important since they were part of the stable community and were treated as equal stable staff rather than patients in equine-facilitated rehabilitation. In addition, children from substance abuse families felt that the interaction in equine-facilitated rehabilitation was safe and reliable. Children wanted to be

understood and to feel important, and they appreciated the safe touch and affection in their relationships with horses. Additionally, adults appreciate the affection with horses (Pohl et al, 2018). Stroke patients were surprised how important horses became to them and felt empowered when they learned how to guide a horse and communicate with it (Pohl et al, 2018). Additionally, the therapeutic impact of equine-human relationships has been recognized. Interaction with a horse helps trauma victims to recover by developing trust, feelings of safety, self-esteem and self-efficacy (Yorke, Adams and Coady, 2008).

There are already a few qualitative studies on the meanings of equine-facilitated rehabilitation from the rehabilitees' perspective (Dunlop and Tsantefski, 2018; Frank, McCloskey and Dole, 2011; Kern-Godal, Brenna, Arnevik and Ravndal, 2016; Kern-Godal et al, 2016; Lemke, Rothwell, Newcomb and Swoboda, 2014; Pohl et al, 2018).

Experiences about the interactions have, to our knowledge, not been the focus of previous studies. Because it is understood that human interaction has an important role in the rehabilitation process (Knutti et al, 2020; Martin et al, 2020), it is essential to study the importance of interaction in equine-facilitated rehabilitation. The aim of this study was to understand rehabilitees' experiences of interaction during equine-facilitated rehabilitation.

## **MATERIALS AND METHODS**

### **Methodological Perspective**

Phenomenology explores how a certain phenomenon appears through various aspects and perspectives (Spiegelberg, 1975). Phenomenological methods are used when experiences and their meanings in real life are studied. In phenomenology, it is understood that the meanings we give to different things in our life guide our actions, and we act intentionally (Brinkmann, 2013). In the analysis, an experience must be described as it presents itself to

the person experiencing it. Researchers seek to get as close as possible to precise descriptions of what an individual person has experienced and how that person talks about it. By studying the experiences, it is possible to become aware of the meanings. Experiences construct different types of meanings that are related to each other (Brinkmann, 2013). That is why, in phenomenological methods, the meanings are described as a network of meaning perspectives including their relations and essences. Some meanings are more essential than others (Spiegelberg, 1975).

Phenomenology is interested in individual experiences and meanings that are believed to represent the essence of the studied phenomena. In a phenomenological approach, humans are thought to be members of a society, so the experiences are intersubjective and dependent on the surrounding society. (Spiegelberg, 1978) The intention is not to generalize but to find the essence of phenomena, and the results of the phenomenological meaning analysis must be considered in the particular context and phenomena. The phenomenological meaning analysis was used to analyse the rehabilitees' individual experiences of equine-facilitated rehabilitation they had participated. All the meanings of interaction were from their perspectives, how they experienced the interaction during rehabilitation. There were only rehabilitee's perspectives to the interaction in this study.

### **Participants and Setting**

The participants in this study were rehabilitees of equine-facilitated rehabilitation. There are internationally used terms, such as hippotherapy, equine-assisted activities/therapies and therapy in an equine environment (AHA, 2018; Wood et al, 2021), that are included under the umbrella concept equine-facilitated rehabilitation used in this study. In Finland, equine-facilitated rehabilitation is performed by a professional who is educated by The

Finnish Association of Equine Facilitated Therapies (52 ECTS) or The Finnish Association of Social Pedagogical Equine-assisted Activities (25 ECTS) (AHA, 2018; Wood et al, 2021), which are included under the umbrella concept equine-facilitated rehabilitation used in this study. Education is carried out as contact teaching at Equine College and between those training periods there are literature assignments and tasks with horses (Suomen Ratsastusterapeutit ry, 2022). The education by The Finnish Association of Equine Facilitated Therapies focuses on understanding how the horse behaves and interacts, how to choose the right kind of horse and exercises for different kind of rehabilitees and how to utilize horse especially with rehabilitees with mental health, behavioural or sensomotor challenges (Suomen Ratsastusterapeutit ry, 2022). The education by The Association of Social Pedagogical Equine-assisted Activities contains practical training with the horse and learning how to use horse in social rehabilitation from a sociopedagogical perspective (Hevosopisto oy, 2022).

The goals of equine-facilitated rehabilitation focus on a rehabilitee's motor, educational or emotional needs. The goals and orientation depend on the professionals' basic occupational training. Equine facilitation is an expansion of basic rehabilitation. In this study, equine-facilitated rehabilitation was performed by a physiotherapist, occupational therapist, psychologist, person with a Bachelor of Social Services degree or public health nurse. In this study, therapists and instructors of equine-facilitated rehabilitation are called generally professionals.

The Finnish Association of Equine Facilitated Therapies and The Finnish Association of Social Pedagogical Equine-assisted Activities helped to contact professionals who then helped to contact suitable participants. The study participants were first informed about the study by their professional from equine-facilitated rehabilitation and asked whether they were interested in participating. Participating rehabilitees were



recruited to the study if they could communicate by talking and if they had cognitive abilities such that they could understand and answer the questions used in the interview. Rehabilitees obtained detailed information on the study from the principal investigator (EA) of this study before signing the informed consent form. Guardians of children also signed informed consent. The study received ethical statement from The University of Jyväskylä Ethical Committee (May 6th, 2016).

The qualitative research data were collected by individual interviews with ten rehabilitees. Seven of them had participated in equine-facilitated therapy and three had participated social pedagogical equine-assisted activities. Six of the rehabilitees were children from ages nine to 14, and four were adults from ages 25 to 54. Seven of them were women and three were men. The rehabilitees had had equine-facilitated rehabilitation from one month to six years, and they reported individual diagnoses or reasons for participating in equine-facilitated rehabilitation (Table 1). The rehabilitees described that the equine-facilitated rehabilitation included among other things riding, exercises while sitting on the back of the horse, taking care of the horse, feeding the horse, or simply encountering the horse.

### **Data Gathering**

Phenomenological interviews were conducted by the principal investigator (EA). The participants were interviewed individually or in the presence of their guardian. The interviews were based on open questions. With adults, the interviews began with the question “What kind of experiences you have in equine-facilitated therapy?”; and with children, the interviews began with the question “Can you tell me what kind of horses the stable has?”. After these opening questions the interview followed the words the rehabilitees used. So each interview was different. There were 10 hours and 29 minutes

(range 42-82 minutes) of audio recordings and 219 pages of interview transcripts. The first author (MM) of this study listened to the audio recordings.

### **Analysis**

In this study, we used Spiegelberg's (Spiegelberg, 1975) seven-phase meaning analysis to determine the essential meanings of interaction in equine-facilitated rehabilitation from the rehabilitees' perspective because the aim of this phenomenological research is to search and understand the meanings diversely. To our knowledge, there are only a few studies about the phenomena of interaction in equine-facilitated rehabilitation, (Johansen, Arfwedson, Wang and Binder, 2016; Kern-Godal, Brenna, Arnevik and Ravndal, 2016; Yorke, Adams and Coady, 2008) and phenomenology is applicable to increase the knowledge of such unknown phenomena (Spiegelberg, 1978). Spiegelberg's method with seven phases ensures systemic progress to guarantee the credibility and validity of the study analysis. The data analysis was performed systematically according to these seven steps such that the previous step was clarified before the next step (Figure 1). The first author (MM) was the main operator in this data analysis but was regularly in contact with the research team to ensure her proceedings.

The first author began the data analysis by writing down her prejudices about the meanings of interaction in equine-facilitated rehabilitation in order to become aware of them. Researchers aspire to examine the phenomena intuitively and free from assumptions. The first author is a physiotherapist but has no previous experience with equine-facilitated rehabilitation or working with horses. She had an assumption that rehabilitees in general enjoy spending time with the horses in equine-facilitated rehabilitation. The first author read and listened to all the individual interviews several times and focused on the experiences of each rehabilitee regarding the interaction in equine-facilitated rehabilitation.

The purpose was to hear the voices of the rehabilitees, so the comments of other persons present in the interviews were ignored. Then, a description of each rehabilitee's experiences of interaction in equine-facilitated rehabilitation was recorded.

In the second step, the first author explored the descriptions to identify the individual meaning units as they were expressed by the rehabilitees. Individual meaning units could include a few words or a sentence that expresses a rehabilitee's experiences in interaction during equine-facilitated rehabilitation. The meaning units formed the individual meanings that were essential to the rehabilitees in interaction during equine-facilitated rehabilitation.

In the third phase, the first author investigated each rehabilitee's individual meanings and the essential relationships between them. Then, in the fourth step, the first author synthesized the individual meanings with authentic quotes, combined them with each other and examined the phenomena in light of new knowledge from the analysis thus far.

In the fifth step, each rehabilitee's individual mode of experiences of interaction during equine-facilitated rehabilitation was observed, and meanings with related content were established to create meaning perspectives. In the sixth step, each rehabilitee's essential relations of meanings constituted a personal meaning network of interaction during equine-facilitated rehabilitation.

In the process of synthesizing the individual meaning perspectives, the most essential meanings were those that opened up a perspective on the phenomenon. The other meanings were identified and grouped appropriately with each other. Three participants of the research group (MM, EA, and AP) discussed every meaning and meaning perspective with each other to find the final expression of the meanings.

Finally, in the seventh phase, these actions formed the rehabilitee's meaning network, where every meaning, the relations between them and the essential meaning perspectives for all the rehabilitees were described. This synthesis describes the phenomena of interaction during equine-facilitated rehabilitation from the rehabilitees' point of view.

## **FINDINGS**

In this study, the interaction during equine-facilitated rehabilitation from rehabilitees perspective includes the interactions to themselves, to the horses, to the professionals and the stable community. According to the results of this study all rehabilitees respected horses and the rehabilitees saw the horses as their friends, trusted them and they spoke about the interaction between horses and themselves respectfully in all interview situations. The rehabilitees also described equine-facilitated rehabilitation as a part of their daily lives. Seven meanings of the interaction during equine-facilitated rehabilitation were identified during the meaning analysis. They are as follows in order of their meaningfulness: I Trust, II Friendly horse, III Mirror of feelings, IV Inspiring riding, V Feeling competent, VI Rehabilitee-oriented approach and VII Uniting experience. The connections between the meanings are shown in Figure 2. According to the results of the meaning analysis and synthesis, the essential meanings of the phenomenon in equine-facilitated rehabilitation form three different circles: circle of recognition, circle of supporting active agency and circle of empowerment (Figure 3). Next, we present the results as meanings of phenomenon in equine-facilitated rehabilitation from most essentials to others.

## **I Trust**

Trust was the most essential meaning for the rehabilitees in the interaction during equine-facilitated rehabilitation. Each rehabilitee mentioned trust, and it appeared to be the basis of interaction. Rehabilitees described trust in the equine-facilitated rehabilitation professional as it being natural to talk to them, and the professionals became close to the rehabilitees during the rehabilitation. The rehabilitees felt that the professionals honoured them, and the rehabilitees trusted the professional skills of the professionals. Rehabilitees' trust in the professionals made the rehabilitation atmosphere safe to handle their feelings. Rehabilitees also felt that it was easier to trust and be close to the horses when they first had a trusting relationship with the professional. Rehabilitees trusting in the horse had very essential meaning in the horse-rehabilitee interaction, and trust was the most important thing facing a horse in equine-facilitated rehabilitation.

With her [therapist], we have formed this good trusting relationship, and we have talked about all kind of things with each other. (Kati, adult, sociopedagogical horse activity)

-- and suddenly I just trusted that horse, when I felt that, I noticed that it's calm.  
(Kirsti, adult, equine facilitated therapy)

## **II Friendly horse**

Rehabilitees experienced the horse as a dear and close friend, and they felt equal to the horse. It was easy to talk to the friendly animal who excepted them as they were. In fact, rehabilitees somehow could see themselves in the personality traits of the horses. The rehabilitees showed their affection to the horse, and it was important to them that the horse responded to their acknowledgements. The rehabilitees experienced that attachment to the horses formed during rehabilitation to be inspiring and reasonable for the rehabilitees. The

rehabilitees felt that the horses encouraged them to improve themselves in areas in which they felt the most uncertain.

Well, it's that when you can talk to them, just like that, it's a little bit difficult, but just like that and although I'm nervous, it's possible to talk to them and then, even though they don't answer, they listen. (Heidi, child, equine facilitated therapy)

Well, I have had it [horse] from the beginning, and it is wonderful. Here are some photos of us two. (Neea, child, equine facilitated therapy)

### **III Mirror of feelings**

Trusting and closeness with a professional and a horse constructed an atmosphere where the rehabilitees felt that it was possible and safe to examine their feelings. By observing and getting to know the behaviour and personality traits of the horses, rehabilitees described that they began to form perceptions about themselves. Rehabilitees experienced that interaction with horses gave them feedback about their behaviour. The rehabilitees felt that they learned that horses could sense when they were tired or restless and that these things could affect the interaction. Rehabilitees talked extensively about their feelings by referring them to the supposed feelings the horse might have had. The rehabilitees reported that working with horses made it easier to express their feelings verbally. Rehabilitees respected the horses and understood that they had to concentrate on directing the big and strong horse. Rehabilitees felt that it was important to learn for being in present and focusing on one thing at the time so that they could also form perceptions of themselves.

It's kind of like if you have a good day, then it [horse] is fine; and if you are sometimes tired, it is tired too. It's kind of like mom said that the horse is like a mirror. (Patrik, child, equine facilitated therapy)

Well, it is very kind of, like sympathetic and it is somehow so like me, it's easy to identify with it and so on. (Jonna, child, socio-pedagogical horse activity)

#### **IV Inspiring riding**

The rehabilitees found riding to be inspiring and fun. They felt that they could forget all the unhappy thoughts and stress in their lives and just focus on riding. Riding was a relaxing and memorable experience. A friendly horse made riding more inspiring. The rehabilitees were inspired to challenge themselves in riding and succeeding with horses brought more good feelings and motivation to the rehabilitees.

It's little bit like, that there you can, it's easy to start thinking of things that you wouldn't think at home. Here, well, all the negative thoughts go away, and the positive things come to mind in a way that it's wonderful to go and ride a horse-- (Heidi, child, equine facilitated therapy)

It's so wonderful, you know, when you feel that your head is empty of all thoughts when you know that at home you have to stress about everything. (Kirsti, adult, equine facilitated therapy)

It's fun! (Veeti, child, socio-pedagogical horse activity)

#### **V Feeling competent**

Positive experiences with the horse empowered the rehabilitees and made them more self-confident. The rehabilitees described that they exceeded themselves in equine-facilitated rehabilitation. The rehabilitees felt that the stable environment was very meaningful. They felt they were treated as equals, and they were responsible for taking care of the horses and other stable tasks. The rehabilitees experienced that they felt more competent in interactions with the horses, professionals and stable environment.

-- time after time I won myself. First, I won the fear of animals and then I got the courage to do and act and come and enjoy even. I was brave enough to sit on a horse eyes closed, and the feeling was pretty awesome. From that I got so much power that I got the courage to apply to these schools and all kinds of power to do and perform. (Anne, adult, equine facilitated therapy)

I tease myself with the thought that I can do it or like that; and then when I did it, I actually realized that I really can do it. (Jessica, child, equine facilitated therapy)

## **VI Rehabilitee-oriented approach**

The rehabilitees felt that they were treated as individuals in equine-facilitated rehabilitation. Rehabilitation was based on their individual goals and assets. The rehabilitees described that it was important to them that professionals listened to them and helped them to recognize the things they wanted to improve in rehabilitation. It was also important for the rehabilitees that they could proceed in the rehabilitation at their own pace and have an influence on the content of the rehabilitation. Trusting relationships, especially with professionals and positive experiences with horses, gave rehabilitees confidence to set ambitious goals and accomplish them.

And until the first time I felt that “Oh, this is how this happened that I exceed myself every time”. In addition, it was so great that right in the first time it was told that there’s no rush-- (Anne, adult, equine facilitated therapy)

And then they think there about your future and what would be best for you, and they focus on that you wouldn’t, for example, become lame at school or in classes. (Patrik, child, equine facilitated therapy)

## **VII Uniting experience**

It was essential for the rehabilitees to share the equine-facilitated rehabilitation experience with the professionals. It felt natural to talk to the professionals while taking care of the



horses or while riding and describing the feelings that arose. Rehabilitees experienced that the interaction between them, and the professionals and the horses were very intimate and trusting. The rehabilitees felt that they could talk about anything in the equine-facilitated rehabilitation. Rehabilitees experienced that the professionals were good listeners, and they understood the rehabilitees better while they shared the integrative experience with the rehabilitees.

You can talk about almost everything there. (Patrik, child, equine facilitated therapy)

And yes, clearly, what somehow unites us is also the horses and that we have similar experiences with the horses and then also other life experiences perhaps similar so somehow it has been easy to talk there with her [therapist]. (Kati, adult, sociopedagogical horse activity)

### **Essential circles**

The meanings of the interaction in equine-facilitated rehabilitation were related to each other as three different essential circles: recognition (meanings I, II, and III), supporting active agency (I, VI, and VII) and empowerment (II, III, IV, and V). These circles are also connected to each other to form a rehabilitee's meaning perspective in the equine-facilitated rehabilitation phenomenon.

The most meaningful circle in interaction during equine-facilitated rehabilitation was recognition. Without this circle, equine-facilitated rehabilitation does not begin. With the help of interaction in equine-facilitated rehabilitation, the rehabilitee moves to the circle of supporting active agency and finally to the circle of empowerment, which is the final outcome of the rehabilitation process. The circles are built partly above one another, showing how the rehabilitation process is constructed step by step, one circle at a time, and

goes forward so that the new circle is built on the one before it. The rehabilitees are the active agents in the rehabilitation process the entire time.

The circle of recognition was the basis of equine-facilitated rehabilitation. The rehabilitation atmosphere must be trusting and safe so that it is possible for the rehabilitee to be aware of and understand his emotions and thoughts. Horses can be used as mirrors of feelings and actions. Horses gave genuine and approbative feedback and strengthened the trusting interaction. The meaning of the interaction with the rehabilitees in this circle was to support them in identifying their strengths and assets and in seeing the things they wanted to improve in themselves.

In the circle of supporting active agency, the rehabilitees are listened to and respected as individuals. It is essential that the rehabilitees feel that one is equal to the professionals and the horses and can influence one's rehabilitation process. The meaning of the interaction in this circle was to support the rehabilitees to set goals that were important to them and support feeling competent to accomplish those goals together with the professionals.

The last circle of interaction during rehabilitation was the circle of empowerment. Here, the stable environment strengthens rehabilitees feeling competent and accepts the rehabilitees as members of a community. This feeling of being equal and accepted in addition to inspiring riding with positive experiences seems to empower the rehabilitees to also take responsibility for their rehabilitation in their daily lives outside the stable environment.

## **DISCUSSION**

In equine-facilitated rehabilitation, from the rehabilitees' point of view, there are interactions between rehabilitees and horses, rehabilitees and professionals and rehabilitees

and the stable environment. In our study, when rehabilitees were asked, “What kind of experiences you have in the equine-facilitated therapy?”, they did not begin to list all the exercises or tasks the professionals told them to perform. The experiences with the horses and professionals in the stable community were essential to the rehabilitees. In addition, the feelings experienced in equine-facilitated rehabilitation and the things the rehabilitees learned about themselves were essential. The essential in interaction in equine-facilitated rehabilitation from rehabilitees’ perspective were the three circles; recognition, active agency and empowerment. Recognition was the base of interaction in rehabilitation process.

The main and essential meaning from rehabilitees perspective was trust, which was a part of the circle of recognition and related to all the interactions in the equine-facilitated rehabilitation and was the basis for the entire rehabilitation process. Trust between rehabilitees and horses has been found to be important for rehabilitees in earlier studies (Kern-Godal et al, 2016; Pohl et al, 2018; Yorke, Adams and Coady, 2008); however, in our study, the rehabilitees also highlighted the importance of trust in the professionals. The other studies have also showed that the professionals can more easily be the interpreter between the rehabilitees and horses when the professionals have good trusting relationship with the rehabilitees (Johansen, Arfwedson, Wang and Binder, 2016). Lemke, Rothwell, Newcomb and Swoboda (2014) found that interaction between professionals and child rehabilitees facilitated children’s communicational skills, and it was important to the children participating in equine-facilitated rehabilitation that the professional was the same every time.

A rehabilitee-oriented approach demands good interaction between rehabilitees and professionals (Alanko et al, 2019; Cott, 2004; Wijma et al, 2017). According to the study of Morera-Balaguer et al. (2021) rehabilitees felt free to express their problems and fears if

the professional exhibited unconditional acceptance and was non-judgemental. In this study, the rehabilitees felt that it was essential that they were heard and respected regarding their goals, feelings and fears. It was essential that the rehabilitees and the professionals shared experiences working with the horses. This made natural dialogue possible and a key to successful rehabilitation processes (Knutti et al, 2020; O’Keeffe et al, 2016).

Our study supports the findings (Kern-Godal et al, 2016; Lemke, Rothwell, Newcomb and Swoboda, 2014; Pohl et al, 2018) that horses and the close relationships with them are important and essential for the rehabilitees. The findings of our study revealed that the horses became friends to many of the rehabilitees, and the most meaningful thing appeared to be that the rehabilitees experienced that the horses accepted them as they were. From the rehabilitees’ perspective the horses were genuine and understood and made them feel special. A study of Lemke, Rothwell, Newcomb and Swoboda (2014) showed that children in equine-facilitated rehabilitation focused especially on attractiveness and emotional connection with horses. Close relationships with horses has also been showed to increase the motivation and commitment to rehabilitation (Dunlop and Tsantefski, 2018).

The rehabilitees in this study described how they mirrored their feelings in their interaction with horses, professionals and stable community. It has been researched that the horses imitate the behaviour of the rehabilitees and thus gives the rehabilitees feedback (Kern-Godal et al, 2016). According to the results of this study using this feedback, the rehabilitees noticed that they could control and change their behaviour. Rehabilitees experienced that they practiced their interaction skills with the horses and obtained feedback and self-confidence in their interaction in daily life situations. Graham and Lindsey (2017) found that direct feedback from the horses improves self-awareness and positive interaction experiences and can increase initiative behaviour in their interactions

in daily life situations. Equine-facilitated rehabilitation provides also an opportunity for rehabilitees to form new relationships (Lemke, Rothwell, Newcomb and Swoboda, 2014).

Rehabilitees experienced that the interaction in equine-facilitated rehabilitation had an essential role in increasing feeling competent. Friendly and trusting relationships with the horses gave the rehabilitees courage to try tasks that they were unsure about and to outdo themselves. Similar findings were previously found with children in equine-facilitated therapy: children experienced improved moods, confidence, self-esteem, pride, independence and sense of achievement (Frank, McCloskey and Dole, 2011; Lemke, Rothwell, Newcomb and Swoboda, 2014). In our study, feeling competent was also supported by the stable community. Additionally, according to Kern-Godal, Brenna, Arnevik and Ravndal (2016), the horse stable was a place where rehabilitees had the opportunity to create a positive self-image.

The synthesis of meanings revealed three circles that form a rehabilitee's meaning perspective in equine-facilitated rehabilitation. The results of this study showed that in equine-facilitated rehabilitation, rehabilitees are taught to recognize their strengths and development targets in order to define their goals in rehabilitation. Martin et al. (2020) found it important that rehabilitees see their situations and possibilities in new ways and become interested in changing their situations to meet their goals. The purpose of interaction in therapy partnership is to help rehabilitees understand whether their previous assumptions of themselves are disturbing or promoting their development (Piiirainen, 2006). New experiences, for example, in rehabilitation, are new possibilities to create new assumptions and disengage from the old ones. Learning in rehabilitation isn't only self-reflection (Piiirainen, 2006). Interactions with the professionals, horses and stable community help the rehabilitees to become aware of the skills that might have been unknown for the rehabilitee.

Active agency means that one builds one's life by choices and actions in different circumstances (Karhula, Veijola and Ylisassi, 2016). In order to be active agents, rehabilitees need to be able to have open dialogue with professionals so that they have a mutual understanding where active agency is targeted. In our study, rehabilitees experienced that the shared experience and activities with horses and the natural dialogue related to that helped the rehabilitees understand that they can change their situation and be active agents in their rehabilitation processes. Natural dialogue, trust and feelings of security activate the rehabilitees, and it is possible to build an equal alliance between the rehabilitees and the professionals (Piirainen, 2006). The feeling of being competent, that rehabilitees obtained from the positive experiences in horse activities, also supported active agency. Self-confidence helps to believe that it is possible to reach individual life goals or goals related to rehabilitation. Children with disabilities participating in occupational therapy have experienced equine-facilitated rehabilitation as a context, which promoted their capacities and strengths and provided opportunities for a broad range of learning experiences as active agents (Martin et al, 2020). In addition, being able to participate in the goal setting has a positive impact on rehabilitees' engagement in the rehabilitation process and forms better outcomes of participation and occupational performance (Alanko et al, 2019; Knutti et al, 2020)

The results of this study showed that the rehabilitees felt they were confronted as ordinary and equal persons and not like patients marked by disability or illness. (Kern-Godal et al. (2016) and Kern-Godal, Brenna, Arnevik and Ravndal (2016) obtained similar findings in their phenomenological studies. From the interaction perspective, those who perceive persons with disabilities to be independent, autonomous individuals with the capabilities for full participation in society will be more likely to adopt an approach based on mutual participation and shared decision making (Cott, 2004). According to the results

of our study, an accepting and trusting atmosphere and appreciation were important elements in feeling empowerment in the rehabilitation process. In our study, empowerment occurred while working together and sharing successful moments with others. Feedback from the horses and stable community increased rehabilitees' feelings of being competent and self-confidence. In particular, interaction with horses was essential to the rehabilitees' feeling of empowerment in equine-facilitated rehabilitation, as also found by Anaby et al. (2021); Borgi et al. (2016); Frank, McCloskey and Dole (2011); Kern-Godal et al. (2016).

Interaction in equine-facilitated rehabilitation has meanings that reflect the rehabilitees' daily living. Our study results support the findings of Martin et al. (2020) that equine-facilitated rehabilitation provides increased opportunities for rehabilitees to view themselves in more positive ways and will also increase social participation outside rehabilitation. Especially in children and youth rehabilitation, more of the focus should be on participation, which means changing environments, creating participatory opportunities and experiences, and fostering abilities to support living a desired life (Anaby et al, 2021). While updating the systemic, ecological model for rehabilitation counselling, Hershenson (2020) found new elements such as learning and environment that should be considered in rehabilitation processes. In addition, understanding these elements would be important to incorporate in basic education of rehabilitation professions.

### **Strengths and Limitations**

The strength of our study is that it clarified a holistic comprehension of meanings of interaction from rehabilitees perspective in equine-facilitated rehabilitation. Another strength is that we used the systematic meaning analysis of Spiegelberg's method that provided validity to the results, and the analysis was performed by a team of researchers with varied experience in conducting phenomenological studies. In our study, the

interviewed rehabilitees were both adults and children with different types of backgrounds. The results are unique for this sample, but the diverse group of rehabilitees improves the validity of the results. The challenge in a phenomenological study is how the researchers measured the individual immediate experiences. This demands that the examined individuals can express themselves and their experiences (Spiegelberg, 1975). Verbalizing experiences can be challenging, especially for children, and an analyzed experience is always an interpretation of the original (Spiegelberg, 1978). A familiar interviewer could have made the children in particular speak more liberally.

In the meaning analysis, the researcher and team bracketed their previous knowledge of rehabilitation aside and described the experience of equine-facilitated rehabilitation as it presented itself to the participants. The research group discussed about the meaning units and meaning perspective and made the critical question according to the meaning analysis (Spiegelberg, 1978). It would be interesting to continue the study also from other perspectives or even make the discussion analysis of the interaction. Another interesting research topic could be differences between professionals. But it was not the focus of this study.

### **Conclusion**

Rehabilitees in equine-facilitated rehabilitation experienced that interaction empowers them and helps them to become active agents in their rehabilitation process. Rehabilitees felt that it was meaningful that they were supported by a rehabilitee-horse-professional partnership with natural dialogue, mutual understanding and acceptance that helps them to improve themselves in a safe environment. The role of interaction in the rehabilitation process seems to be essential and an important factor from rehabilitees perspective for achieving goals related to their daily lives. In particular, interaction is the language used to



translate unconsciousness to consciousness, to find the mutual understanding between the rehabilitees and the professionals and to support the empowerment of the rehabilitees. Understanding the interaction during equine-facilitated rehabilitation can help to improve and strengthen the importance of interaction in rehabilitation processes in general, including those conducted without support of horses.

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### **DISCLOSURE OF INTERESTS**

The authors report no conflict of interest

### **AUTHORS' CONTRIBUTIONS**

All authors substantially contributed to the concept and design of the work. Acquisition of data EA. Analysis and interpretation of the results MM, AP and EA. Writing and editing of the manuscript MM, SH, AP and EA. All authors substantively revised the manuscript. All authors have read and approved the final manuscript.

## REFERENCES

- AHA. 2018. American Hippotherapy Association, Inc. Terminology Guidelines.
- Alanko T, Karhula M, Kröger T, Piirainen A, Nikander R. 2019. Rehabilitees perspective on goal setting in rehabilitation – a phenomenological approach. *Disabil Rehabil.* 41(19). <https://doi.org/10.1080/09638288.2018.1463398>
- Anaby D, Khetani M, Piskur B, van der Holst M, Bedell G, Schakel F, de Kloet A, Simeonsson R, Imms C. 2021. Towards a paradigm shift in pediatric rehabilitation: Accelerating the uptake of evidence on participation into routine clinical practice. *Disabil Rehabil.* <https://doi.org/10.1080/09638288.2021.1903102>
- Borgi M, Loliva D, Cerino S, Chiarotti F, Venerosi A, Bramini M, Nonnis E, Marcelli M, Vinti C, de Santis C, et al. 2016. Effectiveness of a Standardized Equine-Assisted Therapy Program for Children with Autism Spectrum Disorder. *J Autism Dev Disord.* 46(1). <https://doi.org/10.1007/s10803-015-2530-6>
- Brinkmann Svend. 2013. *Understanding Qualitative Research : Qualitative Interviewing.*
- Cott CA. 2004. Client-centered rehabilitation: Client perspectives. *Disabil Rehabil.* 26(24). <https://doi.org/10.1080/09638280400000237>
- Dunlop K, Tsantefski M. 2018. A space of safety: Children’s experience of equine-assisted group therapy. *Child Fam Soc Work.* 23(1). <https://doi.org/10.1111/cfs.12378>
- Frank A, McCloskey S, Dole RL. 2011. Effect of hippotherapy on perceived self-competence and participation in a child with cerebral palsy. *Pediatric Physical Therapy.* 23(3). <https://doi.org/10.1097/PEP.0b013e318227caac>
- Graham LB, Lindsey A. 2017. Horses Helping Children Grow. *Journal of Instructional Pedagogies.* 19(143).
- Hall AM, Ferreira PH, Maher CG, Latimer J, Ferreira ML. 2010. The influence of the therapist-patient relationship on treatment outcome in physical rehabilitation: A systematic review. *Phys Ther.* 90(8). <https://doi.org/10.2522/ptj.20090245>
- Hershenson DB. 2020. Updating the Systemic, Ecological Model for Rehabilitation Counseling. *Rehabil Couns Bull.* 63(2). <https://doi.org/10.1177/0034355219864657>
- Johansen SG, Arfwedson Wang CE, Binder PE. 2016. Facilitating change in a client’s dysfunctional behavioural pattern with horse-aided psychotherapy. A case study. *Couns Psychother Res.* 16(3). <https://doi.org/10.1002/capr.12078>

Karhula M, Veijola A, Ylisassi H. 2016. Tavoitteiden asettamisen käytäntö. [Goal setting practice.]. In: Autti-Rämö I, Salminen A-L, Rajavaara M, Ylinen A, editors. Kuntoutuminen. 1.s. Helsinki: Duodecim; p. 225–238.

Kern-Godal A, Brenna Ida Halvorsen, Arnevik EA, Ravndal E. 2016. More than just a break from treatment: How substance use disorder patients experience the stable environment in horse-assisted therapy. *Subst Abuse*. 10. <https://doi.org/10.4137/SART.S40475>

Kern-Godal A, Brenna Ida H., Kogstad N, Arnevik EA, Ravndal E. 2016. Contribution of the patient-horse relationship to substance use disorder treatment: Patients' experiences. *Int J Qual Stud Health Well-being*. 11. <https://doi.org/10.3402/qhw.v11.31636>

Knutti K, Björklund Carlstedt A, Clasen R, Green D. 2020. Impacts of goal setting on engagement and rehabilitation outcomes following acquired brain injury: a systematic review of reviews. *Disabil Rehabil* [Internet]. [accessed 2021 Jun 22]. <https://doi.org/10.1080/09638288.2020.1846796>

Laine P, Laitinen A, Mäki-Tuuri S, Raento Pauliina. 2015. Equine-assisted therapy and activities in Finland: development and challenges [IN FINNISH].

Lemke D, Rothwell E, Newcomb TM, Swoboda KJ. 2014. Perceptions of equine-assisted activities and therapies by parents and children with spinal muscular atrophy. *Pediatric Physical Therapy*. 26(2). <https://doi.org/10.1097/PEP.000000000000027>

Maribo T, Jensen CM, Madsen LS, Handberg C. 2020. Experiences with and perspectives on goal setting in spinal cord injury rehabilitation: a systematic review of qualitative studies. *Spinal Cord* [Internet]. [accessed 2021 Jun 22] 58(9):949–958. <https://doi.org/10.1038/s41393-020-0485-8>

Martin RA, Graham FP, Levack WMM, Taylor WJ, Surgenor LJ. 2020. Exploring how therapeutic horse riding improves health outcomes using a realist framework. *British Journal of Occupational Therapy*. 83(2). <https://doi.org/10.1177/0308022619865496>

McLeod J. 2009. An introduction to counselling. 6th edition: Open University Press.

Morera-Balaguer J, Botella-Rico JM, Catalán-Matamoros D, Martínez-Segura OR, Leal-Clavel M, Rodríguez-Nogueira Ó. 2021. Patients' experience regarding therapeutic person-centered relationships in physiotherapy services: A qualitative study. *Physiother Theory Pract*. 37(1):17–27. <https://doi.org/10.1080/09593985.2019.1603258>

O'Keeffe M, Cullinane P, Hurley J, Leahy I, Bunzli S, O'Sullivan PB, O'Sullivan K. 2016. What influences patient-therapist interactions in musculoskeletal physical therapy? Qualitative systematic review and meta-synthesis. *Phys Ther*. 96(5). <https://doi.org/10.2522/ptj.20150240>

Piirainen A. 2006. Asiakkaan ja asiantuntijan pedagoginen suhde. Fenomenologinen tutkimus fysioterapiatilanteista asiakkaiden ja fysioterapeuttien kokemana [Pedagogical relationship among client and expert. A phenomenological study of physiotherapy situations as clients and physiotherapists experience it.] [Internet]. [place unknown]; [accessed 2021 Jun 16]. <https://www.researchgate.net/publication/47931323>

Pohl P, Carlsson G, Käll LB, Nilsson M, Blomstrand C. 2018. A qualitative exploration of post-acute stroke participants' experiences of a multimodal intervention incorporating horseback riding. PLoS One. 13(9). <https://doi.org/10.1371/journal.pone.0203933>

Spiegelberg H. 1975. Doing Phenomenology: Essays on and in Phenomenology [Internet]. [accessed 2021 Jun 16]. <https://philpapers.org/rec/SPIDPE>

Spiegelberg H. 1978. The phenomenological movement a historical introduction. In: The essentials of the phenomenological method. The Hague: Martinus Nijhoff; p. 655–698.

Stergiou A, Tzoufi M, Ntzani E, Varvarousis D, Beris A, Ploumis A. 2017. Therapeutic Effects of Horseback Riding Interventions: A Systematic Review and Meta-analysis. Am J Phys Med Rehabil. 96(10):717–725. <https://doi.org/10.1097/PHM.0000000000000726>

Trenholm S, Jensen A. 2008. Interpersonal communication. 7th edition. New York: Oxford University Press.

Wijma AJ, Bletterman AN, Clark JR, Vervoort SCJM, Beetsma A, Keizer D, Nijs J, van Wilgen CP. 2017. Patient-centeredness in physiotherapy: What does it entail? A systematic review of qualitative studies. Physiother Theory Pract [Internet]. [accessed 2021 Jun 22] 33(11):825–840. <https://doi.org/10.1080/09593985.2017.1357151>

Wood W, Alm K, Benjamin J, Thomas L, Anderson D, Pohl L, Kane M. 2021. Optimal Terminology for Services in the United States That Incorporate Horses to Benefit People: A Consensus Document. Journal of Alternative and Complementary Medicine. 27(1). <https://doi.org/10.1089/acm.2020.0415>

World Health Organization. 2021. Rehabilitation. <https://www.who.int/news-room/fact-sheets/detail/rehabilitation>.

Yorke J, Adams C, Coady N. 2008. Therapeutic value of equine - human bonding in recovery from trauma. Anthrozoos. 21(1):17–30. <https://doi.org/10.2752/089279308X274038>

## TABLES

Table 1. Characteristics of the rehabilitees (n=10) in the equine-facilitated rehabilitation.

	Equine facilitated therapy	Social pedagogical equine-assisted activity
Age	Children n=4 Adult n=3	Children n=2 Adult n=1
Gender	Women n=5 Men n=2	Women n=2 Men n=1
Diagnoses/ background reasons for rehabilitation need	Autism spectrum disorders Attention deficit disorders Behavioral disorders Progressive central nervous system disorders Chronic pain Childhood developmental disorder Depression Epilepsy Fear symptoms Weakness in balance and muscle tone	Attention deficit disorders Challenging family situations Depression
Duration of equine assisted rehabilitation	6 months – 6 years	1 – 6 months

## FIGURES

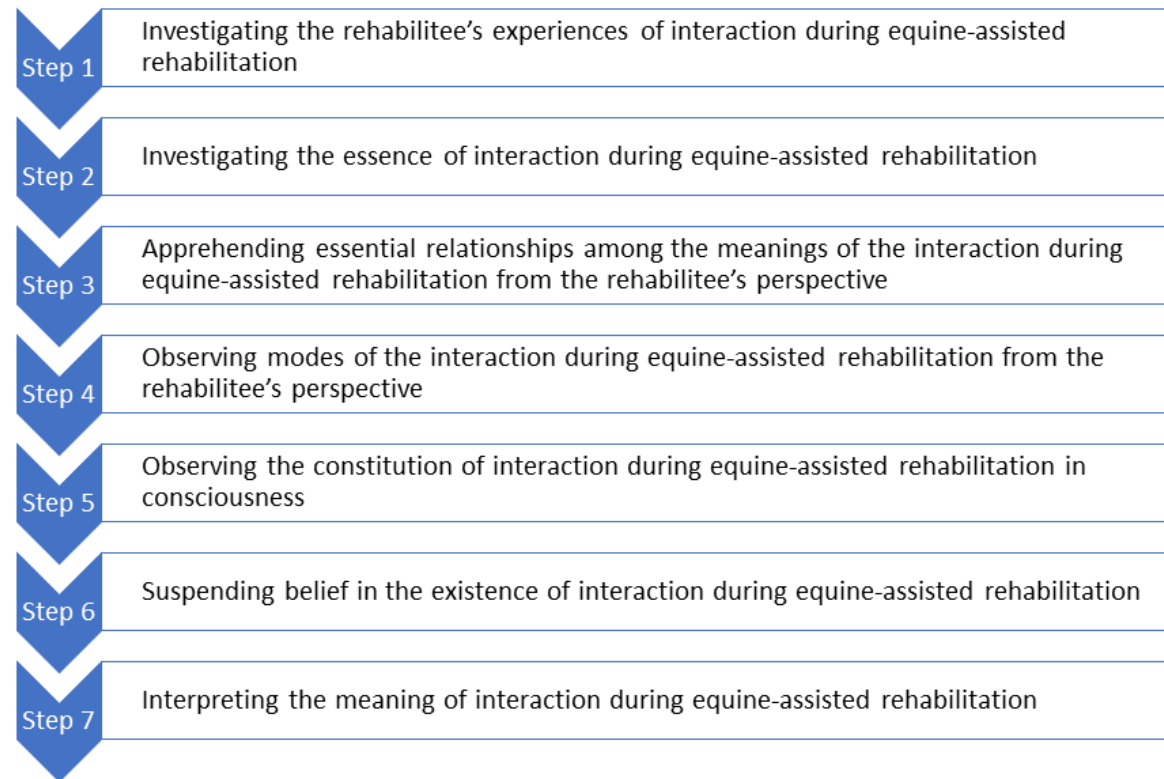


Figure 1. Spiegelberg's seven-phase phenomenological meaning analysis

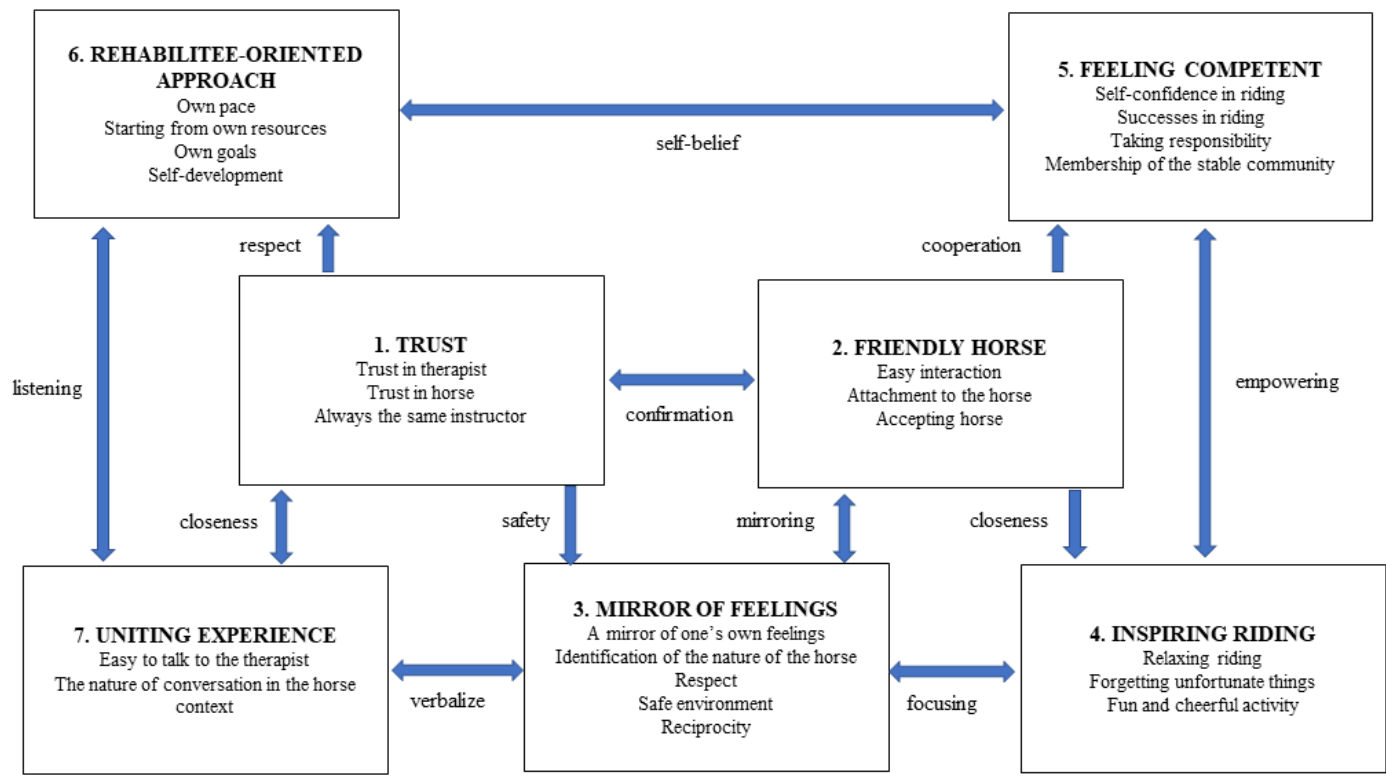


Figure 2. Meaning network of the interaction during equine-facilitated rehabilitation

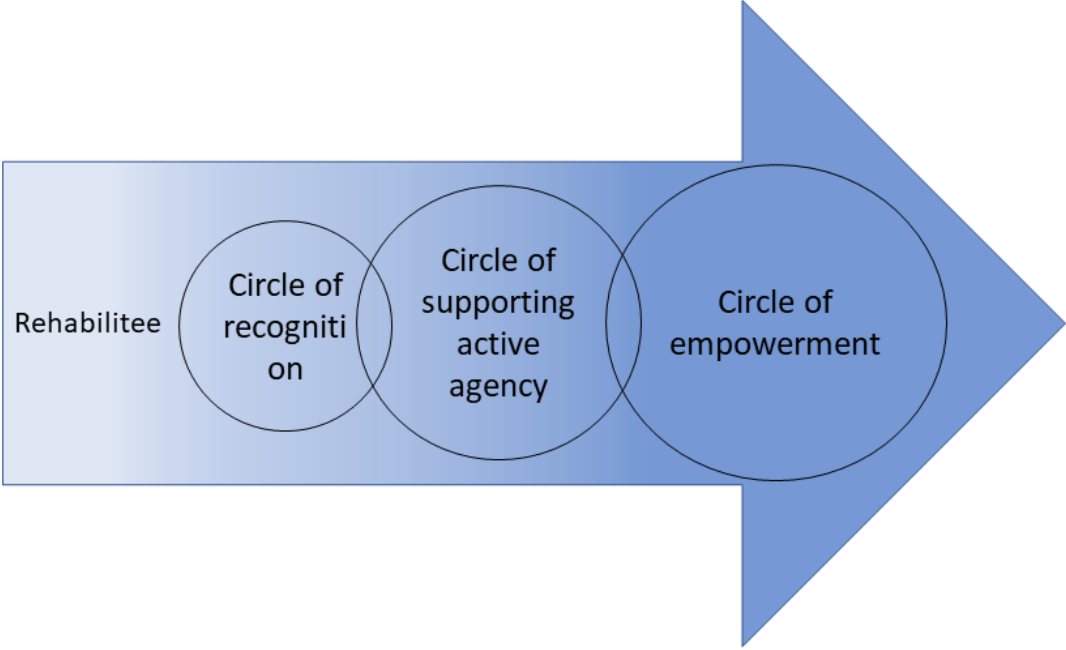


Figure 3. Circles of interaction during equine-facilitated rehabilitation from the rehabilitees' perspective