Music therapy as a means for increased bonding and attachment between mother and infant

- A qualitative literature review exploring how music therapy, or the use of music could promote bonding and attachment between mothers with postpartum depression and their infants

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Abstract

This master thesis explores how music therapy could support the development of bonding and attachment between mother and infant when the mother has postpartum depression. Research has shown that postpartum depression can have a negative impact on the way the mother interacts with her infant. Research on music therapy with this client group is not well documented and it is a field in development. In this study it was conducted a qualitative literature review where research on music therapy, postpartum depression and attachment was analyzed. The results from this literature analysis show that the mothers experienced an emotional change, because singing together with others could enable them to *feel good*, *feel accomplished* and *feel part of a group*, which enabled them to *find and see their resources* and *bond* with their infant. Based on music therapy and attachment theories it is argued that when the mother experienced these positive feelings several times with her infant, the two of them were able to have a more positive and playful interaction. This ultimately helped mother to feel empowered and the dyad could form a stronger relationship. It is therefore concluded that the creative act of singing in music therapy could support and promote bonding and attachment between mothers with PPD and their infants.

Keywords

Music therapy, postpartum depression, mother-infant bonding, attachment, social support, resource-oriented music therapy, communicative musicality, circle of security

Sammendrag

Denne masteroppgaven undersøker hvordan musikkterapi kan støtte utviklingen av bånd og tilknytning mellom mor og spedbarn når mor har fødselsdepresjon. Forskning har vist at fødselsdepresjon kan ha en negativ innvirkning på interaksjonen mellom mor og spedbarn. Forskning på musikkterapi med denne klientgruppen er ikke veldokumentert og er et felt i utvikling. I denne studien ble det gjennomført en kvalitativ litteraturgjennomgang der forskning på musikkterapi, fødselsdepresjon og tilknytning ble analysert. Resultatene fra denne litteraturanalysen viser at mødrene opplevde en følelsesmessig forandring, fordi det å synge med andre gjorde at de kunne *føle seg bra*, *føle mestringsfølelse* og *føle at de var del av en gruppe*. Dette gjorde dem i stand til å *se og finne sine ressurser* og føle et *bånd* til babyen sin. På bakgrunn av teorier om musikkterapi og tilknytning blir det argumentert for at når mor opplevde disse positive følelsene sammen med barnet sitt flere ganger, fikk de et mer positivt og lekende samspill. Dette gjorde at mor kunne føle seg styrket og dyaden kunne danne et sterkere forhold. Det konkluderes derfor med at bruken av sang i musikkterapi kan støtte og fremme bånd og tilknytning mellom mødre med fødselsdepresjon og deres spedbarn.

Nøkkelord

Musikkterapi, fødselsdepresjon, mor-spedbarn bånd, tilknytning, sosial støtte, ressurs-orientert musikkterapi, kommunikativ musikalitet, trygghetssirkelen

Forord:

Endelig har tiden kommet for at jeg skal levere min masteroppgave i musikkterapi. Dette markerer at min tid som student er omme og jeg gleder meg til å begynne i arbeidslivet som musikkterapeut!

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TABLE OF CONTENT

1. INTRODUCTION

Motivation for the master project

When you see an infant and its mother communicating together, it is almost as if that interaction is music. The quality of their timbre, rhythm, and turn taking, both non-verbal and verbal, has a sort of song quality to it and a "call and response" between the two. I think it is fascinating how this form of communication between the dyad, seems to appear in an instinctive way and how they attune themselves to each other through verbal sounds, mimic and eye contact.

There is already quite a lot of research that states or suggests that the communication in the mother-child relationship has a musical quality to it (Malloch & Trevarthen, 2009). The child observes their mother and learns to regulate itself and its surrounding world through this communication (Perkins, Yorke, & Fancourt, 2018, p. 55). The dyad creates a bond, and they learn to know each other. This is how attachment can occur (Ainsworth et al. 1978). But what happens when the new mother isolates herself and have feelings of carelessness and of feeling empty? In what way is the interaction between the mother and infant affected, when the mother has postpartum depression?

This is the focus of my master thesis. I want to write about the use of music therapy and music, with women with postpartum depression and their young children/infants and look at how music therapy possibly can be facilitated to help increase bonding and attachment between the dyad. In this paper I will mostly look at the mother-infant relationship as the mother often is the most important caregiver in the beginning of life. It will also focus on the importance of social support when the mother has postpartum depression. At the start of my inquiry of searching for relevant literature to analyse, I wanted to have a family-centered focus, however it was difficult to find relevant music therapy research that had this focus.

Relevant research on the topic of music therapy, postnatal depression and attachment will be the source of my data collection. It is therefore a theoretical paper, utilizing a method of qualitative document analysis, where I will code the data material and look at relevant themes of how music therapy might constitute the promotion of attachment between the infant and

mother. In regard to the literature and the themes that I will highlight as important, the use of relevant theory will substantiate those thematic results. I have chosen theoretical perspectives that, in my opinion, could contribute in understanding what the needs of the mothers with PPD and their infants are. These are; *Communicative Musicality*, *Resource-oriented Music Therapy* and *Circle of Security.*

Research on the use of music therapy with women with PPD does exist, but there is still not enough research and documentation in this field (Oldfield & Bunce, 2001). I therefore want to closer examine the relevant research that exists on the topic, using a form of thematic analysis (TA). I will address research from articles and book chapters that shed light on the topic and form codes from the texts that will form general themes which will be the findings to be discussed in chapter 5 of my research. By examining what the research articles say about how music (therapy) can promote the therapeutic means of change in the mother-infant relationship, I am hoping my research can further affirm what warrants an increased bond and attachment pattern in the mother-infant relationship.

Abbreviations:

PPD- Postpartum depression. PND- Postnatal depression. MTst- Music therapist. ID-singing- Infant-directed singing. MBU- Mother-baby unit. TA- Thematic analysis

Research question

Based on the hypothesis that music (therapy) could have an important role in supporting the bond and attachment between mothers with PPD and their infants, my research question is;

> *How can music (therapy) help to promote the quality of bonding and attachment between women with postpartum depression and their infants?*

My hypothesis is therefore that;
Music therapy and/or other musical interactions could support the development of a healthier bonding and attachment between the mother and infant. Levinge (2011, s. 49) says that the goal of the therapeutic work with mothers with PPD and their infants is to help prevent/treat such difficult established relationships, by exploring new ways in relating to each other. As we shall see later in the thesis, it is important to provide alternative treatment forms for this

group (Folkehelseinstituttet, 2017)and therapy methods that highlight a focus on social support. I will therefore emphasize research in the thematic analysis that use or talks about music (therapy) in group formats, where several dyads of parents (usually mothers) and infants come together as a unit, more so than individual sessions with mother and infant. To meet other mothers/people that are in the same life situation could be very important for the dyad, and it could possibly facilitate for a better and stronger attachment in the mother-infant relationship. These are questions that I will explore further in my thesis project.

Central terms in research question

I will here give some definitions of central terms used in the research question. Some terms will be clarified elsewhere in the thesis.

Music therapy

Music therapy is a term that can be defined in many ways, because it incorporates different facets about music, health, individuals, communities and so on. As Bruscia (2014, p. 5) notes, "fundamental differences in philosophies about music, therapy, health, illness, and even life are quite evident". The way I have approached music therapy in this thesis, bases itself on a humanistic tradition. Within this tradition in music therapy, it is focused on knowledge about how music can have an impact on our feelings and emotions in relation to our historical and cultural context (Ruud & Trondalen, 2008, p. 18). A humanistic perspective also focuses on resources and to promote the sense of accomplishment in people (Ruud, & Trondalen, 2008). A music therapist that work within this approach may want to highlight, more so, the sense of respect for individuals and their differences, by trying to see and highlight "the whole" person, of mind, body and spirit, often in relation to others (Ruud, 1980). When a music therapist work in relation to, and together with women with PPD and their infants, it seems highly appropriate to emphasize these humanistic notions, in order to help the mother, see her resources and potentials of motherhood.

In the literature analysed, the process of how music and/or communication was used, somewhat changed from session to session. This was in order to accommodate "where" the dyads were in their journeys of exploring and attuning to each other. It is therefore a *reflexive process* where music and communication are used in different ways, in the here and now.

Through the use of music, relationships were formed both between the mother, infant, music (therapist) and the other dyads. And it was these musical experiences that could function as *impetus for change.*

I have therefore chosen to use Bruscia´s (2014, p. 36) definition on music therapy as it comprehends something about the process of music therapy, that I found to be important in my findings from the analysis.

> *Music therapy is a reflexive process wherein the therapist helps the client to optimize the client´s health, using various facets of music experience and the relationships formed through them as the impetus for change. As defined here, music therapy is the professional practice component of the discipline, which informs and is informed by theory and research.* (Bruscia, 2014, p. 36)

Mother-infant bonding and attachment

In this thesis it is important to define what bonding and attachment between a mother and her infant could mean. There is some debate of what the difference could be and many professionals and non-professionals use the terms conversely (Benoit, 2004). This interchangeable use of the terms is also seen in the literature that I have analysis, where the authors do not always define or differentiate what they mean when using the words bonding and attachment. When writing about the concepts of bonding and attachment in this thesis, I therefore use them in this intertwined way. It could be argued that I should have a distinct differentiation between the terms throughout the thesis, but as noted this was mostly not seen from the analysed literature. Perhaps because the way the mothers could feel bonded with their infant, later enabled the dyads to be able to form a stronger attachment.

As a concept bonding was developed by Klaus and Kennell (1976) who suggested that parent-infant bonding was dependent on the skin-to-skin contact between the parent and infant, which they stated as a critical and sensitive period. They suggested that extended physical contact between the mother and infant could enable a stronger relationship between them later, noting that how the mother initially felt towards her infant, was related to how she felt about the infant later in their relationship (Klaus & Kennell, 1976). There was some critique and controversy to this notion, and it was therefore often discredited. However, the contributions it gives on how a mother feels about her infant in the postpartum period is of importance (Taylor, Atkins, Kumar, Adams, & Glover, 2005). How the mother feels about

her infant, is then the essence of what bonding means and this is different from attachment, which includes the way the infant behaves towards its mother (Taylor et al., 2005).

The developmental psychologist Mary Ainsworth defined attachment to be an affectional tie that a person or animal forms between herself and another individual: a tie that connects them together and that continues over time (Ainsworth & Bell, 1970). "The behavioural hallmark of attachment is seeking to gain and to maintain a certain degree of proximity to the object of attachment, which ranges from close physical contact under some circumstances to interaction or communication across some distance under other circumstances" (Ainsworth & Bell, 1970). In the infant, such behaviour can be seen in the way he/she seeks contact "… such as approaching, following, and clinging, and signalling behaviours such as smiling, crying and calling." (Ainsworth & Bell, 1970). The new-born/young infant show similar behaviours, but without the adequate abilities to discriminate who they are directing their behaviour at. Ainsworth and Bell (1970, p. 51) call this proximity-promoting behaviours, which "indicate a genetic bias toward becoming attached…" because these behaviours can change, depending on how the infant is stimulated. The relation between these early behaviours and the ongoing learning process in the mother-infant interaction, help the infant to organize his behaviour so that he clearly can direct the behaviour towards his mother. Ainsworth and Bell (1970, p. 51) state that "…the infant may be described as having become attached to her."

When the mother starts to feel bonded to her infant, this will have an impact on how the infant can "find himself". This implies that the child that is seen by his mother will find himself, but a child that is not seen by his mother will only find his mother- he will not develop a clear sense of self in the world, Winnicott referred in (Hart & Schwartz, 2009, p. 113). This is also closely linked to Stern´s notion that a child needs to be seen/viewed through someone else, so that his individuality/psyche can be formed and established, (Stern referred in Hart & Schwartz, 2009, p. 113). This indicates that if the mother does not "see" her infant or feel a strong bond for him, the shaping of the infant´s self and identity would not form itself in a healthy way. Their relationship becomes difficult and the following section leads on to what this might imply when a mother has PPD and how this could impact the infant and the dyad.

Postpartum depression and its impact on the infant:

Postpartum depression

According to the Norwegian Institute of Public Health, postpartum depression occurs in 3000-9000 women in Norway each year and in a varying degree (Folkehelseinstituttet, 2017). But it is assumed that this number could be higher, due to the fact that there is a high number of women that have symptoms of PPD but do not get any form of evaluation for it. Since postpartum depression has a yearly occurrence of 9 % (Folkehelseinstituttet, 2017) it is a social issue that needs more research and generally more focus in society. Just in the recent year there have been a number of newspaper articles in Norway about PPD (Clausen, 2019) in addition to national and international tv-documentaries about postpartum depression: *A Mother on the Edge* (Bourque, 2019). Something that is stressed in the news-paper articles and documentaries, is that PPD needs to be more discussed in society and especially that the mothers-to-be needs to get information about it from their midwives and in general from health employees at the women's health clinics.

The Norwegian Institute of Health (Folkehelseinstituttet) say that the postnatal period is traditionally grouped into three categories: maternity blues, postpartum depression and postpartum psychosis. Maternity blues is an emotional state where the new mother is easily moved and cries. It is quite normal and occurs for 50-80% of first time mothers (Folkehelseinstituttet, 2017). Postpartum psychosis is a serious mental state that occurs shortly after birth and can be seen in that the person is manic, depressed or a combination of both where the mental state is both "high" and "low" (Di Florio, Smith, & Jones, 2013, p. 145). Postpartum depression is a form of depression that occurs after birth, but one third of women get symptoms during pregnancy. The state can occur in varying degrees from a light to a more severe depression. To diagnose this emotional state, it must meet the criteria of the International classification of diseases, ICD-10 which is the diagnostic system of WHO (World Health Organization, 1999). The treatment for postpartum depression includes medical treatment, individual psychotherapy and strengthening of the persons social network (Clark, Tluczek, & Brown, 2008, p. 516). According to Clark et al. (2008, p. 517) there are several relationship-focused studies on women with postpartum depression showing positive results in increasing the quality of the mother-child interaction.

When the new mother isolates herself and difficult feelings appear, it is important that she (and other family members) is offered a space where she/they can experience cheerful activities together with other people in similar life situations and stages of life. According to Glavin and Leahy-Warren (2013) international and national documents states that social support is necessary for the mother´s and infant´s wellbeing and that this support needs to come from both the family and healthcare systems around them. In addition to conventional treatment for postpartum depression, alternative forms of treatment is also very important, because pregnant and nursing women cannot, or in very little degree, receive mood stabilizing medicines (Folkehelseinstituttet, 2017). In the research of Leahy-Warren, McCarthy and Corcoran (2012) they examine the relationship between PPD, social support and maternal self-efficacy, and they also stress the need for further research on examining the relationship between these variables. They found a significant relation between functional social support and postnatal depression.

The impact of postpartum depression on the dyad´s and infant's development and well-being

With a new-born infant, normal day-to-day routines of nursing and care for the infant might feel overwhelming and oppressing for the new mother, which in turn could keep her from being able to show empathy for her infant (Levinge, 2011, p. 47). The new mother will experience many complex feelings and it could be a very strenuous and vulnerable time. The mother can experience fantasies and desires of e.g. not wanting her infant to wake up. This, Levinge (2011, p. 47) says are disturbing and frightening feelings that are difficult for the mother to process and handle and will have an impact on how the mother relates to her infant.

Postnatal depression has been associated with a lesser mother-infant bond, and even moderate and hard to detect depressive symptoms in a mother has been found to have a compelling impact on maternal bonding if symptoms appeared within the first four months of the infants life (Moehler, 2006, p. 273). When a woman has PPD, she can have a tendency to show less interest in and have less interaction with her infant, and it can be difficult for the dyad to interact, to tune in on each other and form a close bond (Levinge, 2011). This can further result in an insecure attachment style which could have a lifelong effect on the individuals (infants) ability to cope with hardship and also on enjoying life (Gerhardt, 2004). But, at the same time, the mother can feel a strong bond with her infant and a sense of motherhood, but

then still isolate herself from her surrounding world, feeling that everything is hopeless (Levinge, 2011, p. 48). Therefore, according to Folkehelseinstituttet (2017) PPD does not differ from other types of depression, but it gets its name because it occurs during or after labour. According to Gerhardt (2004) children growing up with depressed parents are about six times more likely to experience depression themselves.

The infant's attachment and development

From the first moment of a child's life it communicates and seeks contact with its caregivers. The most important elements here are eye contact and imitation (Hart & Schwartz, 2009, p. 69) From combined research in neurobiology and attachment theories we today know that the early experiences of being with others and receiving care from others is what shapes the neural connections that our mind develops from (Siegel, 2012). That is why a good and close interaction with the caregiver is extremely important for the child to have a healthy development. The psychoanalyst Donald Winnicott has even said that "There is no such thing as a baby. ...if you show me a baby you certainly show me also someone caring for the baby..." (Winnicott, 1952, p. 99). By this he meant that the development of the child is fully dependent on the quality of the care it receives. He also states that for a child to have a natural development, it is dependent on the way the mother attunes herself to the child in a "good enough" way. The most important form of attunement is one that is in contact with what the child feels and what the child does (Winnicott, 1952, p. 99).

For an infant to have a natural development, it must learn to express itself and regulate itself in interactions with its parents, siblings and other people (Ashman & Dawson, 2002, p. 41). If there are disturbances in these interactions, the child develops what Main and Solomon (1990) call disorganized infant attachment. This means that the child shows conflicting, disoriented or anxious behaviour toward its parents (Granqvist et al., 2017; Main & Solomon, 1990).The term disorganized infant attachment come from further development of Mary Ainsworth's work on attachment theory. Ainsworth et al. (1978) and her co-workers examined children's attachment patters in what they called "The Strange Situation". In collaboration with other researchers, Ainsworth tested young children's behaviour by observing the children as he/she explored an unknown room with toys. The child's behaviour was then registered based on how it acted against its caretaker after being separated in two short periods. From the research on "Strange situation" Ainsworth and her co-workers invented the term "secure attachment"

(Ainsworth et al, 1978). “Secure attachment” has two aspects; firstly, it refers to the notion that the child has a basic belief that its caregivers are responding and comforting when the child is scared or stressed. The second aspect of “secure attachment” is that the child relies on its caregiver to be a secure base when exploring the surroundings. This means that the child in its exploration and play expects support by its caregiver, and not disturbance (Ainsworth et al. 1978). Still, not every child shows the same level of confidence. Some children experience that their caregivers constantly have a stressed approach toward them, which may lead to what Ainsworth calls “insecure-avoidant” attachment patters (Ainsworth et al. 1978). Here the child does not show the same attention to information related to attachment because the child experience that interaction with its parents may be negative (Main & Solomon, 1990).

In the case of postpartum depression such inaccessible behaviour from mother to child, may lead to an insecure attachment style between them, which according to Campbell et.al (2004) will have a lifelong consequence on the child’s joy of life and on how the child handles resistance. Levinge (2011, p. 47) continues by saying that “…humans learn not just from the other, but also through the other”. So, the way the mother holds her baby will have an impact on what the infant internalizes about himself, through his mother. From this, one can draw clear parallels to what Winnicott says (1952, s. 99) about a child’s development and that it is fully dependant on the quality of the care it receives and that the one; development, cannot be without the other; care.

What has been prevalent in the literature referred to above is that the child’s experience and development as an individual is only possible through interaction and relation with its caregivers. Research used in the thematic analysis will be literature that focus on this interaction and relation between mother and child.

2. THEORY

This project explores ways that music (therapy) could support the new mother-infant relationship through the analysis of theoretical perspectives that, in my opinion, could contribute to understanding what the needs of mothers with PPD and their infants are, and how these needs could be supported through music (therapy). The theory *Communicative Musicality* could contribute to understanding why music could be seen as a tool for communication and also the other way, how communication could be seen as music. The perspective *Resource-oriented Music Therapy* can show how music (therapy) could support the mother-infant to see and find their resources and potential in order to strengthen them. And the intervention built on attachment theory, *Circle of Security* is used to see how an infant´s attachment structures are dependent on how near/present his caregiver is. In the discussion chapter I will also use *Circle of Security* in a parallel way, seeing how the music (therapist) could function as a music "mother" or "music grandmother" and the women´s (mothers) to support the real mothers need for care.

Communicative Musicality

When the mother with PPD communicates with her infant, as shown earlier, there can be elements in her depressive state that makes it more difficult for the dyad to interact in a healthy and meaningful way. But in order to understand a mother-infant´s way of communicating, I see it as important to use theory that evaluates some components of how this communication develops from the beginning of ordinary (here meaning non-depressed) infant-mother life.

In communicating with one another, humans use other means than only direct words. To understand one another and to have interactive relations, there are also several gestures that we utilize. These are e.g. the use of different vocal sounds, eye contact, moving the body and so forth. From birth and onwards this way of communicating changes and develops in the course of one's life. Malloch and Trevarthen, (2009) mean that for humans to be able to develop these communication abilities, there are predisposed structures in the infant that enable him/her to be susceptible to such communications, and that these abilities are even developed before birth. These abilities are also what makes cultural learning possible, through interacting with each other. According to Mazokopaki & Kugiumutzakis, (2009, p. 187)

movement of dancing, playing and rhythm from the mother is shared with the infant several months before the infant can understand words, and this thrills the infant's interest, making her content and drives her to act and develop.

Malloch and Trevarthen´s (2009) theory, communicative musicality derives from an increased amount of interest in, and research on non-verbal interaction that began to evolve four decades ago. Within psychology and development research, a broader interest was taken in theorizing why humans so quickly could adjust themselves to feel empathy for other people's emotions and needs, synchronizing themselves in a sophisticated, subtle and unconscious manner of rhythmical exchange. Malloch and Trevarthen (2009) determine that humans are able to do such adjustments, due to our predisposed abilities to use gestures and voice.

The important elements of the theory were first seen from analysing the mother and infant's way of communicating together. From this work Malloch et al. (2014, p. 11) stated that it proved that when the infant interacted with their mother or caregiver, he/she made gestures and vocal sounds that were inter-synchronized with that of their mother's gestures. Furthermore, the infant was particularly sensitive to the non-verbal gestures and utterances from mother. The way that the caregiver speak to their infant is also different than how two adults speak to one another. With the infant, their timbre is higher/lighter and of a more gliding tone. The caregiver repeats their voicings and sounds in a clearer way than with other adults, and this is because the infant has a higher need of a communication that is musical.

> Communicative musicality is based on the theory of how human vitality acts, regulates itself, forms intimate relationships and grows in friendship, and also how it defends itself when the physical or social environment is threatened, and how it can be undermined by illness. (Trevarthen, 2008, p. 37)

The word «communicative» refers to different dynamic aspects like how emotions, motives and interest are thought to be what all human communication bases itself on. It is called "musicality" in order to highlight the quality in the nonverbal communication (Malloch & Trevarthen, 2014, p. 213).

In relation to Malloch and Trevarthen´s work with the mother-infant interaction, three parameters have been formed (2009, p.8). These are *pulse, quality* and *narrative.* The "pulse" attributes to two people or more coordinating their expressions through time. These

expressions are seen through vocal sounds and gestures, and by this they can make opinions and assumptions about what is going to happen and when that something should happen. The "quality" says something about the shape that the affective expression has, and how it develops itself over time. An example could be how the mother-infant dyad and music (therapist) alter their sounds, timbre and volume in order to get to know each other. When the dimensions *pulse* and *quality* are seen in relation to each other, they shape the third-*"narrative"*. The "narrative" is the "stories" that are "music-like" which is needed in order to display one´s emotional state of mind. According to Malloch and Trevarthen (2009) this is needed if the music is to be used in a therapeutic way.

Music therapy and Communicative Musicality

The model of communicative musicality has been used in music therapy research and work for over two decades and Malloch and Trevarthen (2000) actually described it as a foundation for a theory of music therapy. Because this model accentuates humans´ underlying brain mechanisms, it has been utilized in claiming why music therapy could be beneficial (Malloch & Trevarthen, 2009. p. 4). By way of examining physiological components like sleep, breath, and level of emotion, it can give notion to how a person feels, which in turn will affect those around him/her. According to Stern (1999) humans have the ability to sense what other people desire and what they feel, within their own bodies, and they become "moved" by it. "Most humans, whether adults or children distinguish four named emotions that move our bodies differently – happiness, sadness, anger and fear – and these same emotions can easily be conveyed as distinct by the dynamics and tonality of music with considerable confidence" (Malloch, Trevarthen, 2009, p. 122). However, Malloch & Trevarthen (2009, p 122) refers to Stern who state that these emotional foundations are just that, foundations, as musical movement encompass an array of `vitality affects´ that relates to feelings of the body's movement in itself and in the world.

Protomusicality

There has been an evolving interest in, and research on human´s psychobiological predispositions and culturally learned abilities, as I have shown in relation to Stern (1999) and Mallloch and Trevarthen (2009). According to the anthropologist Blacking (1973, p. 7), all humans from birth are musical and he sees it as a specific trait of man, comparing it to language and possibly religion Because, as Blacking states, "there is so much music in the

world" (1973, p. 7) music could therefore be seen as an integration of cognitive processes seen in culture and the human body and, therefore he stresses the connections between music, society and culture.

In Dissanayake´s (2001) work on behavioural biology (ethology) she proposes that music's behaviour has developed from protomusical elements that are first developed in the mother-infant interaction. "These evolved patters of interaction had survival value, she argues, in creating and sustaining an emotional bond between ancestral human mothers and their – compared to other animals – immature infants." (Dissanayake, 2001, p. 165). With reference to Malloch and Trevarthen´s research on mother-infant interaction, Dissanayake (2001) introduces an ethological definition on music, looking at protomusicality from an ethological perspective:

> The capacity to "artify" and/or respond to the unification by others of various protomusical components, including concurrent vocal, visual and kinesic elements, whose effects encourage participation and positively affect the participant´s sense of well-being. (Dissanayake, 2001, p. 164)

Because the mother-infant interaction consists of ritual-like elements of exaggerating, simplifying, elaborating and repeating, she sees protomusicality as the basis for shaping/manipulating later adult rituals (Dissanayake, 2001). In relation to this behavioural biology work of Dissanayake (2001) Stige (2002) suggest one possible objection to communicative musicality as a term, in that it is not distinct enough in defining the term "music". Stige relates this to e.g. how the mother-infant communication could be different to that of "…the elaborated patterns cultivated in music…" (2002, p. 90). Stige then says that Dissanayake (2001) "…is able to describe continuity and connection between mother-infant interaction and cultivated forms of music. To a larger degree than Trevarthen and Malloch (2000) she is able to distinguish between these." (Stige, 2002, p.90)

"Protomusicality may serve as the biological basis for the rituals and cultures of music that have been developed, and therefore deserves careful attention" Stige notes that protomusicality deserves recognition as it could be seen as a biological foundation for the development of cultures (2002, p. 90-91).

Community music therapy and communicative musicality

In their chapter in the book *Communicative musicality* Pavlicevic and Ansdell (2009) take into consideration a community-based music therapy perspective, stating the need to see the theory communicative musicality in relation to a broader social and cultural level. It is noted that this is based on undeveloped ideas by Malloch, Trevarthen and other scholars, and that it is needed, due to the increasing focus on community music therapy and its more sociocultural perspective on music and health (2009, p. 359). For Pavlicevic and Ansdell, protomusicality (they use the term core musicality) brings a "necessary bot not sufficient, theoretical platform" (2009, p. 358). They further state that several music therapists initial use of Malloch and Trevarthen´s work often diminishes the music in the music therapy to "`…just preverbal protomusic´" (2009, p. 359). There are clear similarities to Pavlicevic and Ansdell´s (2009) notion on protomusicality to Stige´s critique, where he states that, "No person moves directly from protomusicality to musicking. Musicking, based on human protomusicality involves appropriation of music as culture" (2003, p. 173). Trevarthen and Malloch´s (2000) work on communicative musicality somewhat encompass, as they say "musical companionship", but as Pavlicevic and Ansdell note, Trevarthen and Malloch´s theorization mostly remains on a dyadic level and Pavlicevic and Ansdell therefore ask the question "what of the ensemble dance?" (2009, p. 360).

Pavlicevic and Ansdell suggest theorizing musical and social development by linking "…cultural learning (musicianship) and direct social participation (musicking). We call this further function of music `collaborative musicking´" (2009, p. 358). Musical experience and social experience are what generate musicianship and musicking. They therefore propose a model were protomusicality (core musicality) naturally becomes communicative, using an example where they note, "… as the dyad takes in elements of musical culture (e.g., in mother´s vocalization and nursery songs)– communication begins to service the development of musicianship (the expression of musicality in and as culture)." (Pavlicevic & Ansdell, 2009, p. 364). From this first form of communication, one goes from an "I" to a "we" (first in the dyadic- caregiver-infant relationship) and it is here that "true musicking becomes possible" (Pavlicevic & Ansdell, 2009, p. 364). Going from this, they suggest that ongoing functions of the music/sociality relationship becomes not only communicative but also collaborative, calling communicative musicality a partner to what they call collaborative musicality as a sign of musical community (Pavlicevic & Ansdell, 2009, p. 364). In a music therapy context, where clients may have experienced deprivation and illness, they note that

this can impact this ideal model that they presented. The availability to communicative or collaborative musical functions, afforded to the person/s may be lacking, and he/she may then need help in "…repairing communicative musicality through the cultivation of musical companionship" (Pavlicevic & Ansdell, 2009, p. 365). Likewise, they say, a person may also need help to cultivate (or re-cultivate) their use of collaborative musicking, so that they get the opportunity and "…access to their (musical) culture and community" (Pavlicevic & Ansdell, 2009, p. 365). This access to one's culture and community may be deprived of a mother and infant, when a woman has PPD. Both the factors of depression and (often) the new and unknown role of motherhood, could maybe result in the need for help in both the mother-infant communicative musicality and in their access to their community and culture. In chapter 5 I will discuss the themes from my literature review that focus on community and group parameters of music (therapy), in relation to this "access" and what this could mean for the dyad.

Resource-oriented music therapy

When working with mothers with postpartum depression in a music (therapy) setting, it is important that the music (therapist) emphasizes the mother's resources and her need to be seen and acknowledged as an individual, not just as a woman with a depression diagnosis, or signs of depression. As well as the mother, the infant also needs to be seen and acknowledged by the mother and the music (therapist). I therefore find it important to discuss this notion in accordance to a resource-oriented music therapy view.

A resource-oriented music therapy perspective is something that perhaps music therapists see as obvious and natural in their work with clients. However, in Rolvsjord (2010, p. 20) book on a resource-oriented music therapy, she notes that health systems in today's society and culture often have a view on the therapeutic field that is closely linked to an ideology of illnesses and to a traditional medical treatment view. But she states that there are several disciplines where there now begins to be an increasing interest in enlightening the patient´s resources and abilities. Also, the common notion amongst these disciplines is a strong critique on the traditional treatment techniques within psychiatry and psychology.

Rolvsjord (2010, p. 74) says that "resource-oriented music therapy involves the nurturing of strengths, resources, and potentials" and resources are something that not only persists to the individual's personal abilities, but just as much on the aspect to have access to something. It

entails something that a person has, like personal qualities and abilities, but also the person's access to social connections, how the society around the person is structured and through their culture. In relation to music therapy, to focus on the persons resources is just as much to focus on other aspects of the individual as it is to focus on their musical abilities (Rolvsjord, 2010, p. 75). In fact, when one´s best qualities and resources are highlighted and developed, it could be of therapeutic value in itself. This also needs to be understood in relation to sickness and problems. Therefore, one´s resources and abilities are not only important in regard to our ability to prevent illness and difficulty, but also in how we are capable of dealing with illness and hard times. Rolvsjord says that this notion bases itself on the Salutogenic health model and research on "resilience". The term "resilience" refer to an individual´s capacity to deal with hardship, but this approach has had a lot of critique, because when a person has a hard time dealing with difficulties, others could easily judge that persons for only having themselves to blame (Rolvsjord, 2010, p. 76).

Rolvsjord (2010) highlight and build on some theoretical perspectives as a framework for a resource-oriented music therapy perspective.

Salutogenic health model

Rolvsjord (2010, p. 31) refers to Antonovsky and his alternative approach to grasping the understanding of health- the salutogenic model, that relates to the potential of preventing illness and to stay healthy, more than it does to cure disease. This model arose as an alternative to the pathogenic view on health. The salutogenic model gives meaningful knowledge on how preventative measures can be taken in order to promote health and why people maintain a good health. From the prologue, *To Music´s Health* in the book *Musical Life Stories,* Ansdell referred in (Bonde, 2013), brings forth four principals on how we can understand the link between people-music and health. In the third- *Salutogenic principal*, he says that "music does not usually treat illness; it helps health" (2013, p. 8). Peoples use of music in everyday life is mainly considered health promoting, but where a biological model on health needs to consider a psycho-sociocultural model in order for balance, the use of music in a therapeutic way also needs to consider pathology and illness. "This is where music therapy as a profession and discipline comes in, as it trains people to think about people, music, health and illness together. But music's aim is always towards health." (2013, p. 8).

Positive psychology

To highlight the strong sides of a person in relation to therapy is strongly seen within positive psychology. Rolvsjord (2010, p. 53, 55) refer to one of the leading figures, Seligman who says that in order to activate a person's feelings of joy and happiness, their "signature strengths", that is, their strong sides that characterizes them, needs to be used and revealed. According to Rolvsjord, experiences of positive feelings, like joy, contentment, and interest, are vital in relation to health and empowerment (2010, p. 40-41). Engrossed within empowerment thinking, is the understanding that positive experiences could lead to feelings of empowerment. According to Fredrickson´s theory "Broaden and Build", referred in Rolvsjord (2020, p. 54-55), positive feelings are tied to a mindset that is flexible, but negative feelings makes us unable to have a more broadened mind. Positive emotions then enable us to see that we have a broader spectrum of possibilities. When we have new experiences of positive emotions, it triggers a spiralling effect, enabling us to seek and gain more positive experiences towards possibilities and to health (Frederickson, 2005). The positive emotions that one often receives when participating in musical interaction, could then be seen as vital in motivating us and enabling us to participate, making us better equipped to do the things we want in life (Rolvsjord, 2010, p. 55).

Because the individual lives in a context of society, this notion of doing the things you want to, and to be able to control and have access to resources, needs to be viewed in relation to the society and the political dimensions where he/she lives. In relation to this, the empowerment philosophy criticizes the traditional view on health, in particular the diagnostic systems ICD 10 (World Health Organization, 1999). These systems understand disease as something "wrong" in the individual, with little view on what could be the problem in regard to the interpersonal and societal structures around that person (Rolvsjord, 2010, p. 20, 39). Rolvsjord says that labelling illness and problems in such an individualized manner creates unfortunate power relations within health care. It is vital to be aware of the person's life circumstances and the society he/she lives in, in relation to empowerment, but that does not mean that the music therapist directly need to work on a societal level. However, it is important that cultural awareness and social engagement is part of the therapeutic work (Rolvsjord, 2010). In relation to music therapy, Rolvsjord (2010, p. 67) sees the political message of equality and justice, in that it helps promote accessibility to music and highlights a person's rights to co-decide in his/her treatment.

Therapeutic collaboration to promote health and music's health potential

In going from a therapeutic intervention to a therapeutic collaboration, Rolvsjord (2010, p. 77) says therapists need to view their role as equal to the client/s. If the client is going to feel in control of her/his own life, it requires that the relationship between them is to be based on equality, reciprocity and co-decision making, so that their collaboration can feel genuine and positive. However, equality does not exclude differences. In fact, differences among us is what infer us to talk about equality in the first place (Becker, referred in Rolvsjord, 2010, p. 78-79). The therapeutic relationship between client and therapist needs to be built on respect and be transparent and clear. Their collaboration therefore needs to involve decision-making on how to use music in the best way and also for what purpose. The therapeutic effect of this collaboration does not derive from the therapist's intervention, but rather on the possibilities, brought forth by their willingness to cooperate (Rolvsjord, 2010)

As mentioned previously, Ansdell (2013) claims that music always works/aim towards health. This idea is also enlightened/backed up by Ruud (1998) who stated that there is health potential and health resources in music. This way of thinking about music's health potential and resources is also seen in DeNora (2000) where she uses the terms "musical affordance" (the quality and potential of music) and "musical appropriations" (the way we use music) to explain how music could give meaning to humans. Music encompass some possibilities, but it is only through the active use of it, that it can be used in a meaningful way (DeNora, 2000). The goal "music for all" and that it is made available in an interactive manner is important here. For many, there are musical restrictions in society, where feelings of "not being good enough at it" is inhibiting them to participate in active music-making. "Therefore, it is important that music therapy could work as a role model in highlighting that the clients have "a power to" and "a right to" music" (Rolvsjord, 2010). As Stige (2002, p. 92) puts it;

> The unconventional – and sometimes quite unpretentious – character of music typically heard in music therapy sessions may even lead some to separate the sounds of music therapy from culture. … however, the descriptive or "anthropological" concept of culture is essential when studying music.

One could interpret this to mean that all musical forms and shapes in society should be seen as having equal value in a culture, both on an individual as well as on a society level.

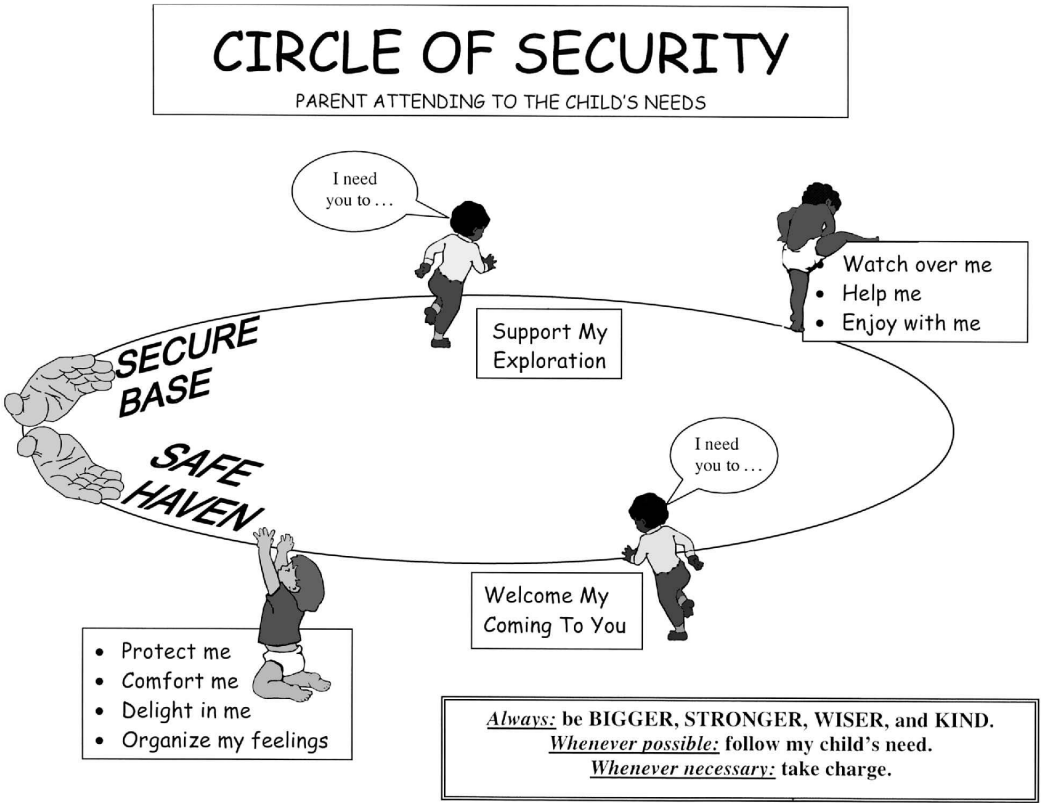
Circle of Security

As I have shown earlier the mother with PPD and her infant´s relationship could be one of a lesser mother-infant bond than usual, and this could even result in lifelong consequences for the infant in his/her sense of feeling joy in life and on how he/she handles resistance (Campbell et al., 2004; Gerhardt, 2004; Levinge, 2011; Moehler, 2006). I therefore want to utilize an intervention, built on attachment theory that in a clear way presents how attachment structures in a caregiver-infants relationship unfolds itself and how attachment is dependent on how near/present the caregiver is to the infant.

Circle of Security is an intervention protocol that goes over 20 weeks, used as a group-based, parent education tool. It is designed so that the attachment patterns in vulnerable/high-risk caregiver-child dyads can shift their developmental journey to a more appropriate/positive one (Marvin, Cooper, Hoffman, & Powell, 2002, p. 107). This protocol Marvin et al., say is based on several ideas from theory and research on child development and particularly early parent-child interaction (2002, p. 108). Therefore the base construction of COS, Marvin et al. (2002) say, is taken from Ainsworth´s concept of a Secure Base and a Haven of Safety (Ainsworth et al., 1978). The goal of developing COS was "…to present these ideas to the parents in a `user-friendly´, common-sense fashion that would be cognitively and emotionally accessible to them, and that would also guide the intervention." (Marvin et al., 2002, p. 109). A key component of COS is that the parents can learn that smooth interactions between caregiver and child consist of disruptions and the need of "repair". But that it is the "… ability to repair a disruption that is the essence of a secure attachment, not the lack of disruptions." (Marvin et al., 2002, p. 109). In order to present COS in a user-friendly way, Marvin et al. (2002) developed a graphic figure of both of Ainsworth´s et al. (1978) concepts of a secure base and a haven of safety. The graphic is regularly displayed in the location the therapy takes place. In addition, the caregiver receives a copy of the figure on a refrigerator magnet so that it is noticeable at home (Marvin et al., 2002).

The graphic figure shows a circle where the upper half describe the child´s exploration system and his needs and tendency/impulse to go on exploring. Marvin et al. (2002) say that this exploration can happen if the child is expecting that his attachment figure is available/near when needed- "I need you". The upper right of the circle represents the needs of the child to have the attachment figure watch over him in his playing. If he needs protection or help in

affective or behavioural structuring from the caregiver, she is present and they can enjoy his activity together- “Watch over me, help me, enjoy with me”. In the bottom of the figure the child´s attachment system refers to his need for the attachment figure to “…easily welcome him “in” for protection, comfort, delight, and to organize his feelings and behaviour when they go beyond his own limits of self-organization.” (Marvin et al., 2002, pp. 109-110).- “Welcome my coming to you”. “Protect me, comfort me, delight in me, organize my feelings”.



Graphic of Circle of security by Marvin et al. (2002).

The graphic of this intervention will be used in the discussion chapter in order to highlight how a mother and infant structure their attachment so that the infant can feel secure. It will also be used to see how the mother and infants from the literature, perhaps developed their attachment structures through the music (therapy). As mentioned earlier I will also use the graphic from this intervention to compare it to the role of the music (therapist) as an attachment figure. In this way, at the beginning of the intervention, the music (therapist) could function as the mother/caregiver and the dyad could function as the ones in need of care.

3. METHODS

Methodology

In dealing with and researching a phenomenon, it is important to use some tools that can enlighten this phenomenon in a good and decent way. The research question has therefore functioned as a guide to what form of methodology and method that this thesis bases itself on.

My research question was: *How can music (therapy) help to promote the quality of bonding and attachment between women with postpartum depression and their infants?* In relation to this I have analysed relevant literature in an interpretive manner, in order to understand the phenomenon that is my research question. However, the goal has not been to conclude on "a truth, but rather to try to understand this phenomenon. I thus want to position my epistemological commitment within a hermeneutic way of thinking. One could understand hermeneutics as the doctrine/belief about interpreting texts. Through this interpretation, one can reach a deeper understanding of the phenomena, which could function as a ground for further interpretation. This is a process that traditionally has been understood as circular, where one has to see the parts in relation to the whole and the whole in relation to its parts (Thornquist, 2003, p. 142). Within this process, it is acknowledged that to understand is a fundamental trait of humans. This is something that Gadamer states by asserting that humans cannot separate themselves from their connection and relationship to language (Krogh, 2014).

In my method of analysing literature, the generating of codes enlightened and influenced me on how I understood the phenomenon from the literature as a whole and vice versa. Another step in this circular process was how relevant theory influenced my interpretation of the literature and my coding. In this way I had a circular process of moving back and forward between reading – interpreting – coding - building themes – thinking about codes and themes in relation to theory.

Restriction/ confinement of data material

I will focus on research that look at the postpartum period and on how singing, playing and listening to one another in both group settings and in therapist and dyad sessions could impact the mother´s depression and the relation between the mother and infant. The age limit of the infants will be from 0-2 years. In one case description from the literature, the child is four

years old and the mother struggle with PPD. I will limit the research utilized in the data collection to the use of music where both the music therapist or singing leader and the mother-infant participate in music-making. This means that research where the music was receptive, that is listened to on i.e. a cd-player, streamed or on other devices will not be analysed. There are several reasons for this. Some research done on receptive music therapy look at how music effects the mother only during birth and that does not take into account the social aspect and importance of making music together with therapists or mothers and families in similar situations.

When using the words music therapy throughout the thesis I will write the word therapy with parenthesis- "music (therapy)". Three of the seven articles utilized are not written by music therapists or the music intervention is not completed by a music therapist. These are, (Perkins et al., 2018; Puyvelde et al., 2014; Reilly, Turner, Taouk, & Austin, 2019). Thus, when I refer to several articles or refer to them as a whole, it includes research conducted by either music therapists or people of other professions who use music in a therapeutic way. Instead of writing music therapist or singing leader each time I refer to all the analysed literature, it will instead stand music (therapy).

I choose not to delineate where the research comes from geographically, as there are few examples of research on the subject and nothing in Norway that I have found on music therapy, PPD, bonding and attachment. The research used for analysis, mostly came from western European countries, and this will perhaps have an impact on my analysis, in that it will have a westernised view on the topic. The most important thing when searching for relevant material is then to use research that has been per reviewed and that comes from reliable databases and so on. In some of the article/book chapters it is not music therapists that lead the music intervention, but instead other types of researchers, e.g. psychologist that are also musicians. I have chosen to incorporate research on this, as the relevant literature sample would be too small for a compelling literature review. I will discuss the use of non-music therapy literature and what this may imply in chapter 5.

Identifying literature targeted for the analysis

The six steps of thematic analysis by Braun and Clarke (2006) does not implement the process of identifying literature for analysing. I will therefore write it initially, before the six

steps. The process of identifying relevant literature started out by identifying and searching for relevant keywords using different combinations in databases such as PsycINFO, Cochrane library, Google Scholar and ScienceDirect. In addition, I used the ancestry approach (using citations gathered from relevant research). Some of the keywords used where.; *music therapy, bonding, attachment, postpartum depression, postnatal depression, social support, intersubjectivity.* An example of combinations used are; music therapy AND postpartum depression AND attachment AND social support. I also used the University of Bergen´s online library with access to several databases and Journals with relevant material. Relevant research articles and book-chapters where found in some of these journals; *The Arts in Psychotherapy, Nordic Journal of Music Therapy, Music Therapy Perspectives, Infant Behaviour & Development, Infant Mental Health Journal.*

Method: thematic analysis

For analysing relevant research on the topic of postpartum depression, music therapy and attachment, I am utilizing a method that is a form of qualitative thematic analysis. I have chosen to use Braun and Clarke´s (2006) guidelines, *Using thematic analysis in psychology.* Braun and Clarke (2006, p. 79) view thematic analysis as a… "method for identifying, analysing and reporting patterns (themes) within data. It minimally organizes and describes your data set in (rich) detail.". It also seeks to interpret various aspects of the research topic (Braun & Clarke, 2006).

As "thematizing meaning" is something that is widely used in many areas of qualitative research, there has been debate about whether TA is defined as a specific approach of qualitative research like, for example, narrative analysis and grounded theory. Braun and Clarke, (2006, pp. 78-80) argue that TA should be considered a method in its own right and that a lot of analysis is thematic, but that it is either claimed as something else like Discourse analysis, Content analysis or not identified as a method at all.

TA is a flexible method that is not pinned to a particular theoretical or epistemological position. However, it is important that the researcher make their epistemological assumptions and other beliefs clear (Braun & Clarke, 2006). There are a number of decisions to actively think about when conducting TA (Braun & Clarke, 2006).

In the beginning of my inquiry I sought out to conduct an analysis with a more detailed deductive account of some aspects of the literature, rather than a rich inductive description of the overall texts. Braun and Clarke say that deductive TA is driven by the researcher´s interest in theory and analytic interest in some aspect of the data and also often driven by a research question (2006, p. 84). Throughout my analysing and coding-process however, the question/s of what I wanted to explore changed somewhat. First, I only wanted to examine how the music (therapy) had an impact on the mother-infant relation, but I found that in order to do so, it was important to examine whether the music (therapy) had an impact on how the mothers felt, which could indicate the levels of postpartum depression. It became clear that these two elements would affect each other. Therefore, I found it important to give a richer description of the articles/book chapters. I coded the literature in such a way that the themes I generated could be strongly linked to the articles/book chapters themselves. I would then say that I have had an inductive analytic approach on thematic analysis. Braun and Clarke (2006, p. 83) say that "Inductive analysis is therefore a process of coding the data without trying to fit it into a pre-existing coding frame, or the researcher's analytic preconceptions". However, as Braun and Clarke (2006, p. 84) state "…it is important to note,…that researchers cannot free themselves of their theoretical and epistemological commitments, and data are not coded in an epistemological vacuum." My analysis is influenced by other ways of thinking and by my experiences and training to be a music therapist. So, the foundations of how I think about the thesis´ topic is influenced by my epistemological commitments.

Procedure for thematic analysis

To be clear on the process of my inquiry and method used, I will use the headlines from the step-by-step guide of (Braun & Clarke, 2006) to showcase the reflexive process from the start of familiarizing myself with the data, then generating codes, to searching for themes within the codes with importance to my research question and then to the final analysis. As (Braun & Clarke, 2006, p. 86) state, "analysis involves a constant moving back and forward between entire data-set, the coded extracts of the data that you are analysing and the analysis of the data that you are producing". So even though I will use the steps as headings for clarification, it is important to state that I have gone from reading- coding- generating themes- reviewing themes- writing or reasoning on the analysis and then "back to start" on the process of reading or re-reading material.

Table 1 Phases of thematic analysis (Braun & Clarke, 2006, p. 87)

Phase	Description of the process
1. Familiarizing yourself with the data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2) generating a thematic `map´ of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

1. Familiarizing yourself with the data:

The process of familiarizing myself with the material started when I had found most of the literature that I wanted to use for my research. By printed them all out and reading and re-reading the literature, I begun to think about whether I saw any similarities recurring throughout the literature or any differences. By doing so I started to get an initial feel and ideas of whether there were any topics that I found important in relation to my research question.

2. Generating initial codes:

The process of starting to generate codes was most often done on the second time of reading the literature. Throughout my coding process, I have used the same method of coding interesting features by writing it in the margin of the printed article or book chapter. Often the codes I found important were longer sentences or even sections of writing. I therefore had to work on making the codes shorter in length, but still try to incorporate what these sentences or passages was talking about. This process went on for some time as I read, re-read and coded

the entire articles/book chapters in order to have a richer description of the literature. When I had generated codes in all the literature I used, I wrote the codes on my computer, making a document for every article/book chapter and their codes.

3. Searching for themes:

I started re-reading the codes and mixed them all in one document in order to actively think about grouping them together to form themes. I began to form some thoughts about the similarities and if I saw that e.g. a code addressed how music could increase the mother's feelings of wellbeing, I drew a line of a certain colour under that code. Going from here, I looked after codes that dealt with the same notion. If so, I proceeded with drawing a line with the same colour. I used this method on all the codes and eventually the different colours started to represent different themes. I then wrote the codes that dealt with similar subjects, "same colour", together to form nine initial themes.

4. Reviewing themes:

When I had grouped the codes into forming initial themes, I went back to my initial codes seen in the margin of the printed literature, to check that my codes actually could represent what the literature was talking about. In further processing of the codes/themes I saw that there were some similarities between two themes and I therefore grouped them together to form one theme.

5. Defining and naming themes:

I now had eight themes that analysed either how PPD had an impact on the way mother sung and interacted with infant, what role the music (therapist) and music needed to have in order support the dyad, how the dyads emotional state changed through the course of music (therapy) and how this change enabled the dyad to form a closer bond and attachment.

6. Producing the report:

I started to actively think about what extracts from my analysis that I would write about. When I had produced the analysis, I thereby used relevant theory to substantiate what the themes talked about in the discussion chapter. This enabled me to produce a paper that related my results to relevant theory and thereby synthesizing a further meaning on the research question of how music (therapy) could help to promote the quality of bonding and attachment between women with postpartum depression and their infants.

4. MUSIC THERAPY AND MUSIC WITH WOMEN WITH POSTPARTUM DEPRESSION AND THEIR INFANTS: RESULTS

In this chapter I want to present the findings of my thematic analysis inquiry from the literature found on music (therapy) group and individual dyad sessions with mothers with PPD and their infants. I here discuss how music therapy and the use of music had been used with mothers with PPD and their infants and also in what way the music (therapy) groups and dyads in therapy were affected by the interventions. By doing so I will produce a somewhat comprehensive synthesis focusing on different facets in the music (therapy).

My literature review includes seven articles/book chapters, that all deal with the use of music (therapy) to analyse how and if the music (therapy) had an impact on the way a mother and infant interact with each other, and a few articles on whether the level of depression did change. In some of the music (therapy) literature the sessions are individually based- dyad and music (therapist) while most of them use a group format of several dyads and music (therapist) There are several facets in the use of the words music (therapy). These are e.g. the songs that are utilized, the group dynamics with several dyads (in some data-items), the dynamics between music therapist or singing leader and mother-infant and the dynamics between the dyad- mother and infant.

Table 3. Summary of literature

Researchers	Title	Manuscript type	Music (therapy) form	Research on music therapy	Focus on PPD	Instrument used to measure PPD	Time and duration of therapy
de´ lEtoile, S., Leider, C. (2011)	Acoustic parametres of infant-directed singing in mothers with depressive symptoms	Journal article	Infant-directed singing	Yes	Yes	Edinburg Postnatal Depression Scale (EPDS) Infant Behavior Rating Scales- Revised (IBRS-R)	
de´ lEtoile, S (2012)	Responses to infant-directed singing in infants of mothers with depressive symptoms	Journal article	Infant-directed singing	Yes	Yes	Same participants as (de´ lEtoile, S. 2011)	
Oldfield, A., Bunce, L. (2001)	`Mummy can play too...´ Short-term music therapy with mothers and young children	Journal article		Yes	Yes, but also mothers who struggle to form relation with children.		2 hour weekly ses. Week 1-6 play ses. Week 7-12 also 30 min MT
Levinge, A. In Edwards J. (Ed) (2011)	´The first time ever I saw your face...: Music therapy for depressed mothers and their infants	Book chapter		Yes	Yes		
Van Puyvelde et al. (2014)	Shall we dance? Music as a point of enterance to maternal-infant intersubjectivity in a context of postnatal depression.	Journal article	BebéBabá Pentatonic and consonance songs. Same beginning and end song. Improvisation: spontanious vocals, clapping, mimics, so on.	No, but researchers are proffesional musicians and psychologists, not MT	Yes		30 min. mother-infant group in morning. 90 min. mother only in afternoon. (This research: focus on morning ses.)
Perkins, R. et al. (2018)	How group singing facilitated recovery from the symptoms of postnatal depression: a comparative qualitative study.	Journal article	Use of "global" songs: facilitate to meet cultural diversty of mothers.	No, but researchers are proffesors of music, psychobiology	Yes		
Reilly, N. et al. (2019)	´Singing with your baby´: an evaluation of group singing sessions for women admitted to a specialist mother-baby unit	Journal article	Gentle warm-up, shared singing-known songs, rounds and lullabies. No other instruments used.	No	Yes	12 Item Quick Scale (IQM) shortly before, after each ses. Visual Analouge Scale (VAS) shortly before, after each ses.	12 weeks, 1 hour weakly ses. First 20 min. Mothers only, infants join remaining 40 min.

Description of the included literature

In this literature review I have included one book chapter and one article describing and discussing the use of music therapy to help the mother-infant, within both group and case-descriptions (Levinge, 2011; Oldfield & Bunce, 2001). Two articles analysed digital recordings of individual mother-infant dyads and music therapist, where mother and therapist sung to infant. These two studies used the same participants (de l'Etoile, 2012; de l'Etoile & Leider, 2011). It is analysed one comparative qualitative study, where they use group singing together with dyads that are in recovery of PPD (Perkins et al., 2018). Lastly there are two studies that evaluate the use of group singing with mothers and infants at a mother-baby unit (Puyvelde et al., 2014; Reilly et al., 2019).

I first want to start to describe the book chapter and article that describe how music therapy could support mothers and infants in both case examples and group examples. Levinge (2011) starts the chapter by talking about a case-description of a four year old boy and his depressed mother, coming to music therapy with Levinge. The mother and boy have a difficult relationship and do not interact in a comfortable way. In the sessions it was worked on creating a space where mother and child could have a more successful relating through music. When the boy could communicate through the music, it in turn encouraged the mother to be more interactive with him, then "she (mother) herself was brought to life" (Levinge, 2011, p. 43). Another example was in a group MT for depressed mothers and their infants with a case where a mother perhaps felt that her infant had to look at her in order for them to be connected. In turn, this interfered with the infant, not giving him right time to process the relation. There is also another similar case-description from group setting. Levinge sees it as important that the therapist `holds´ instead of intervening with the dyad. The latter could be experienced as mirroring the same intrusive behaviour. In the case, the co-therapist instead sat next to the dyad, gently playing along (2011, p. 54).

[1]In Oldfield and Bunce (2001) they describe two short-term music therapy groups with young children and their mothers, where the aim was to help families that were experiencing difficult relations with their children. This was both in regard to PPD and also to mothers that

[1] In regard to Oldfield and Bunce (2001) I have only coded the first music therapy group because the second one did not have much information and it was noted that the work in this `Parenting Project´ group went on over a very short period.

needed support in relation with child, regardless of depression state. It is worth noting that in the article by Oldfield and Bunce (2001) they talk about music therapy with mothers and their toddlers, not infants. Oldfield and Bunce explain how the therapeutic intervention unfolded itself from start to end. In the beginning it is important to reassure the mothers that the group is for playing together, not performing. Using elements of spontaneous play, with structure from a music therapist this could bring up issues of control between parent and child. Using songs that engage the child, having them conduct could give them feelings of empowerment. Then using movement activity songs, to lastly have a clear ending with quiet relaxing mode. They also note that mothers and therapist need to review first session and discuss throughout the therapy intervention (Oldfield & Bunce, 2001).

There were two articles used in this literature review that instead of giving a music therapy intervention over a longer period, only had one short inquiry of singing with one dyad of mothers and infants at a time. Both these studies are drawn from the same intervention. In de l´Etoile and Leider, (2011) through analysing audio files of the intervention, they sought to evaluate mothers acoustics during ID-singing when mother had depressive symptoms. The aim was to examine if there was a relationship between depressive symptoms and those acoustics from mother when singing to infant. It is interesting to note that 12 of the 16 mothers in this study were first-time mothers. The findings suggest that the ID-singing of mothers with depressive symptoms could lack the type of sensitivity and emotional expressions that an infant need for affect regulation. In de l´Etoile (2012) she examined how PPD could have an impact on the infants responses to infant-directed singing from the mother and the music therapist. Findings suggested that ID-singings exaggerated communication nature, made it possible for the infants to get the stimuli they needed. She also concludes that interventions that employ ID-singing could help enhance maternal responses that the child needs.

Perkins et al. (2018) aim to enlighten how singing groups had an impact on mothers with PPD and their infants, through a comparative qualitative analysis of mother's experiences of singing groups as compared to playgroups. This study based itself on previous research from a three-armed RCT by Fancourt and Perkins (2018) that compared singing groups to playgroups and groups given usual care. 55% of the dyads from that study participated in this study´s focus group interviews. In this research it was important to emphasize the time in the therapy when music is active. DeNora and Ansdell (2014) argue that RCTs risk leaving "the

middle period"- that time when music is active, left in the dark. Therefore, the processes where music could have an effect often is made mysterious. By having focus group interviews with the mothers, some main featuring themes from the singing and play interventions were identified. A number of these themes are prevalent in many of the other articles/book chapters I have used.

Lastly there were two studies where the mother-infant dyad was offered singing and music group sessions, while staying at a mother-baby unit (MBU). In Puyvelde et al. (2014) they held a singing group comprised of four mothers with PPD and their infants. First 30 min. session in morning with infant, then 90 min. mother only in afternoon, but this study only focused on the mother-infant sessions. They conducted a video-analysis to explore maternal-infant intersubjectivity and how the singing sessions had an impact on it. After a five-week period of weekly sessions they found that maternal-infant intersubjectivity had increased. The dyads had more IS moments and longer duration than prior to intervention. They concluded that the singing groups offered a space that allowed the dyads to re-experience feelings of vitality, joyfulness and liveliness (Puyvelde et al., 2014). The study by Reilly et al. (2019) is clearly influenced by that of Puyvelde et al. (2014) where the singing group were in two parts. First with mothers only, then infants join the remaining part. In the group they focused on singing well-known songs and lullabies and it was found through analysis of mood and visual scales that immediately after first singing session the women felt much more relaxed, cheerful and clear-headed (Reilly et al. 2019).

Findings from thematic analysis

Important topics in the music (therapy) literature

Through my analysis there were a few topics that I saw reoccurring through the literature and that I thought of as important in relation to how the music (therapy) could support the mothers in finding new ways of relating with their child through the enjoyable activity of singing. And this could help them feel better about themselves and therefore also feel better in their relation to their infant. The themes stand in their order in a deliberate way, going from mapping how PPD impact singing therefore communication, the importance of music/singing and music (therapist), to how this helps the dyad in feeling better and lastly how this affected them and helped them to bond.

How PPD could affects mother´s singing and thereby affect the dyad´s interaction

In these studies, they used a form of singing called infant-directed singing. “Infant-directed singing is defined as the unique way in which mothers sing to their infants as part of caregiving.” (Trehub, 2000) Also it “pertains to the expressive and highly ritualized manner in which mothers sing to their infants as part of caregiving” (Trehub, 2000). de l´Etoile and Leider (2011, p. 248) also note that this form of singing, from mother to infant, could easily be recognized from its continuing and sustained us of vowels, slow tempo and a variation of frequency and amplitude/volume.

In l´Etoile and Leider (2011, p. 253) they expected to see an alteration in pitch and a lack of frequency in the singing, but instead found a relation between the level of depression reported from the mothers and the tempo of mothers singing. When having more depressive symptoms, the mother sang faster to their infant, interestingly found more so with male infants. This l´Etoile and Leider (2011, p. 253) explain referencing to Weinberg et al. who state that male infants “communicate their needs more explicitly and frequently then do girls, making male infants more demanding social partners”. They state that a slower tone of voice gives a more loving tone. In addition, a slower tempo of singing enables the mother to reflect and modify herself in order to get a more synched interaction with her infant. It is interesting to note that 12 of the 16 mothers in this study were first-time mothers and also 97 % first-time mothers in Perkins et al. (2018) In de l´Etoile (2012) the mother sang the song “Twinkle, twinkle little star” for 90 seconds, then the music therapist did the same, and in both instances the infant was placed in a chair for infant´s in front of the singer. It was found that the responses from infants were similar in both instances and the researcher interpreted this with that the infant was perhaps able to extract the stimuli he/she needed due to the ID-singings exaggerated communication nature (de l'Etoile, 2012). Another unexpected finding (de l´Etoile, Leider, 2011, p. 253) was that mothers with PPD symptoms tended to sing in one tonal-key- not shifting or modulating tonal key. They explain that occasional shifts of tonal key could be very effective to redirect infant’s attention.

The role of the music therapist or singing leader

An important role of the music therapist or leader is to guide mother in the preferable interaction style that the dyad needs, and encourage mothers with PPD to regularly sing to their infants (de l'Etoile, 2012). The guiding of the mother is derived from the intervention of interaction coaching; “an intervention that improves mother-infant interaction by enhancing

maternal sensitivity and contingent responsiveness" (Field, 1995). In relation to PPD it is linked to a style of interaction. An example is when a mother with PPD who shows an intrusive interaction behaviour with her infant, is encouraged to mimic her infant. This can help the intrusive mother to have a slower activity level and it also increases her sensitivity to the infant's behaviour. On the opposite side, mothers who show a withdrawn interaction style are encouraged to hold onto their infant's attention by staying active, to stimulate and to play games with them. The clinician can model the wanted behaviour to the mother, through ID-singing, imitating the infants present state, while the mother is observing (de l'Etoile, 2012, p. 363) I will discuss the use of interaction coaching and/or if it could be seen as a more pathological view in chapter 5.

When communicating with the mother and or parents, Oldfield and Bunce (2001, p. 32) stress that it is important to reassure mother/parents that the aim of the music making is to play together, rather than to `perform´. There can be a difficult balance between the resources that the music therapist has and the mother's feelings of self-efficacy. Levinge (2011, p. 50) says that it can be difficult for the therapist to stand back and only support, when the infant clearly need more stimulus than what he receives from his mother, but that this is required to create a space to work from. She further states that the therapist is to "hold", not intervene in the dyad's communication and that intervening could be experienced as mirroring the same previously-demonstrated intrusive behaviour from the mother (2011, p. 54).

In addition to former assessment by other professionals , the music therapist should also carry out an assessment of needs that include a family's history prior to the music (therapy) intervention (Levinge, 2011, p. 50). She sees this as an essential part of the mother-infant work that she provides and refers to the study of Fonagy, Steele and Steele that shows evidence of the association between "…the way in which a mother recalls her own childhood experience and the quality of the relationship existing between her and her child."

Through the relational dynamics between the two artists in the study of Puyvelde et al. (2014, p. 229) they tried to act as dyadic role models to encourage maternal-infant dynamics. An example of this was to have "…brief moments of voice and gesture games, mimicry, and pantomime between the two artists…" (Puyvelde et al., 2014, p. 229). This can could provide essential vitality affects of a mother-infant relationship (Stern, 1991c; Trevarthen, 2011; Winnicott, 1971). Puyvelde et al. (2014, p. 229) also made emphasis on that they focused on

potential dynamic group effects and therefore avoided verbal speech to try and create "..openings for vitality and companionship."

In both the research of de l´Etoile (2012) and Oldfield and Bunce (2001) they stated that it was important to make time for at-risk mothers and therapists or singing leaders, to reflect on the session just after it had ended each time. Oldfield and Bunce (2001) points out that in addition to this, the purpose of the singing group was also explained by the music therapist after the first session. In this review they also note that it is helpful to focus on one or to difficulties each time, e.g. of being controlling or aggressive behaviour from mother or being able to give more praise (Oldfield & Bunce, 2001). De l´Etoile (2012, p. 364) points out that a key factor for infant-directed singing to be a successful intervention, is that mothers and therapists discuss together their observations and receive feedback. Through this; "…mothers learn how to read and respond to infants´ cues, thereby promoting infant self-regulation." (de l'Etoile, 2012, p. 364).

The music therapy session enables the mother to interact with infant in more of a spontaneous and positive way, but it is only through reflection and discussion after, or by looking at a film of themselves from their sessions, that the mother can see that she is, at times able to appreciate and enjoy being with her infant. Through recognizing this, the mothers hope and confidence can raise, which then gives ground to find ways to strengthen and improve the dyads relationship (Oldfield & Bunce, 2001, p. 33).

The role of the music: singing and songs

In a music (therapy) setting it is naturally important to consider what type and form of music that is utilized, in order to work on the most desirable outcome or goal. In all the literature analysed, music was used in different ways to accommodate the mother-infant relationship, either together with a dyad and music (therapist) or music (therapist) and groups of women and infants. Most often they used lullabies that were familiar to the mothers. In Reilly et al. (2019, p. 126) it was seen that lullabies felt soothing for the infants, which was something that encouraged reflection among the mothers. Although, when the mothers came from different parts of the world, the music (therapist) used songs native to their different respective countries- seen in Perkins et al. (2018). In Puyvelde et al. (2014, p. 230) the music chosen by the singing leaders were based on consonance and pentatonic scales, in order to evoke early

interpersonal experiences of tonal and rhythmic movement. Jaffe et al. (2001) suggests that these early interpersonal experiences are the fundamental starting point for developing social conversation patterns later in life. “Music is by its own nature interactive. Therefore, in a therapeutic context it can provide a means by which a therapist can literally tune into the ‘here and now’ elements of a relationship” (Levinge, 2011, p. 52). In the therapeutic setting music can elaborate and amplify what is happening in the moment (Levinge, 2011, p. 55). Since communication through music is as Levinge says, naturally interactive, then music (therapy) has the potential to form a meaningful, therapeutic relationship between the client(s) and music therapist.

The group sessions acquire more structure than work with individual dyads and Levinge says that complex feelings needs to be contained. In her clinical work, structure is addressed by using pre-composed, familiar tunes (2011, p. 52). In the start of the different group sessions in the literature I have used, they often begun with the music (therapist) playing a calming and welcoming song for the dyads to listen to. In Oldfield & Bunce (2001, p. 32) they say that in the “mothers and toddler group” they played a `greeting song´ on guitar, singing live and saying “hello” to each individual, letting the dyads strum the guitar. This they say could even captivate the young infants in this group and that their fascination gives the insecure, young mother a justification to sing herself. Further in the sessions it was seen as important to focus on physical connection, and visual connection of that e.g. mother sings infant´s name while making eye contact (Levinge, 2011, p. 55). An emphasis was also made on rhythm and tempo in the group, which enables the mother to hold and handle her infant in a more sensitive way, which teaches the mother to time her responses to meet her infant´s expressive movements (2011, p. 52). According to de l´Etoile (2012, p. 363) the music therapist focusing on ID-singing would sing in different ways, depending on if the mother showed an intrusive or withdrawn interaction style. With intrusive interaction-style, she says that the clinician could model the infant’s present state, while the mother was observing. For a withdrawn interaction style, the therapist should hold the infant´s attention, by e.g. using a high pitched, loving tone of voice, which is something that most infants prefer.

The use of improvised music to encourage maternal-infant bonding was highlighted in some of the articles that I have used; (Levinge, 2011; Oldfield & Bunce, 2001; Puyvelde et al., 2014). Ruud (1998) sees the musical improvisation to be a process that is circular, where all the individuals involved are in a similar action, affecting one another´s contributions. Ruud

(1998) also sees improvised music as similar to the construction of one's social identity, which is similar to what Puyvelde et al.´ (2014) refers to from Jaffa et al. on the notion that tonal and rhythmic movement is fundamental in the devolvement of social identity.
In Puyvelde et al. study (2014, p. 230) improvised music was used to encourage delicate maternal-infant expressions, like e.g. infants vocal assertions, mimics, movement etc. Oldfield and Bunce (2001, p. 33) say that many musical activities or improvisations have a structured, non-verbal nature, which could be quite comforting and reassuring for families who have become fastened in struggles, and that fragile problems of control can be taken care of and readdressed.

In Oldfield and Bunce (2001, p. 30) they refer to an unpublished paper by Stern, presented at the 8th congress of music therapy, *The temporal structure of interactions between parents and infants: the earliest music?* where Stern found that "…the mother intuitively changed the rhythm of her responses to her infant after two or three strict imitations of her infant's sound." So first the echoing of the infant's sound gestures excited them, then the mother changes the vocal response, in order to keep infant interested. "In the same way, the skilled music therapist will often first imitate her clients' musical contributions but soon subtly introduce harmonic, melodic or rhythmic changes to maintain and intensify the quality of the improvised musical exchange." (Oldfield & Bunce, 2001, p. 30). Puyvelde et al. (2014, p. 230) also emphasize this, referring to Dissanayake which suggest that musical improvisation is quite similar to the mother-infant relationship.

Sense of feeling good

Throughout all seven articles/book chapters it was often repeated that the music group had an impact on the dyad that brought up a sense of feeling good. This was measured and reported from different depression evaluation instruments taken during and/or after the music intervention, through interviewing mothers and through the researcher's general evaluation. In the research of Perkins et al. (2018) music groups were compared to playgroups and it was found that both the singing group and playgroups elicited "feel good" emotions, but that only the singing group appeared to bring out a more functional emotional response of being a new mother: "…have time to reframe the self, to feel immersed in an activity beyond looking after the infant alone, to feel competent as a mother and to feel bonded with the infant" (2018, p. 10). It was especially uplifting in the context of new motherhood. "`No matter how bad the

night you've had, no matter how knackered you are, you've got to still just get out and go to the group. Because it just makes you feel better, don't you think?´ [Sing 1].´" (Perkins et al., 2018, p. 6). It is clear from this research that the activity of singing can bring something more meaningful to the mother and therefore also to the mother-infant relationship, than just normal play groups could, as I have shown in the theme "mothers embracing their resources through singing".

In the chapter of Levinge (2011, p. 54) that discuss the use of music therapy to help depresses mothers and their infant, the mothers in a music therapy group setting also appeared to feel more comfortable in their ability to express themselves musically in their interaction and intervention with their infants. "…By seeing her son play together with me (music therapist) in the music, she (mother) herself was brought to life" (2011, p. 42). Similar findings were also reported in Reilly et al. (2019, p. 124) stating that the mothers in the study in a mother-baby-unit (MBU), reported feeling much more relaxed, cheerful and clear-headed just after their first session.

Perhaps in relation to feeling good, the music (therapy) was often experienced as calming/relaxing, which perhaps ultimately amounted in them feeling good. It was seen in Perkins et al. (2018, p. 5) that the use of international music and the group dynamics in general felt authentic, which the mothers felt as natural and calming.

Sense of accomplishment

An aspect that was often seen in much of the literature used, was that the mothers reported feeling a sense of accomplishment, and it could be argued that the music (therapy) enabled them to have feelings of self-efficacy. Leahy-Warren, McCarthy & Corcoran (2012, p. 390) define maternal parental self-efficacy as a parents belief about their ability to have success in their parenting role. I want to suggest that these feelings of accomplishment were something that perhaps came through the initial "sense of feeling good" seen in the previous theme. In Oldfield and Bunce (2001) this could also be seen in the way some of the children behaved when they got to lead the music therapy group. Oldfield and Bunce say that this delighted the children, making them experience a sense of power, and the parents could also enjoy this, seeing a positive side of their child being in control. This ability of the child; to concentrate, listen, wait and share, was something that the parents often were surprised by (2001, p. 32).

To give the children and parents an opportunity to `Perform to others´ enabled their confidence to be boosted (Oldfield & Bunce, 2001, p. 33). It has to be noted that the children in these case-descriptions are young children and therefore able to take more control and to have awareness of themselves.

The research findings of Perkins et al. (2018) on singing´s impact on PPD, says something about the potential that it can have on the mothers feelings of self-worth. The singing sessions brought some positive feelings to the dyad through the music, which had an impact on how they interacted together. It was also seen in the research of Puyvelde et al. (2014, p. 229) that the mothers and infant were starting to be more autonomous in their way of interacting, by session 5, creating playful moments, which was seen in the dominance of intersubjectivity level 3.

The mothers in the study of Perkins et al. (2018) reported that they were more likely to use the new songs that they had learned to soothe their infant in the following week, compared to the prior week. It was therefore seen as a skill that was transferable to other situations, outside of singing group, like at home or in some challenging situation. One mother did also report that she was able to soothe her infant when they were in a stressful situation at a hospital (2018, p. 5). These new skills were seen as particularly rewarding as new mothers, as seen from a mother in one of the focus group interview of Perkins et al. (2018, p. 4); " ´I've found it very rewarding to have something to take away with me each week as well. Coming in to being a mum, and knowing a few songs, but not many, it's been really nice to learn songs´ [Sing 3]." Another mother said that motherhood was a new identity and that having songs and this group, added to her (and others) purpose (2018, p. 7). It was also seen that the groups brought opportunities for sharing tips and resources, that were helpful in their continuing experience of being mothers (Perkins et al., 2018, p. 7).

Sense of group belonging

In the first chapter it was highlighted the importance of social support as crucial for the new mother with postpartum depression and also that the mother and infant needed to receive this both from the family and healthcare systems (Glavin & Leahy-Warren, 2013; Leahy-Warren et al., 2012). It could be argued that a group format of music (therapy) could be overwhelming for the new mother with depression, and de lÉtoile (2012, p. 363) point out that one could begin with an approach involving only a mother and her infant and then gradually

move over to a group setting "…In which mothers support one another and further expand their musical repertoire."

In the context of a music (therapy) singing group, the mother and infant meet and interact with other mothers and infants that are also in similar life situations. In the research of Puyvelde et al. (2014) it was stated that, in the context of PPD, mutual and prolonged experiences of companionship may evoke feelings of self-efficacy (Trevarthen & Aitken, 2001). As a result of the music group in this study, the contributions of the "artists" (music leader) appeared to be more needed in the first session, compared to the fifth session. It also appeared that the mothers and infants required the dynamic flow of the group and the artists to reach the highest level of intersubjectivity- level 3 (dyad achieves an independent intersubjectivity moment) (2014, p. 229).

In the study of Perkins et al. (2018) it was stated that the singing activity provided a feeling of group belonging, where social cohesion became strengthened by the act of singing itself and that the space was a place where the mothers could share knowledge about motherhood (2018, pp. 7-8). " `You feel a part of a community and (…) it´s lovely´ " (2018, p. 7) It is interesting to explore the possibilities that singing can have on the mothers feelings and sense of self. In the study of Oldfield and Bunce (2001) where several case-studies (both group and dyad-only therapy) are described by the two music therapists, it was seen that singing created a group feeling, stating that the only other common activity in a children's nursery setting is `story time´, but here the teacher has a different role, acting as the leader, but when singing the children and adults are all ´equal´ (2001, p. 33).

It is interesting to note that the codes derived from this theme are mostly seen in only three of the seven articles/book chapters. Two of them are Perkins et al. (2018) and Puyvelde et al. (2014). Only one of the three is a music therapy article- that of Oldfield and Bunce (2001). There is also only one significant code on this theme from that article. This further confirm the vast need for more research on the relationship between social support, postpartum depression and singing in a music therapy context.

Mothers embracing their resources through singing

In several of the articles/book chapters, it was seen that the music (therapy) could help the mothers to see that they had many abilities and resources. The role of the music was seen as important in Reilly et al. (2019, p. 125) to be facilitated for the vulnerable mother's needs, making it a space for them and their musical preferences. At the start of each session in Reilly et al. study there also were a `mothers only´ time and the employees at the Mother Baby Unit (MBU) looked after the infants, stating that this could help reinforce the sense that it was a time for the women too, and help to bring their focus to the present (2019, p. 126).

The emphasis on the music being facilitated to meet the women's needs is also clearly stated as important in the music group in Perkins et al. (2018). It was a space where the mothers participated in an activity for themselves- a `me time´ (2018, p. 6). Below is a description from a mother in one of the focus group interviews from this research.

> `Everything is for the baby. You go to a class and it's always for the baby. Then you go out and meet for coffee with your friends and you talk about your babies. This [singing] is also good for the baby, but at the same time it's something for us as well´ [Sing 3]. (Perkins et al., 2018, p. 6)

As seen previously in the theme "Sense of feeling good", it appeared that only the singing groups and not the play groups gave a more functional emotional response based on the needs of new motherhood, and the mothers were able to feel immersed in an activity outside of normal baby care, which helped increase their confidence and the feelings of being more bonded with the infant (Perkins et al., 2018, p. 10). One of the aspects of why the mothers felt better, was perhaps due to the emphasis on that the music time was just as much about them as their infants-"…highlighting the mothers own need for care and nurture." (Perkins et al., 2018, p. 9).

One of the aspects of the music group being a time for the mothers, was how the music itself enabled some mothers to feel immersed in the music time, something that was promoted through the creative act of singing (Perkins et al., 2018, p. 10); "`…Here, I'm just being here singing, being present and not thinking about all that needs to be done…´[Sing 5]" (Perkins et al., 2018, p. 6) In this research the music felt engaging for the mothers in a sense, because it was music that spoke to them as individuals. The mothers came from different countries and this was highlighted in the music that they played together. An example were the use of

Indonesian songs, and singing songs from their native lands were seen as empowering and it perhaps brought some of their identity to show and share with the others (Perkins et al., 2018, pp. 3, 5). The utilizing of music that speak to the women as individuals, embarking on their identity and their resources is something that will be examined in the discussion chapter.

Singing´s impact on infants and mothers: Singing supports bonding

In much of the literature it was seen that singing in a group format or with a dyad and music therapist, could support the mother and infant in finding new ways of interacting together in a way that supported the bond between them. As seen previously in chapter 1, Winnicott describe that a child's development is solely dependent on the quality of care that it receives and stresses the importance of mothers attunement abilities to what the child feels and does (Winnicot, 1952, s. 99). When describing this theme, I will therefore not try to see the importance of what aspects of the singing intervention affects the mother and the baby as different but see the infant and mother as intertwined and as a whole- a dyad.

Levinge (2011, p. 43) describes that at the start of a music (therapy) intervention the music therapy could be used as a means to support a child´s ability to establish a larger repertory to express himself. This will first be together with the music therapist, and finally the goal is for the parent to offer such support. Here, the parents will be supported to take care of and attend to the child in a different way than before, being encouraged to give the child more rewarding and satisfying exchanges. It was also seen in Perkins et al. (2018) this notion that the music (therapist) could support the infant, when this would be more difficult for the mother: "´Coming to this made me feel like I was doing something that was really nurturing her while I felt like I was struggling to nurture her, so that really made a difference in that time´ [Sing 3]." (2018, p. 7)

Once the infant is born, the mothers vocal pitch brings the quality of her voice and mothers intention behind the expressions and the infant gradually learns to understand what those sounds mean (Perkins et al., 2018, p. 55). Therefore, one could say that how the mothers quality of vocal expressions unfolds itself through singing, will have an impact on the infant, and that the infant learns to regulate herself through those vocal gestures.

One of the aspects seen in Perkins et al. (2018, p. 5) was on the music leader´s ability of attuning to the infants, calming them down or livening them up, which was appreciated by the mothers. One mother stated that in another singing group she and her infant had attended sometimes felt like a sensory overload, but that it was different here and that the leader really payed attention (Perkins et al., 2018, p. 5). By being attentive about the infants' emotional state, it was perceived here that the singing leaders were able to attune to the children's needs as a group and also on individual levels. This was picked up by some mothers, which perhaps means that the mothers themselves would carry out some of the same attentive behaviour in the future. It is also noted in this study that the soothing element that the singing had, could help calm the infants, something that in turn helps the mothers to feel more competent (2018, p. 5). This will perhaps then work as a spiralling effect- when the mother feels more competent, she will perhaps ultimately be more competent in caring for the infant. This will naturally give a positive effect on the infant.

As seen in the theme "Sense of group belonging" the music (therapy) intervention was seen as a space where the adults and children were equal (Oldfield & Bunce, 2001, p. 33). In this sense, the infant's needs were attended to, because both the mothers and infants need of care and acknowledgment is seen to be equally important in the moment, through the singing. In the case descriptions of Levinge (2011) she talks about a mother and her infant in music therapy sessions together with herself, seeing how when she (MTst) played with the son, then mother "…was brought to life" (2011, p. 44). I see this as a very powerful description of what music therapy could bring to a therapeutic intervention in supporting a mother and infant´s bond. Levinge describes that as the sessions went on, a musical aliveness became more present, enabling the relationship between the dyad to blossom and that the music became a dialogue between the mother and the infant, enabling the infant to relate to mother, through his musical gestures.

In the study of Reilly et al. (2019, p. 126) on evaluating how the singing had an impact on dyad´s in an MBU setting, it was reported that 56% of the women felt closer to their infant and 48% agreed that the intervention made them more attentive to how their infant might feel. Beyond that, there was little reference to or elaboration on what it was about the music group that had warranted those findings. According to Perkins et al. (2018) it appears to them that singing could maybe provide one mechanism of "…supporting this bond through the shared interaction of singing vocalizations." (2018, p. 10). Some of the mothers in this study also

reported that they felt that the music group had helped the bond between themselves and infant; "´I have a good relation with him because I sing to him every day´[Sing 5]." (2018, p. 7).

In a case from a group intervention, Levinge (2011, p. 44) describes that the mother and infant found new ways of relating and of being together, through the music intervention. The notion that music therapy can help the parents to interact with their child in a more positive and spontaneous way is also seen in Oldfield and Bunce (2001, p. 33). In Puyvelde et al. (2014, p. 229) it was found that the duration of intersubjectivity moments increased and the duration of the moments were also longer than in the beginning of the intervention. To awaken moments of tonal synchrony and affect repair, it was made emphasis on pentatonic and consonance songs (2014, p. 230). According to Levinge (2011, p. 55) for this client group, music therapy can provide aid for taking important steps to go from disconnected to connected. It is concluded in research that;

> The natural interactive element of music provides mothers who are depressed with a non-verbal means by which they may connect with their baby. Equally, the temporal nature of music, allows for sensitive and empathic attunement to be developed in the moment between therapist and mother, therapist and child, and mother and child. (Levinge, 2011, p. 54)

Because the musical interaction involves touch, hearing and sight, then what is happening in the moment can be refined and intensified, which in turn supports positive and sensitive interpersonal communication (Levinge, 2011, p. 55). The melodious form of the mother's sounds has an impact on the infant's positive and negative affect. It is the variation of those sounds, how fast/slow and the timing of them that affects the infant.

In this chapter I have gone through my findings from the thematic analysis, where relevant literature on music therapy was explored in relation to my research question. I coded the research and generated themes that I saw as related to what the literature said about how music therapy could promote bonding and attachment between mother and infant. Eight themes were generated and in the next chapter the findings from the analysis will be reviewed and discussed in relation to relevant theories on music therapy and attachment.

5. DISCUSSION

Through my analysis on research on the use of music (therapy) with mothers with PPD and their infants, it has become apparent to me, thorough coding and building themes, that there are some facets that are important in the use of music as a therapeutic means to support the bond between mother-infant. I found that there were some key elements seen in the literature that needed to be present in order to support this bond. In relation to my research question, I want to go through my findings on the themes about what the music (therapy) could offer the mothers and how it could have an effect on their emotional state, in ways that enabled them to bond and interact. The last part of the discussion will look at ways that the music (therapy) interventions promoted bonding and attachment in the dyad.

Because as Winnicott (1958, p. 99) notes, a mother and infant could be seen as one item or a whole, it was apparent to me that the musical and/or therapeutic work needed to support the mother in finding "her own voice" in order to "find her way to the infant". By this I mean that my analysis has heavily emphasized some elements that could support a mother in being able to still feel like "her old self" but also being able to "find her voice" as a new mother. An element that was seen was that the mothers needed a singing-time for them, not just for the infants: *Mothers embracing their resources through singing.* Also, to feel a *sense of accomplishment*, to feel a *sense of group belonging* and the *sense of feeling good.* This ultimately could lay a path for the dyad to feel bonded and therefore to have a stronger attachment. For this to be possible the *role of the music (therapist) leader* needed to be one that, reassured and supported the mother and infant in finding their way to each other. And also, the use of the *music* and *singing* needed to be facilitated to their needs as a group, as (new) mothers and as individuals.

Organizing findings in relation to research question and theory

I therefore want to propose how the process on the mother "finding her own voice" and "finding her infant" could have unfolded itself through the course of the music (therapy). I have organized my findings in a table overview of four parts, presenting them in this way in order to be able to approach the research question in relation to my findings and the theory used in a systematic way. My research question; *How can music (therapy) help to promote the quality of bonding and attachment between women with postpartum depression and their*

infants? By organizing the themes in this way, it can tell us something about how the music (therapy) interventions unfolded itself.

Table 2. How the music (therapy) could support the mothers in finding new ways of relating with their child through the enjoyable activity of singing.

Clusters of themes	Themes	Explanation of the themes.
1. Mothers with PPD acoustics of ID-singing and responses from infants	How PPD affects mother´s singing and thereby affect dyad´s interaction	Firstly this could help to map how mothers singing is affected by PPD and how this might affect the dyad´s way of interacting.
2. Music therapists, music leaders and music´s role in supporting the dyad to form a closer bond	The role of the music therapist or singing leader	How the music (therapists) role needed to function in order for the intervention to provide good support for the mother and infant.
	The role of the music: singing and songs	How music (singing) was used with the mothers and infants in a supporting way.
3. Mothers and infants emotional state- from disconnect to connect	Sense of feeling good	What the music (therapist) and music afforded the dyads, could help the mother-infant to feel good and calm.
	Sense of accomplishment	To feel good and calm ultimately could lead the mothers to feel a sense of accomplishment and self-efficacy
	Sense of group belonging	From the elements above, both mother, infant, them as a dyad and all dyads as a group could feel a sense of group belonging
	Mothers embracing their resources through singing	When the two elements above were "present" it could enable the mother to find and see her resources and to discover new ways of being with her infant.
4. Implications of singing intervention-singing supports bonding	Singing´s impact on infants and mothers: Singing support bonding	The themes above can draw us closer to show how the music (therapy) singing intervention could support the dyad in finding new ways of relating to each other and find new ways to bond.

1. **Mothers with PPD: acoustics of ID-singing and responses from infant**

Map how PPD could affect the way in which a mother sings to her infant.

Since I wanted to examine how elements of music (therapy) could promote the quality of bonding and attachment, I will discuss the first part/theme as a base for how PPD affects the mother's way of singing and how she interacts with her infant. The first theme only maps how PPD impacts singing and how the infant responds to this, not how a music intervention over a time-period could impact the dyad. However, the first theme says something about the dyads' emotional state before any music (therapy) intervention is given. Therefore, it can work as a starting point for the music (therapist) in seeing what some of the difficulty for this client group is, and how to best facilitate the use music in a therapeutic way.

2. **Music therapists, music leaders and music's role in supporting the dyad to form a closer bond and attachment:**

Highlights what needs to be established from these elements so that something can be "afforded" to/for the dyad.

The second part maps what the role of the music (therapist) and the role of music could be in the therapeutic setting with mothers with PPD and their infants. It also looks at potential differences between the music therapists and the singing leaders from the articles/book chapter. It is to note that this is not written about in the results chapter, but only discussed in this section of this chapter.

3. **Mothers and infants emotional state – from disconnect to connect:**

Tells us something about how the intervention had an impact on the dyad's emotional state.

The third cluster is comprised of themes that show how the dyad's psycho-emotional state is changing through the music (therapy) intervention. Here it is shown that the mothers could feel good and calm, that they felt a sense of accomplishment, feeling like they were a part of a group and this enabled them to embark on their resources through the creative act of singing. This focus on the mother's emotional state in the literature, showed that the mother's needs had to be attended to in order for her to attend to, and interact with her infant in a new and healthy way.

4. Implications of singing interventions: Singing support bonding and attachment:

Tell us something about how all the earlier elements helped the mother-infant in finding new ways to relate to each other and perhaps therefore got a stronger bond.

Ultimately my findings from these themes gives knowledge to how the music (therapy) interventions were facilitated so that bonding and attachment could occur in the dyads and this is discussed in part four. This part tells us something about the way the music and therapeutic setting could impact the dyads emotional state and therefore impact their attachment.

When talking about the themes/clusters, I will use the theory earlier presented and link them to my findings in order to substantiate and contextualize what the themes/findings could say in relation to my research question.

Throughout this chapter I want to use the parameters from the theory communicative musicality. These parameters are *Pulse, Quality* and *Narrative.* Malloch and Trevarthen (2009) stress that within communicative musicality, these parameters are needed for music to be used in a therapeutic way. I will also utilize a community music therapy view on communicative musicality, since I have analysed several articles that mostly encompass a group format of music (therapy). A resource-oriented music therapy will talk about how the relation between music (therapist) and clients should be and how the dyads find their inherent or new resources. The way music was used in the interventions from the literature will also be seen as a health resource. The intervention built on attachment theory, *Circle of Security* will be used to see how the mother-infant structure their attachment and how it changes through the course of music (therapy). It is also used in a parallel way- seeing how the music (therapist) could function as a music "mother" or "music grandmother" and the women´s (mothers) need for care.

1. Mothers with PPD- acoustics of ID-singing and responses from infant

In relation to my research question, think it is important to see how PPD could affect the way in which a mother interacts, sings and handles her infant, prior to any music (therapy) intervention. This can give some indication to how to best use music, in order to help the dyad to change their difficult relation. As seen from the analysis, before any long-term music (therapy) intervention, de l´Etoile and Leider (2011) wanted to examine how PPD had an

impact on mothers way of singing and de l´Etoile (2012) analysed how the infant responded to mothers with PPD and to a stranger (music therapist) singing. In these studies, they used the form of singing called infant-directed singing and as I have shown earlier, is as a way of singing that enhances and exaggerates the pitch and gestures of the singer (Trehub, 2000).

As shown from the results, in de l Etoile and Leider (2011, p. 253), there was a correlation between PPD levels and how fast the mothers sung to their infants, meaning that the higher the depression level, the faster mothers sang. Interestingly they found that mothers with PPD more often sung faster when the infant was male. de l Etoile and Leider (2011, p. 253) reference to Weinberg et al. who state that male infants could be more demanding social partners, because they express their needs more explicitly than girls do. I think that these are interesting findings, but that one should be careful with differentiating between male and female infants in this way. I do not see that there are good reasons for looking at young infants' sex and labelling them as two different groups in relation to research on PPD and music (therapy). A resource orientated music therapy view would perhaps look at this notion as stigmatizing, in that it labels male infants to not possess some qualities of relating to others, that the female infants do. As Rolvsjord say, in a resource-oriented music therapy, different clients and therapists need to be viewed as equal (Rolvsjord, 2010). If the goal of the research is to facilitate for therapy that could promote bonding and attachment between the dyad, I think that research on the differences between male and female infants' way of relating to their caregiver is counterproductive.

I would relate de l Etoile and Leider (2011, p. 253) findings on mothers singing faster when having PPD, with Malloch and Trevarthen´s (2009) three parameters. As seen earlier in the theory chapter the *Pulse* relates to how two people or more coordinate their expressions in time. The *quality* is saying something about the affective expressions form, and how it develops. Together these two parameters form the third, *narrative*, which forms the "stories" that we need to show our emotional state (S. Malloch & Trevarthen, 2009). Because the mothers with PPD in this study sang faster to their infants, a mother's *pulse* was perhaps not coordinated with the *quality* of *pulse* that the infant needed in order to form a close bond and for infant to be able to self-regulate.

In addition to mothers singing in a fast tempo de l´Etoile and Leider (2011) also found that mothers with PPD tended not to shift or modulate their tonal key when singing. Stern (1999)

found that a mother intuitively altered the rhythm of the responses to her infant to keep him intrigued in their interaction. When the mother is less able to do so, as seen not in a rhythmic sense, but in mothers tempo and tonality in de l´Etoile and Leider (2011) I see this in relation to Sterns findings. It would perhaps be more difficult for the dyad to bond and form a good relationship when the mother struggle to modify her acoustic parameters of singing. Oldfield and Bunce (2001) compare this ability that a mother has, to that of a skilled music therapist. "In the same way, the skilled music therapist will often first imitate her clients' musical contributions but soon subtly introduce, harmonic, melodic or rhythmic changes to maintain and intensify the quality of the improvised musical exchange." (2001, p. 30).

Because ID-singing has a nature of exaggerating the pitch, tonality and slow tempo, the infants in de l´Etoile (2012) were able to extract the stimuli needed when mother or stranger sung. I would reflect this in the notion just presented by Oldfield and Bunce (2001, p. 30) and on the three parameters of communicative musicality (S. Malloch & Trevarthen, 2009). When the mother or music therapist sung to the infant, the mothers change of pitch, rhythm and tempo would perhaps be different to how the dyad normally interacted, which ultimately enabled the infant to extract needed stimuli. The *quality* of their affective expressions in that moment therefore changed in some way. They perhaps became more able to display their emotional state and then the *narrative* "story" of the mother and infants could perhaps change into a more positive one.

What these two studies from de l´Etoile and Leider (2011) and de l´Etoile (2012) seek to find out could give an implication to how a music (therapist) can use music in a therapeutic way in trying to promote the quality of bonding and attachment in mothers with PPD and their infants. Because the mothers with PPD, in these articles tended to sing faster to infant and not modulate their tonal key, an example of how the music (therapist) could help to change this is by first imitating the dyad and then guide the mother in how to use the harmonies, melodies and rhythm to change the quality of their musical exchange (Oldfield & Bunce, 2001, p. 30). How the music (therapist) and music´s role could best be used to support the dyads, will be described in the next section of part two.

2. Music (therapists) and music's role in supporting the dyad to form a closer bond

From the research utilized in my thematic analysis, it has become apparent to me that the mothers and infants emotional state changed throughout the singing intervention and I want to suggest that this was highly due to the elements seen in the themes in this part/cluster. These themes are "The role of the music therapist or singing leader", and "The role of the music: singing and songs. When the music (therapist) and the music's role was established in a good way, this was seen to make a good therapeutic foundation in order for the mothers and infants to find new ways of relating to each other and "find their way to each other".

In order for there to be a music (therapy) intervention, I want to talk about what the music therapists or singing leader's role is in this context could be. Then I will discuss if I found any differences between music therapists or music leaders in the literature and debate whether this might have any implications for the mother and infant.

According to Oldfield (1995c) a music therapist specialize in non-verbal communication and music therapy can be an effective intervention with families who have a difficult relationships with their children. She states that a music therapist's role is intricately similar to that of the mother-infant relation in the way the playful, musical interactions unfolds between the music therapist and the child client. It is the form this exchange takes, rather than other aspects of the relationship that is of importance. The interaction between both the mother-infant and music therapist-infant is mostly non-verbal, intuitive and spontaneous (Oldfield, 1995c). The important role the music therapist has, as Levinge states (2011, p. 51), is "…to affirm a mother's capacity for mothering and to carry on their behalf, the projections which arise from the work." She goes on saying that the music therapist needs to contain the feelings that the mother has. "As therapists however, we are there to be a witness to the pain of our clients and not to avoid it." (Levinge, 2011, p. 51).

As I have used some literature in my inquiry where it is not music therapists that lead the intervention, but researchers and people of other professions, I need to debate whether I found any obvious differences between the music therapists and singing leaders. Since the way that I have obtained knowledge about the research has been through reading the articles/book

chapter, it was a bit difficult for me to see the nuances in what actually was different about a music therapist's work and other professions in this setting. However, I saw some differences in some of the literature that I used, and I shall talk about it here.

In the research of Puyvelde et al. (2014) they talked about the way the "two artists" could model a preferable dyadic interaction between the two of them, for the mothers to observe. They say that "In this way, the artists provided essential vitality effects of a mother–infant relationship" (2014, p. 229). However as Levinge say (2011, pp. 50-51), the therapist should `hold´ the dyad and not intervene and that it could be more helpful for the mother that the therapist can take a third stand – more in the background. I consider this aspect to be important in discussing what differences there could be between a music therapist and a music leader.

> From this place, the therapist can be used positively to help a mother become more aware of her own capacity for being good enough. As music mothers or even music grandmothers, the most significant elements of our role therefore, is to affirm a mother's capacity for mothering and to carry on their behalf, the projections which arise from the work. (Levinge, 2011, p. 51)

It does not seem that the singing leaders in Puyvelde et al. (2014) have the same thought on this notion as I did not find any reference to them talking about the importance to stand back when the dyad needed so. The lack of this explanation I actually did not see as much in the other non-music therapist articles as well (Perkins et al., 2018; Reilly et al., 2019). However I saw it as more prominent in Puyvelde et al. (2014), because they talked a lot about this role of the "singing leader" but not as much about the stepping-back for the dyad to find their abilities of relating. I therefore see some differences between music therapists and the singing leaders in relation to power-structures between therapists/leader and clients. As they are not music therapist, I interpret this in a way that the researcher´s in the non-music therapy research may lack some knowledge on, or at least not emphasizing the dyads resources in the same way that a music therapist does.

To be stepping back in this way, as Levinge (2011) says, I think shows that the music (therapist) respects that the dyad needs some space in order for their resources to bloom. Also, when the therapist sees that the mother-infant are at a place in their journey of "finding each other" by stepping back, this can confirm to the mother that the music (therapist) respects

them and their abilities to interact. As shown in the theory chapter, Rolvsjord (2010) highly emphasizes the need for the relation between clients and therapist to be equal, transparent and built on respect. The intervention also needs to be a collaboration between them, rather than an expert-patient relationship. In relation to Ansdell (2013, p. 8) notion that "music does not usually treat illness; it helps health", I think that for music to become a health resource, the health of the client cannot improve if the therapist only treat the client like someone that only needs their expert evaluation. It needs to be a collaborative relation between them, in order to help and promote health. In some of the articles this was noted, especially in Oldfield and Bunce (2001) and de l´Etoile (2012). In these two articles they stated that making time for reflection just after each session was very important. Oldfield and Bunce (2001, p. 33) note that it is only through this, that mother can see that she is, at times able to appreciate and enjoy being with her infant and through this recognition, her hope and confidence can raise. In this way, I see Rolvsjord´s (2010) notion that therapists' and clients' relationship needs to be transparent, clear and built on respect.

I think that how Levinge (2011, p. 51) says that music therapist in this context could work as music mother or music grandmother, would be interesting to relate to Malloch and Trevarthen's (2009) parameter *Pulse* and also in relation to *Circle of security* (Marvin et al., 2002). In relation to the three parameters I think that when the therapist is able to *coordinate* her vocal *expressions* and *gestures* in a way that doesn´t take the attention away from the dyad, but tries to support them by making her *pulse* sensitive to their needs, this could be seen as a good way to support them. An example could be the way the therapist withdraw herself physically (body and voice) when the dyad is ready, but still being "there"/present to support them when needed. In the start of the intervention the music therapist's presence (and also the other dyads) is more needed for the dyad to begin to relate to each other in a different way. This was seen in Puyvelde et al. (2014) were the mothers and infants started to become more autonomous in their way of interacting, by session 5, creating playful moments, which was seen in the dominance of intersubjectivity level 3.

In relation to what I have shown, Levinge (2011) talks about in the way a music therapists could function as "music mothers" or "music grandmothers" I see clear parallels to Circle of Security. As seen previously, the graphic of Circle of Security by Marvin et al. (2002) use Ainsworth's (1978) concepts of a *secure base* and a *safe haven.* As the mother and infant go on their "journey" of discovery and ultimately "discovering each other", I think that the music

(therapist) could work as a “secure base” and a “safe haven”. Perhaps this could only happen in the music (therapeutic) setting, if the dyad feels and expects that the music (therapist) is available/near when needed, as the Circle of Security talks about (Marvin et al., 2002, p. 109). In this way I think that the music (therapists) can work as an attachment figure that needs to be sensitive to the dyads needs in the moment. So, then the mother and infant could both be seen as the child in the graphic of Circle of Security. In the same way as Circle of Security (Marvin et al., 2002) talks about the way a child needs his/her attachment figure, the music (therapist) also has to welcome the dyad in when their moment of interaction needs support again. By this, the music therapist needs to have a role where they comfort and delight the dyad, and also help to organize their feelings if they e.g. become overwhelmed. So by comparing the therapeutic relationship that the mother-infant-therapist have, to Circle of Security, the music (therapist) could function as a mother and the dyad could function as the child in need of an attachment figure. I realise that calling a woman a child could sound undermining and contribute to unwanted power structures between therapist-client, but I make this comparison not thinking of the woman as immature, but rather as a person in need of care and in need of an attachment figure.

How the music (therapists) in the literature used, helped organize the dyads feelings could be seen from e.g. the singing leaders in Puyvelde et al. (2014) way of modelling a preferable dyadic interaction when singing together. Or how the use of a group format with other mothers both singing together and reflecting afterwards together, could help each dyad structure their emotions and needs. The format of group music (therapy) and the reflection after each session was seen in some of the literature used in my inquiry; (Levinge, 2011; Oldfield & Bunce, 2001; Perkins et al., 2018; Puyvelde et al., 2014). When the music (therapists) in the literature I have used, paid attention to the dyads needs, I think that it gave a good base for the therapeutic work/goal on increasing the bond and attachment between mother and infant.

Because the use of music and singing are key elements in the therapeutic work between a (therapist) and clients, it is important to emphasize how the different use of music: “appropriations”, could support the mother-infant bond and as DeNora (2000) says, how music could “afford” the person/s in the best possible way.

I think that for the vulnerable and possibly first-time mother with PPD to have a closer bond with her infant, some of her musical needs and preferences needs to be highlighted, so that the music and music (therapist) can help the dyad in the best possible way. It is important that the role of the music and singing supports the health of the individual and that the music therefore is facilitated to meet the women's musical preferences. As seen from the results, it was noted in some articles (Perkins et al., 2018; Puyvelde et al., 2014; Reilly et al., 2019) that in the singing intervention, the mothers had a need to come into contact with their identity of who they are and were, before the infant was born, in order to re-frame themselves. In this way the sessions could be seen as space for the women themselves and not just for the infants alone. The music could speak to them as individuals, and it was seen in Perkins et al. (2018) as an immersive activity where the women could have a break from their day-to-day duties of care. I would suggest that using music in this way, of emphasizing the individual's musical preferences, is a key factor in how music could function as a health resource. As seen in the theory chapter, both Ansdell (2013) and Ruud (1998) talk about music in such a way that it has a health potential and that people's use of music in everyday life could be considered as health promoting. DeNora (2000) talks about the quality and use of music and that the way we use music has health potential. In the examples above from the literature used in my findings, I think that the health potential of music could be seen in how the music (therapist) together with the mothers best facilitated the music in using songs that the mothers could relate to and/or wanted to sing.

As seen from this theme, the use of improvised music was highlighted, to encourage maternal-infant bonding. The research that talked about the use of improvised music were (Levinge, 2011; Oldfield & Bunce, 2001; Puyvelde et al., 2014). Levinge (2011) sees musical improvisation as one of the most meaningful therapeutic interventions in music therapy. In this time, she says, there is not suggested any specific musical directions or time boundaries and (in this setting) the mothers and infants are encouraged to play as freely as they want to and, in the way that they want. It is in this musical intervention, in Levinge's experience…

> "…that the feeling element of each relationship becomes vividly present. More spontaneous and sensitive connections and responses can be seen between mothers and their babies and as the group becomes more relaxed, different musical ideas are developed and tried." (Levinge, 2011, pp. 52-53)

I think that improvisation can be the creation of something new musically, here and now with one another, which means that one has to collaborate, listen and give the other person or persons your attention. With the use of sounds, songs and instruments, one can intuitively form musical phrases and melodies or try to play as freely as possible (Ruud, 1998). As we have seen from Levinge (2011), the use of improvisational music can perhaps further help to form a therapeutic relationship between mother and infant or client and therapist. In Oldfield and Bunce (2001, p. 30) as I have earlier shown they say that "… the skilled music therapist will often first imitate her clients' musical contributions but soon subtly introduce harmonic, melodic or rhythmic changes to maintain and intensify the quality of the improvised musical exchange." I think that this imitation and elaboration to one another's musical contributions is that what Malloch and Trevarthen (2009) talks about in their three Parameters.

> In improvised music therapy between therapist and client, where sounds are mimicked, changed, and elaborated upon in a give-and-take cooperative fashion, the reflecting back to another the emotive qualities in the sounds they have just produced (the implicit "vitality affect" of the sound) demonstrates the quality of attention being given to the other. The change and elaboration that often goes hand in hand with the reflecting back demonstrates a "commentary" by the therapist or by the patient, who is considering what they have just heard. In the response, some of the listener's inner life is added to the relationship. (Malloch et al., 2014, p. 5)

Here Malloch et al. (2014) present how a person, in an emotional way can be «moved» by the attention and recognition given in the musical interaction between him/her and others. According to Malloch et al. (2014) it is from this combination of reflection and the "commentary" by the persons interacting together, that close relationships and community establishes itself. This is what enables a person to feel "seen" and acknowledged by others and Malloch et al. (2014) state that this is what sets the foundations to how music therapy could be an effective therapeutic intervention. It is clear that what Malloch et al. (2014) says about improvised music in therapy is linked to Malloch Trevarthen´s (2009) three parameters, Pulse, Quality and Narrative. In the literature I have used the way the mothers and infants communicated together through music was ever changing and elaborated on. It was clear in all seven articles/book chapters that it was the use of music that enabled the dyads communication to go from a more negative interaction to then forming a relationship that was musical and more positive.

3. Mothers and infants emotional state

All seven articles/book chapters used in the analysis encompass something about how the dyad's feelings changed and how their way of interacting changed throughout the course of the music (therapy) sessions. As I pointed out in the second cluster, I want to suggest that this emotional change could occur when the music (therapist) and the music's role was established in a good way. In relation to my research question on how music (therapy) could help promote the dyad's bond and attachment, it was then important to analyse how this change could occur. I have therefore grouped together the four themes that all deal with this psycho-emotional change in the dyad as well as on a group level, into this section. This could then help to come closer in answering how the music (therapy) had an impact on the dyad's bonding and attachment structures.

Singing makes me feel good

When the mothers and infants sang together with people in the same life situation as themselves and a music (therapist), it was shown to provide a way for them to feel a sense of joy and to feel good about themselves. This was seen in all seven articles/book chapters from the analysis. Because the music enabled them to "speak" together through the use of singing with often no talking at all, it perhaps provided a safe space, which enabled the mothers to feel good and more comfortable in the way they expressed themselves with the others and with their infant. In relation to findings from Puyvelde et al. (2014), the naturally exaggerated nature of singing enabled the mothers to feel good. This was perhaps because the music made it easier to interact with the other mothers and (therapist), forming a bond between them as well, so that in turn the bond between mother and infant could also be strengthened. So then, this relation between the mothers and music (therapist) were important for the dyad to be more connected and autonomous in their interactions.

As shown earlier in the result section in this theme, both the singing groups and playgroups in Perkin et al. (2018) evoked "feel good" emotions, but it was only in the singing group that the mothers had a more functional emotional response of being a new mother. These responses were: "have time to reframe the self, to feel immersed in an activity beyond looking after the baby alone, to feel competent as a mother and to feel bonded with the baby". The arena of singing together with mothers or caregivers in similar life situations appeared to enable them to think of something else other than their daily worries of new motherhood for a moment.

The notion that relaxation techniques can be of aid in recovery of depression has some small evidence in a general mental health research (Jorm Anthony F., 2008). In this way the music (therapy) could be seen as a relaxation technique in the way that it enabled the mothers to think of something else than their daily worries. As noted earlier, the mainly negative relationship that has established itself between the mother-infant can be hard to "get out of" so to speak (Oldfield & Bunce, 2001, p. 33). I want to suggest that these types of emotional responses, seen in Perkin et al. (2018), but also elsewhere in the literature, could enable the mothers to feel more comfortable in their way of expressing themselves through music. I think that this was perhaps why the dyad could feel more comfortable in their interaction and to see their relation in a new, more positive way. The music (therapy) enabled them to see their ability to have fun together.

In all of these examples from the research that I have used, it appeared that expressing themselves through singing, enabled them to "get back to" feelings of cheerfulness and hope. To experiencing cheerful feelings is perhaps clearly linked feeling accomplished.

I feel like good therefore I feel accomplishment

I want to suggest that when the music helped the mother to feel good, she was then able to feel more accomplished. Because feeling better enabled her to have a positive relation with her infant, this would result in her feeling a sense of self-efficacy. As I have shown earlier, Leahy-Warren et al. (2012, p. 390) define maternal parental self-efficacy as parents beliefs on their ability to have success in their parenting role. Leahy-Warren et al. (2012) also suggest that there is a link between maternal parental self-efficacy and reduced symptoms of PPD, which further validates the ability that singing can have on the reduction on symptoms of PPD. And when those symptoms lower, it can enable the mother to have a more meaningful interaction with her infant (Perkins et al., 2018).

In the analysis it was seen that the singing intervention could have a potential to help enable the mother to feel a sense of self-worth (Perkins et al., 2018) and this further validates the ability that singing can have on the reduction of PPD symptoms. This could also be seen in Puyvelde et al (2014) in the way the mothers and infants were starting to have more autonomous interactions with each other by session five.

I think that there lies a way of empowerment thinking within all these examples from the sense of feeling good and accomplished. As Fredrickson (2005) notes, engrossed within empowerment thinking is the notion that positive experiences could lead us to feelings of empowerment. Because the singing intervention in the beginning could give positive experiences in Puyvelde et al. (2014) the interaction between mother and infant became more autonomous. Frederickson (2005) states that when a person experience positive emotions, it sets of a spiralling effect which enables him/her to seek and gain more positive experiences towards possibilities and towards health. So, when the mothers and infants in the literature I have used had positive experiences of singing in a music (therapy) group, these experiences could be seen as vital in motivating and enabling them to participate. As Rolvsjord (2010) says, these types of positive experiences make us better equipped to do the things we want in life.

I feel like we are part of a group

I want to suggest that the creative act of singing together with mothers, infants and music (therapist) made it possible for the mother and dyad to feel like they were a part of a group and community. This was seen in much of the literature from the analysis (Oldfield & Bunce, 2001; Perkins et al., 2018; Puyvelde et al., 2014). As I have shown earlier, in order for the mother with PPD to get better, she needs to receive social support from her family and healthcare systems (Glavin & Leahy-Warren, 2013; Leahy-Warren et al., 2012).

As Pavlicevic and Ansdell note, in relation to a community music therapy perspective on communicative musicality, in order for musicianship and musicking to occur, this needs to happen in a community and group level as well as a dyadic level. Stern (2004, p. 98) states that "Regardless of how we define intersubjectivity, it must operate for groups as well as dyads. The couple is a subsystem of the basic units of evolutionary adaptiveness: the family and the tribe." This notion could be seen in relation to Dissanayake's (2001) view on music, on that music's behaviour has developed from protomusical elements that are first developed in the mother-infant interaction. Since a mother with PPD often tends to isolate herself and/or feel isolated (Glavin & Leahy-Warren, 2013) this could impact, as Pavlicevic and Ansdell (2009, p. 365) say, a person's availability for communicative or collaborative musical functions. Therefor the dyad may need help in "…repairing communicative musicality through the cultivation of musical companionship" (Pavlicevic & Ansdell, 2009, p. 365). In Pavlicevic and Ansdell's model of "Collaborative musicking" they argue that musicking as an

activity of musical participation, require/involve social development and that there is a need to see this in a broader collaborative context, than only on a dyadic level (Pavlicevic & Ansdell, 2009, p. 364). I therefore want to argue that the mother and infant's social development and their increasing bond, seen from the research utilized, could be a result of the musical collaboration between mothers-infants and therapists.

When a mother sings to her infant, she naturally exaggerates her voice and affect, in order to provide the stimulation the infants need (Levinge, 2011; Nakata & Trehub, 2004). This was also one of the conclusions in de l Etoile, (2012) that through the naturally exaggerated element of singing, the infants could extract the stimuli they needed in response to the way mother sung to him/her. When this exaggeration happens within a group setting, I would propose, in relation to the findings, that some of this naturally exaggerated communication will then also "float" over to be seen between the mothers. This is perhaps an important element that enabled them to feel a sense of belonging to a group, making it easier to communicate with other people when this perhaps seemed difficult before in mothers depressive state. I want to suggest that the mothers needed this exaggerated type of ID – singing interaction with other adults, in order to better communicate with her infant.

In the first session in Puyvelde et al. (2014) they state that it appeared that the mothers and infants needed the contribution of the "artists" more so than in the fifth session. It also appeared that the dyads required the dynamic flow of the group and the "artists" to reach the highest level of intersubjectivity. In Perkins et al. (2018) they note that the singing activities provided a feeling of group belonging for the mothers and that this creative act itself generated social cohesion in the group. These findings show that being around other women and infants, forming a dynamic group together through the creative act of singing, eventually could enable the individual mother-infant to interact together in a new and more healthy way. Through the mothers and infants collaborative musicking, they then shaped a musical community that was beneficial for them in making them feel like they were a part of a community. From this point, the mother and infant was able to form a stronger bond and as seen in Puyvelde et al. (2014), dyads reached the highest level of intersubjectivity.

I can see my resources

In the reflexive music (therapy) intervention, I would propose that all the emotional changes seen in this cluster enabled the mother and dyad to see and find new resources. As seen from

this theme, the literature analysed often highlighted that the mothers could come into contact with their own identity and find their inherent resources. Examples of this was how using music that came from all around the world could helped mothers with different cultural backgrounds feel appreciated and proud (Perkins et al., 2018). Or how they in Puyvelde et al. (2014) and Reilly et al. (2019) emphasized the need for the mothers to have a time for themselves, to re-frame themselves, where only the mothers and therapist were in the music sessions for some time, while the infants were looked after in the MBU.

As I have shown earlier the positive psychologist Seligman (2005) says that in order for a person to feel joy and happiness, their "signature strengths" needs to be used and revealed. The emphasize that Perkins et al. (2018) gives on the mothers musical and cultural "signature strengths" I think was significant to the mothers being able to feel joy and happiness. The way the music leaders in this study highlighted different types of music, from different countries, perhaps helped to show the mothers and dyads that the qualities and resources they have from their native countries, is acknowledged and appreciated by others. In this way I think music can have a health potential, because the music gave the women and dyads in this research a positive meaning. DeNora (2000) talks about "musical appropriations", the way we use music, and I think that music was used in a way that gave meaning to these women in Perkins et al.´ (2018) study.

As previously seen Rolvsjord (2010) defines the word *resource* as something that, not only persists to the individuals personal abilities, but just as much on the aspect to have access to something. In all the three articles mentioned here; (Perkins et al., 2018; Puyvelde et al., 2014; Reilly et al., 2019) they emphasized the need for the music to be facilitated to "afford" the dyads in the best possible way, by supporting the mothers in being able to "find her voice" as a new mother. The music groups were for the infants and mothers, however there was also a focus on that the sessions were a time for the mother, were only the mothers participated for some time. The use of music that the mothers wanted or could want to sing was also strongly emphasized. In this way the music was "appropriated" in such a way that the mother could feel like "her old self".

4. Implications of singing interventions: Singing support bonding and attachment:

As I have shown in the previous sections, when the music (therapist) role and music was facilitated in a good way, this enabled the mothers and infants to have an emotional change, both individually, as a dyad and as a group. These changes that the dyads had through the music (therapy) could help to support and promote their bonding and attachment. Something that has been prevalent in the literature that I have analysed is that the research generally focused on the mother's emotional state, but that is not to say that they did not focus on the child's emotional state. This focus showed that the mother's needs had to be attended to in order for her to attend to and interact with her infant in a new and healthy way.

As mentioned earlier, a child's development is solely dependent on the quality of care that it receives and mother's attunement abilities are important here (Winnicott, 1952, p. 99). The mother's vocal pitch is what brings her quality of voice to the infant and the infant learns to understand what these sounds mean (Perkins et al., 2018, p. 55). So then, when mother's quality of voice changes in the music (therapy) this will have an impact on the infant's ability to self-regulate. When the music (therapist) in de L'Etoile (2012, p. 364) guided the mothers to use the musical elements in the best possible way with their infant, this enabled the mother to alter her pitch to a more loving tone. This will then have a positive impact on the infant. In an example seen earlier from the literature, a mother "was brought to life" when she saw how the music therapist played, sung and interacted with her infant (Levinge, 2011, p. 44). Through this interaction, the infant could expand his ability of expressing himself. This interaction, first with the therapist and infant eventually later enabled the mother and infant to form a musical dialogue and musical aliveness. In this example it was focused on the child's interaction with the music therapist, but it was especially the mother´s emotional change that was described, which also was something that had an impact on the infant's emotional state. Another example, from this theme was also that a music therapist could support the infant, when this seemed more difficult for the mother: "´Coming to this made me feel like I was doing something that was really nurturing her while I felt like I was struggling to nurture her, so that really made a difference in that time´ [Sing 3]." (Perkins et al., 2018, p. 7)

In these examples it is seen that the way music was used, could bring positive experiences to the mother and infant and I want to suggest that this gave feelings of empowerment to the

women, seeing their infant interact with someone else and themselves in a positive way. Throughout the course of the music (therapy) intervention, this resulted in a spiralling effect as Fredrickson calls it (2005). Since the mothers were depressed and experienced negative feelings it made it more difficult to have a broadened mind and to see the possibilities that they and their infants could have. When the mothers first felt these positive feelings, this motivated them and showed them that they had the ability to gain more of these experiences with their infants. This I think could be seen as a driving force in how the music (therapy) enabled the dyad to form a closer bond together.

Another argument for how music (therapy) could help to promote the quality of the dyad's bond and attachment lies in how the music (therapist) approached the dyad in the music. In order for mother to feel these positive feelings described above, the therapist's role is vital.

As seen in the theme "the role of the music therapist or singing leader" the therapist should "hold" the dyad in order to support the dyad in establishing a good bond. This means that therapist should know when it is time to interact with the infant and mother and when to take a third stand (Levinge, 2011, p. 43). As shown earlier I have made a comparison of how the music (therapist) could function as a "music mother or music grandmother".

If we look at the graphic figure of Circle of Security by Marvin et al. (2002) where the child (here mother and infant) is in need of a *Secure base*, the music (therapist) could function as this base, and I think that the dyad needs to be near to this base at the start of the intervention. Here the music (therapist) tries to form a musical interaction with the dyad that involves the use of touch, hearing and sight and this could intensify what is happening in the moment so that they can refine and alter their interaction (Levinge, 2011, p. 54). The mother and infant may need to stay together in this place of the *Secure Base* for some time. When they have had several instances of these positive experiences described above, and the knowledge that the *Secure Base* is present if needed to "go back to", they can slowly start to move over to the next phase of the exploratory system seen in the Circle of Security graphic (Marvin et al., 2002). The dyad starts to interact together in a different way, "inspired" by how they interacted together with the *Secure Base* (music therapist). The mother and infant can "go on exploring" each other in a more independent way. In Puyvelde et al. (2014, p. 229) this could be seen in the way the duration of intersubjectivity moments (ISM) increased and how each duration became longer, than previously in the intervention. Throughout the sessions it is

important that the music (therapist) *Safe Haven,* is near and present to welcome them in when needed. Then therapist needs to protect, comfort, delight and help organize the feelings that the dyad may have experienced in "their discovering/ finding each other". It is important to note that the interaction between therapist and dyad needs to be a collaboration in order for the dyad to feel like they are in control and I think this is important if the dyad is going to be able to explore each other and develop their relationship.

I want to suggest that when the dyad has had several experiences of feeling that they can explore each other and "find each other", but still have their *Safe Haven* present, the (real) mother can ultimately be more autonomous in her role as a good enough mother. She can experience feelings of self-efficacy and success in her motherhood (Leahy-Warren et al., 2012, p. 390). From her *Secure Base* and also from the other dyads, she has experienced and learned some new tools in how to interact with her infant: new songs, ways of interacting, discussing motherhood and so on. When the use of these tools resulted in a more positive attunement and experience between her and the infant, it could motivate mother to go on using these tools of possibilities. And these possibilities from the music (therapy) sessions enabled the mother and infant to form a closer and stronger bond together.

In this chapter I have deliberated on the ways in which music (therapy) with mothers with PPD and their infants, could help to support and promote bonding and attachment in the dyad. In the beginning of this thesis I used Bruscia's (2014) definition on music therapy, where it is said that music therapy is a reflexive process. In this chapter, the ways in which I have described how the therapeutic process developed itself has been structured in a way that the music (therapist) and music's role firstly needed to be established in a good way. It was then presented ways in which this could have an impact on the mothers and infants emotional state and how this made it possible to promote bonding and attachment in the dyad. I however want to assert that this is a *reflexive process* and the order in which these elements have been presented are not necessarily to be determined in this way. It is important that the music (therapist) role firstly is established in a good way, but the order and ways in which the mothers and infants emotional state changed were reflexive. I however wanted to present the different ways of emotional change in this way, to be clear on how the music (therapy) could promote bonding and attachment in the mother-infant's relationship.

6. CONCLUSION

The way a mother and infant intuitively change their musical and rhythmic communication, through gestures of movement, different sounds and melodies I find captivating. The mother mimics her infant's musical contribution and subtly changes these vocal responses that the infant gives, in order to attune to him and keep him captivated in their musical exchange (Stern, 1996). But when a new mother struggles with difficult feelings and/or isolates herself from her closest family, friends and society in general, it can be more difficult for the dyad to carry out this way of communication between themselves (de l'Etoile, 2012; de l'Etoile & Leider, 2011).

When a woman becomes a mother, possibly she herself, and the society and culture around her have some expectations on what she is supposed to feel in relation to being pregnant and importantly, how she feels when the infant comes into this world. There are expectations of feeling an overwhelming sense of joy, happiness and love for the infant, and to feel like you care for and nurture the infant in the best possible way. However there are several reasons why this can sometimes be difficult for the woman, and sometimes the mother perhaps cannot see any reason to why she's not feeling joyous (Glavin & Leahy-Warren, 2013; Levinge, 2011). This could make it even more difficult for mother to understand why she feels the way she does. A traumatic childbirth, being a first-time mother, having an unwanted pregnancy or hormonal changes could all contribute to mother experiencing feelings of hopelessness which could lead to depression (Folkehelseinstituttet, 2017).

In this master thesis the aim was therefore to examine how music (therapy) potentially could be facilitated to promote bonding and attachment between each dyad of mothers with postpartum depression and their infants. My research question was: *How can music (therapy) help to promote the quality of bonding and attachment between women with postpartum depression and their infants?* In order to examine this question, I conducted a qualitative document analysis with a method of thematic analysis, where I analysed music (therapy) literature that in some way were relevant in relation to my research question. The themes from my analysis were then linked to relevant music therapy and attachment theories, which formed the discussion. In this last chapter I want to summarize the most important elements of

this thesis, on how the music (therapy) interventions could affect the mother-infants bond and attachment. This can then enlighten what this might imply for further practise.

What does music (therapy) afford mothers with PPD and their infants?

For the mother to be able to interact and form a closer relationship with her infant, through the use of singing in a group setting or in individual sessions, there were some key elements that needed to be established.

A space for finding their way to each other

At the start of the interventions, the dyad needed more support from the music (therapist) to be able to interact together. This support could be seen in that therapist was physically closer to them or that therapist helped livening them up or calming them down when needed. This helped the dyad to structure their emotions when e.g. the interaction seemed difficult. As I have shown, the therapist could function as a "music mother", where the dyad is in need of a *Secure Base* (music therapist) that they can "go out from" when it is time to explore each other (mother-infant). When their moment of autonomous interaction is over, they can "go back" to the *Safe Haven* (music therapist). When the mother and infant had experienced several of these positive "turns" seen from Circle of Security, the mother could feel empowered and experience self-efficacy in her motherhood. The spiralling effect when sensing positive feelings through singing, could lead the mother to seek/gain new experiences and possibilities of health. When this occurred the music (therapist) needed to be sensitive to and observe when it was time to "step back" and take a third stand. This sensitivity I have seen in relation to communicative musicality, where therapists *coordinated* their *pulse* of vocal *expressions* and *gestures* to form *narratives* together with the dyad. Eventually the dyad was ready to form a closer and more autonomous interactions, shaping the *quality* of their *pulse* to form their own *narrative*. This meant that the infant´s mother could fully embark on the role as the "music mother" (attachment figure).

Mothers and infants emotional state: from disconnected to bonding and attachment

I want to suggest that the way the therapeutic work was carried out, as seen above, enabled the mother and infant to experience a positive emotional change, which ultimately enabled them to form a closer bond and attachment. The most notable changes, seen from the analysis

were that singing together with therapist and (mostly) other mothers and infants could enable the dyad, and especially mother to have a sense of feeling good, to feel a sense of accomplishment, to feel like they were a part of a group, and to feel like they possessed many resources. I therefore want to suggest that these feelings activated the mothers to see the possibilities that the infant and herself could give to each other. At the start of the music interventions, it brought them feelings of happiness, but more on a group level, than dyadic. After experiencing these feelings several times, the dyad became more able to share them independently, just among the two of them, but still be able to interact with the others. This ultimately could have helped them to form a stronger bond and attachment between them. I therefore want to conclude that music (therapy) could have the potential to help the dyad to form a closer bond and attachment, because the creative act of singing together in a group or individual setting, could help bring the mother and infant on the path of "finding each other".

Implications for research and practise

The way music was used in a therapeutic way in the literature analysed, has been shown to have significant potential in supporting the mother with PPD and her infant's interaction and also om enabling the women to see her potential as a new mother. This is something that should be researched further, and I especially find it interesting to see the potential that group music therapy can provide, where dyads e.g. sing known songs together that help cultivate musicianship. In relation to this, I also saw an absence of relevant research that had a family-centered view as I did not find literature that included the father/other partner or family members.

Limitations of research

I would therefore say that the lack of research analysed on this subject in my thesis is a limitation of my study, as social support from the family is very important for the mother with PPD and her infant. Here, I think there is a lot of potential for further research. Another limitation of my study would be that the amount of literature I have analysed could have been more substantial. I would however note that I completed a systematic search to identify relevant literature to analyse and I incorporated all the relevant research that I could find. This shows that there is a need for further research on the subject.

At the start of this project I initially was supposed to have a music therapy group together with a music therapist, for mothers with PPD and their infants at a culture/arts school. This

was difficult to achieve, as it took a long time to process the approval of this for ethical reasons. A reason for why this was difficult was perhaps because there is no research on the use of music therapy with women with PPD and their infants conducted in Norway. And it therefore lies a huge potential for further research here, especially in a Norwegian context, but also on a global level.

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