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**“With my own voice I could  
encourage others to also join in”**

**Music-making to strengthen the parent-child  
early interaction**

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## Abstract

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Parenting support has become part of the Finnish family policy over the past two decades, one of the aims being to support parent-child interaction. In the wake of the pandemic, the need of family support for parenting has increased; furthermore, family support services, such as family training, have been cancelled or have only been offered via video recordings. Parenting support needs have been identified, understanding in terms of growing healthy children, parents' capabilities and resources need to be supported and the early child-parent interaction needs to be strengthened. A child's first year is crucial to create a strong basis for the holistic development of human life and to develop, children need for safe early interaction and emotional experiences with their parents.

Meanwhile, the new health and social services counties' objectives include the aim to increase preventive services, the discussion on the role and importance of using creativity and arts to promote health and well-being has been growing. In this empirical, qualitative case study the focus was to examine how the interaction between the parents and the baby can be strengthened through music-making in a group context. The musical baby group was organised in collaboration with Metropolia University of Applied Sciences and the group met four times to make music together. The data for the study was collected through semi-structured interviews were made with the mothers and video observation from the actual music-making. The data analysis process was data-driven using thematic analysis method.

The findings explicate that music-making can provide concrete tools for parent-baby interaction to increase the ability to communicate and regulate emotions. Furthermore, the findings indicate that music-making with parents and babies in a group context can increase the feeling of sense of belonging. Music-making enabled sharing experiences in a group where interaction happened on several levels reciprocally between mothers, babies, and the group leader.

Keywords: arts improving health and well-being, early interaction, music-making, parenting support, sense of belonging

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# 1 Introduction

In the wake of the pandemic, many family health services were downsized, moved to online or even cancelled in full in Finland (The Finnish institution for health and welfare). A major Finnish newsroom wrote an article in July 2022, about midwives and mothers' feelings of frustration because family training and antenatal classes were still held online and interactive encounters were lacking (MTV News, 07/22). According to the article some municipalities had not provided any family training during these two years, although these activities are protected by the Finnish Health Care Act regarding the Finnish Government Degree of the child health clinics (The Finnish Health Care Act 1326/2010 15 §).

Early interaction and early emotional experiences during the baby's first year are the cornerstones for a human being's psychological development (Ainsworth et al., 1978; Bowlby, 1969; 1973; 1980; Erikson 1950; Piaget 1971; Stern, 1985). Furthermore, the early interaction experiences guide the functional brain development, and they will form the basis for the whole holistic development in human life (Black, 1998; Mäntymaa et.al. 2003). The ability for empathy begins to develop in early childhood, and it models, how people will trust and make connections to others in their future relationships. Empathy is needed to create the ability and willingness to understand what the other person may be feeling and experiencing, and, furthermore, the ability to put themselves in the other person's position. (Ainsworth et al., 1978; Bowlby, 1969; 1973; 1980; Fu, et.al. 2022; Xu, et al. 2022.) When a child experiences a basic sense of security and trust in early interactions, it is reflected in future relationships and lays the foundation for the holistic development: good self-esteem, self-image, empathy, and physical health (Ainsworth et al., 1978; Bowlby, 1969; 1973; 1980; Gerhardt, 2007; Koschanka et. al. 2008; Mäntymaa, 2006; Stern, 1985; Överlund, 2009).

Parenting support needs have been identified and concerns about family resilience have been raised in the public debate in Finland (The Ministry of Social Affairs and Health, 2020). In addition, the challenges posed by inflation and the current electricity policy situation have raised the issue additionally at the political level of how to give more support to families (Sihvonen, 2020). In January 2023 the new health and social services counties in Finland start to operate and it is still uncertain how the new counties will regionally organise family support services such as family training, which has been on hold for a long time in many municipalities. The importance of preventive work in social and health care has been noticed in the aims of the new health and social services counties (The Finnish Government, 2020). Furthermore, according to multidisciplinary research, the use of the arts for promoting health and well-being has been shown effective in preventive work (WHO, 2019). Enriching early interaction through music-making could strengthen the attachment bond between the parent and the baby and provide opportunities to share experiences together as a group (Huhtinen-Hilden and Isola, 2019; Kirschner and Tomasello, 2010; Koelsch, 2013; Marjanen, 2006; Mithen, 2006; North et al. 2000; Saarikallio, 2007; Scherer, 2004). Early interaction can be supported musically (Marjanen, 2009) and moreover, active music-making can increase musical, communicative, and social development in babies (Cirelli et. al, 2014; Gerry et. al., 2012).

This empirical, qualitative case study research (Eriksson and Koistinen, 2014; Fossey et al., 2002; Leavy, 2017) focuses on examining how the interaction between parents and the baby can be strengthened through music-making in a group context. What kind of tools music-making could give the parents for early interaction to increase non-verbal communication and to regulate and transfer emotions with their babies (Koelsch, 2014; Marjanen, 2006; Saarikallio, 2007). The musical baby group was organised in a collaboration with the Metropolia University of Applied sciences. The data for the study was collected through video observations and semi-structured interviews conducted with mothers afterwards. In the end of the study there is a discussion about the potential of using professional music educators specialised in early music education and

community music or other professionals using art-based methods in interprofessional team work to encounter families in family groups to strengthen the early interaction.

## 2 Conceptual Framework

The conceptual framework of this study covers the background of the importance and the meaning of parent-infant early interaction, Finnish child health clinic system, building a feeling of sense of belonging in a group context and what music-making together in a group enables. The first chapter is particularly focused on a child's whole development based on the early interaction experiences and emotional connections in the early years. It is focused to provide background, why humans need a good quality of experiences in reciprocal interaction with their parents. The conceptual framework examines the mother-infant early interaction through the main theories of developmental psychology, the attachment bond models, and other relevant studies on the topic. This first chapter examines individually the role of a mother and a baby in early interaction events and goes deeper to the role of reciprocity in interaction and mutual adaptation capacity with infant and mother together. The possible elements disturbing or delaying the formation of a safe attachment bond will be examined as well.

Furthermore, the second chapter deals with the background on what the Finnish child health clinic system is based on and what laws and guidelines regulate its work. In the third chapter the sense of belonging and social inclusion in the group context will be examined. The Last chapter will examine using arts promoting health and well-being, especially music and music-making to enable sharing emotions and experiences, strengthening early interaction and increasing social cohesion and the sense of belonging in the group.

## 2.1 The Importance of parent-child early interaction

Early interaction consists of all the everyday things that parents and babies do together: nurturing, feeding, and socialising (Trevarthen and Aitken, 2011.) A newborn baby is a sentient, feeling and a communicative being, ready to receive and process information of the surrounding environment. Infants are born with a natural desire to interact with others, and they are instinctively looking for reciprocity, social interaction with their mother. Infants have a built-in operating system ready to act and in order to develop these systems they need for safe early interaction experiences. (Gerhardt, 2007, p. 32; Stern, 1977; 1985.) Emotions are central to human interaction and communication between baby and parent is emotional communication. Trevarthen and Aitken (2011) define an early form of communication between infant and parent including eye contact, vocalisations, hand, and head movements that transfer shared experience, emotions and understanding. (Trevarthen and Aitken, 2011.) A child's emotions, imagination and social development are intertwined from an early age with the child's early interactions in everyday situations (Överlund, 2009). A baby's early emotional experiences are initially very holistic, and the child needs parental support to regulate them from a very early age (Gerhardt, 2007, p. 31).

Nowadays it is recognized that the early interaction can start already in prenatal time (Huotilainen, 2009; 2006; Marjanen, 2009). Babies can hear in the womb after 24 weeks of pregnancy at the latest and they can feel a touch on the mother's stomach and can taste the mother's nutrition through the amniotic fluid. A mother's feelings are also transferred to the baby by supplying hormones through the bloodstream. The early prenatal communication can consist of small elements of combining mother's love-filled thoughts for the unborn baby, a warm touch on the stomach and heartwarming words or singing to transfer mother's emotions. (Huotilainen, 2009. pp. 121–129.)

For over decades many studies and theories in developmental psychology have brought out of evidence, how important child's first years and the mother-infant



early interaction are for constructing the basis of psychological development of human life (Ainsworth et. al, 1978; Bowlby, 1969; 1973; 1980; Erikson 1950; Mäntymaa, 2006; Piaget 1971; Stern,1985). Developmental psychologist Jean Piaget (1971) divided the cognitive development of children to for four different stages, where the first two years of human life is called sensorimotor stage. Characteristics of this stage are the reflex ability and infants not being only passive waiting for someone to fill them with knowledge. Infants' cognitive development forms, through the interaction of innate capacities and environmental events, the mental model of the world. (Piaget, 1971.) Development psychologist Bowlby created the foundations of the attachment bond (1969) and examined mother-infant attachment bonds and developed research methods to study children's emotional life. Bowlby was among the first professionals to state the point of view on how far-reaching consequences of a poor-quality mother-baby interaction might have. (Bowlby, 1969.) According to Erikson's theory of psychological stages of development (1950), the first conflict of the eight psychological stages appears in the first year of an infant's life. How the first conflict of mistrust vs. trust will be solved, depends on whether a child gets a great amount of acceptance and attention or whether mother is emotionally unavailable. Baby will form emotions of basic trust when their needs are met. If these needs are not answered adequately, it will negatively affect a baby's social development, emotion regulation and ability of empathy. (Erikson, 1950.)

Development psychologist Ainsworth worked together with Bowlby and continued his work creating a strange situation method to study mother-infant attachment bonds more closely. The idea of the strange situation method was to examine how babies react when the caregiver or a stranger leave and come back into the room. The child's responses were observed in the changing situations. Ainsworth created attachment bond models by dividing attachment styles into two categories: secure and insecure attachment bond styles. Insecure attachment styles were further divided into ambivalent-insecure and avoidant-insecure attachment styles. Later, a fourth disorganised-insecure attachment model was added, which is observed more as a disorder than an attachment model. (Ainsworth et. al, 1978.)

**In a secure attachment bond model**, the child feels safe and secure. The child's needs are met, and they have mostly positive experiences of interaction. In a secure attachment relationship, the child is courageous to express their own feelings. In the strange situation method, a securely attached child shows separation anxiety when the mother is away for example by crying and the child seeks safety in the mother when she returns, but soon goes back to explore the environment. (Ainsworth, et.al, 1978.)

**In the avoidant-insecure attachment model**, the child's basic needs have been met, but emotional expressions between the parent and the child have been inadequate. The interaction is distant, and the child has not experienced that their emotions are valued. The child has trouble expressing their feelings and does not feel secure with the parent. The child protects themselves from disappointment and behaves avoidantly towards the parent. In the strange situation method, the avoidantly-insecure child does not react to the mother's departure or return. (Ainsworth, et.al, 1978.)

**In the ambivalent-insecure attachment bond model**, the child is unsure about how the parent will react. The child's experience of the parental behaviour has been inconsistent, and the child is surprised at the parent's unexpected reactions. The child might exhaust their resources by observing the reactions of the parents. In the strange situation method, the ambivalently-insecure child is not interested in the toys in the room and the child acts inconsistently towards the parents for example by clinging to the mother, wanting to sit on the lap, and by hitting her. Since the child does not know how the parent will react, the child tries to ensure safety by intensifying the distress. (Ainsworth, et.al, 1978.)

**In the disorganised-insecure attachment model**, which is rather a disorder than a style, the child's system is disrupted, and they are unsure how to interact with the parent. In the strange situation method, a child wanders, dissociates and behaves strangely. The disorganised-insecure attachment disorder has often

been caused by a disconnect in interaction, misinterpretation, asynchrony between child and parent and abuse. (Ainsworth, et.al, 1978.)

A mother's sensitivity for a baby's emotions is considered to be a good feature of the mother's ability to recognise, read and understand the baby's signals better (Ainsworth et al. 1978). A central element for human interaction is emotions. People need emotions to understand others, to be understood and make us relate to others and feel togetherness. What comes to communicating with newborn babies, emotions are playing an important role. (Siegel, 2003, pp. 67–94.) Sensitive mothers seem to have a connection to a strong relationship with secure attachment and to a favourable child development and well-being (Mäntymaa and Tamminen, 1999; Pesonen, 2010, Svanberg et.al, 2010). Infants express their emotions in the beginning mostly by crying, and parents' role is to try to understand babies' emotions and emotional states by trying to find the right solutions (Emde, 1998; Stern, 1977). Babies are sensitive to the quality of expression of feelings, and the emotions of the baby and the parents need to be integrated together in interaction. It is important for babies' socioemotional development to have face-to-face interaction with their mothers. (Cohn and Tronick, 1989, pp. 242–248; Stern, 2001.) Key elements for the attachment bond forming are reciprocal regulation and social interchange through mutual eye contact, gestures, face expressions and vocalisations (Marvin and Britner, 1999, pp. 44–67; Stern, 1977; 2001). A parent who is sensitive to the child can make quick, consistent observations of the child's energy and emotional states, and to match their own interaction style to the rhythm and emotional state of the child. A functional and effective interaction is based on reciprocity (Silvén and Kouvo, 2010). There are many different types of interaction styles, but many similarities have been recognized in the communication skills and methods of parents in early interaction situations with the babies. The key features of conversations are alternation and continuity in interaction. (Brooks and Kempe, 2012, pp. 8–10.) Parents can support reciprocity in communication with the baby by giving space for the baby's turn in interaction situations and by trying to interpret even minor reactions of the baby as a dialogue (Kunnari and Paavola, 2012).

Mothers' and babies' personalities and temperaments are not always matching and being in synchrony. This might cause asynchrony in the early interaction relationship and parents might easily start to call the baby as a difficult. Babies with difficult temperaments might be challenging to care for because they usually have strong emotional reactions; cry for long periods of time, are hard to comfort, slow to accept new people, food or routines, and it is not easy to predict or regulate in their eating and sleeping (Kendall-Tackett, 2010, pp.25–40). If a mother is unable to show enough attention and answer its needs, babies usually show anxiety by crying a lot, avoiding eye contact and stiffness in their body (Cohn and Tronick, 1989). Mother's hostility towards her baby increases the child's risk for emotional and behavioural problems progressively (Mäntymaa, 2006, p.65). Additionally, it seems to have remarkable evidence with preconceptions and the image of how pregnant women are seeing themselves as becoming mothers and how they feel about their baby already during the pregnancy. These preconceptions are considered to be quite effective, lasting and permanent (Mäntymaa, 2006, pp. 64–81; Siddiqui and Hägglöf, 2000, pp. 13–17). Multiple factors effect and delay the development of a warm attachment bond such as breastfeeding, feeding or a parent becoming ill. The attachment bond may also be initially challenging if the child is born seriously ill or has developmental delays. (Launonen, 2007, pp. 28–29; Mäntymaa and Launonen, 1999.) Mother's own poor childhood relationships with her mother seem to determine how active she will be in the early interaction with the infant (Mäntymaa, 2006, pp.64–81). These early interaction relationships create models for later adult relationships and models for humans, how they will parent their own children in the future (Bretherton and Mulholland, 1999, pp. 102–122).

The quality of mother-infant early interaction has not only effects on the psychological development, but also an impact on physical health and functional brain development of the infant (Mäntymaa et al. 2003, Mäntymaa, 2006, pp. 12, 65–84). The structural development of the brain happens during the pregnancy, whereas the functional development occurs after the baby is born (Nelson and

Bosquet, 2000, pp. 37–55). Experiences of the environment, nurture and interaction guides certain synapse formations in the brain to be either functional or deactivated after a certain time (Lehtonen and Castren, 2000). It is also possible to predict future health and development in a child's early years by observing certain features in the early interaction between mother and baby. Mother's inability to communicate actively, use positive vocalisation or if their presence is avoidant with the infant, it might cause chronic diseases or recurrent health problems for the baby in the first two years. (Mäntymaa, 2006; Mäntymaa et.al. 2003.)

Hence, children need safe, loving and reciprocal early interaction experiences with their parents to build a strong and secure attachment bond. The mother-infant early interaction event can be examined in different angles, when emphasising the baby's own active role for solving their own crisis depending on, how their needs are met (Erikson, 1950; Piaget, 1971) and when emphasising the mother's role in terms of how well she can interpret the baby's signals and how well she is able to respond to them. (Ainsworth et. al, 1978; Bowlby, 1969; 1973; 1980) Nowadays the early interaction is not only being looked at in the light of how babies or parents individually are involved to make the early bonding to happen, rather the interaction is seen as an act, where both parents and the baby are equally active (Kochanska et al. 2008). The mutual early interaction and bonding needs participation of both mother and baby (Figueiredo et al., 2009), but an important factor seems to be the mutual adaption capacity, i.e., how mother and baby can adjust to achieve a balance between the two of them in relation to other internal or external states (Mäntymaa, 2006, pp. 65–84). Common for the early interaction studies is whether the perspective is in health, psychology or in the brain development. Studies and theories are discussing with each other and creating a strong understanding about the importance of mother-infant early interaction. A secure attachment bond is a very important foundation for the child's overall, holistic development and creates models for later adult relationships.

## 2.2 Finnish child health clinics for supporting families

Child and maternity health clinics are a central part of Finnish family and community life. The child health clinics system started officially a hundred years ago, when Archiater Arvo Ylppö founded a consultation centre for the care of young children in Finland, Lastenlinna, in 1922. The child health clinics were first started in response to high maternal and infant mortality rates and in 1944 it was incorporated into the public health system. In addition to medical monitoring, from the late 1960s onwards child health clinics began to pay attention to parenting and the psychological and social aspects of child development as well. The reputation of Finnish child health clinics is also well known abroad. (Finnish Medical Journal, 03/22.) Today, the child health clinic is still a place that is accessible to all families with children in Finland, and the services are protected by the Finnish Health Care Act (The Finnish Health Care Act 1326/2010 15 §).

The objective of the child health clinics work is to secure that every infant is ensured healthy growth and development, and that the mothers health is equally be taken care of. It is stated that the “Local authorities shall provide within their area maternity and child health clinic services for pregnant women and for families that are expecting a child.” (The Finnish Health Care Act 1326/2010 15 §). Maternity and child health clinics need to offer widely services for promoting the health and well-being:

- 1) regular checks to ensure the healthy growth, development, and wellbeing of foetuses and the health of pregnant women and new mothers according to individual needs;
- 2) checks to ensure the healthy growth, development, and wellbeing of children at intervals of approximately one month during the first year of life as well as annually and according to individual needs thereafter;

- 3) oral health checks for children at least every other year;
- 4) support for parenthood and other wellbeing of families;
- 5) promotion of the health of the homes and living environments of children and healthy lifestyles of families; and
- 6) early identification of any special needs and tests required by children and families as well as support for children and families and, if necessary, referral tests or treatment. (The Finnish Health Care Act 1326/2010 15 §.)

In section four is mentioned that in addition to regular checks for both mother and the child in health manner issues, maternity and child health clinics need to provide support for parenthood and families' wellbeing as well. Families living in Finland, who are expecting their first child needs to be offered family training and antenatal classes (The Finnish Health Care Act 1326/2010 15 §). The fourth part of the Act provides the need of family training, where families can be supported and guided on parenting issues and moreover, should receive support for early interaction as well. One of the goals of family training has been set to support early interaction between parents and the child in addition to other aims, such as to promote the health of the foetus and the family, and the couple's relationship. The early interaction is monitored by doctors and public health nurses when families are having their regular visits to the child health clinic appointments. The Finnish institution for health and welfare has drawn up an interview model Vavu-form to help healthcare professional to ask questions to examine the quality of the interaction between parents and children. (The Finnish institute for health and Welfare.) The preventive work model Vavu is developed in Finland, and it was evaluated in a European study using a two-year follow-up method to assess its effectiveness in increasing child development and family well-being. Results were positive and in line with expectations but remained low in Finland compared to other countries. (Puura et. al, 2005.)

The Finnish institute for health and welfare researches and develops maternity and child health clinic services. The Ministry of Social Affairs and Health prepares legislation and issues recommendations on child health clinic work. "The Ministry of Social Affairs and Health is responsible for guiding the development of maternity and child health clinics and municipalities are in charge of the practical arrangement of services." (The Finnish institute for health and welfare). However, The Finnish social and health care services are going through a reform of the service structure of social welfare and health care and municipalities will not be any more in concrete charge of organizing the child health clinic services. The current service system will end in the end of 2022. Additionally, The Health Care Act (The Finnish Health Care Act 1326/2010 15 §) will remain in effect until the end of 2022. In January 2023 the new health and social services counties will officially start operating. The counties have been given more authority to influence how they will organise their social and health care services regionally and these new counties are naturally in charge arranging the child health clinic services in the future. The aim is to give residents opportunities to participate and influence the activities of the well-being area and to promote the system and financial sustainability of the welfare area's activities, and to create conditions for the welfare area to support the well-being of its residents. The reform of the service structure of social welfare and health care programme has listed five main goals: accessibility for improving equal access, timeliness and continuity of services, prevention for shifting the emphasis from heavy services to proactive and preventive work and quality, improving the quality and effectiveness of services, interoperability for ensuring coordination of social and health services and interfaces with other services, and costs to contain cost increases as other objectives are met.

The reform requires time for the new social service counties to make decisions and regulations how they will organize the social and welfare and health care services in their district. The work among child health clinics are a central part of the preventive and health-promoting activities of primary health care (The Finnish Government, 2020.) In 1972, the Public Health Act gave more opportunities for



active development of services and for interdisciplinarity (Finnish Medical Journal, 03/22). In Finland, there are cross-sectoral experiences of cooperation between cultural services and child health clinics. According to The Arts Promotion Centre Finland TAIKE, a cross-sectoral projects in child health clinics have been experienced for example in a project “supporting voluntary activities and participation”, where the aim was that the child health clinics can offer a family in need of support a cultural referral, which can be used to take the family e.g., to a circus, and do something different that the family would not normally do. Social services can give a family or individual client a cultural passport, which allows the family or client to participate free of charge in cultural events or voluntary activities. A doctor can write a cultural prescription in a situation where there is no medical treatment available and the potential of the arts to enhance well-being is recognized. (Arts Promotion Centre Finland.) In Finland, cities of Espoo and Jyväskylä have been provided projects called “Kulttuurineuvola”, as Cultural child health clinics. The basic idea is that the cultural institutions and libraries for example in Espoo city present their activities in the waiting rooms of the child health clinics and encourage families to get involved in culture and the arts. The aim is to reach out to families and offer them knowledge about the cultural services specialised for families with small children.

### 2.3 Sense of belonging and social inclusion in a group

The concept of social capital (Putnam, 2000) in sociological research refers to specific dimensions of the social environment or social relations. These include social networks, norms and trust that facilitate interaction between community members. Social capital can be defined as both individual and collective assets, and it enhances the well-being experienced by the community and the achievement of individuals' goals. There are growing evidence of social capital being connected to subjective well-being through social cohesion. (Putnam, 2000.) Social capital is a quality that can be a facilitator of interpersonal

cooperation and it can be divided into three forms: bonding, bridging, and linking. (Putnam, 2000; Ruuskanen, 2001.) Bonding addresses that people share similar values, aims and experiences, such as feeling sense of belonging, whereas bridging social capital addresses more of overlapping networks and linking social capital refers to connection between individuals' connections with people in leading or influential positions. (Kivijärvi and Poutiainen, 2019; Ruuskanen, 2001.) Trust is a central feature of social capital and without trust there is no social capital. Hence, trust allows one person to expect the other to act in a certain mutually acceptable way, which reduces uncertainty. (Ruuskanen, 2001.) Trust can take a long time to build and it can be lost in an instant as well. Furthermore, it can be used unintentionally and intentionally in negative contexts such as manipulating and exploiting people. (Kouvo and Kankainen, 2007.)

Coleman defines social capital being “a mode of social structure that eases the activity of an individual in a structured context” (Coleman, 1988). According to Ruuskanen, the sources of social capital include social networks, community norms, interaction, and group identity (Ruuskanen, 2001.) The term family social capital “includes the social relationships, values, and norms shared by a family and is positively linked with children’s mental and physical health status” (Quick et al. 2021). The main purpose in family social capital is to “bring parents’ human capital available to children and it depends both on the physical presence of adults in the family and on the attention given by the adults to the child” (Coleman, 1988). The future of children is increasingly determined by the social capital of their parents. More specifically, the ingredients of social capital are personal networks, trust and reciprocity. The most valuable of these are networks that bring people together from different backgrounds. (Putnam, 2000.)

There are growing evidence of social capital being connected to subjective well-being through social cohesion (Helliwell and Putnam, 2004; Langston & Barret, 2008; Putnam, 2000; WHO 2012). A case study conducted in Australia examined a community choir to understand the ways in which community music engagement and participation may shape community. It showed that choirs and similar organisations are strong community resources to increase social capital.

Important elements of the choir were seen as a strong community connection, including individual autonomy, bonds, and fellowship which enabled the chances to build of a strong creation of social capital. (Langston & Barret, 2008.) Regarding the use of the arts to increase social capital it is stated that using the arts by doing together rather than making arts for other people is crucial in creating social capital (Putnam, 2000; Wilks, 2011). In Finland, a study demonstrated, that learning, making, and experiencing music can increase the potential of social capital in a music centre for special educational needs. The study was focused on examining the experiences, reactions and feedback of the audience, the performers, and the teachers in organised concerts. The findings indicated that music, musicking and music education are important for the students and as well as for their relatives, friends, and the audience. According to the study the concerts' "performers, teachers, and audience members felt included and connected with others in the concerts". The feeling of sense of belonging in the concerts had increased the students' emancipation and helped to improve their music making. (Kivijärvi and Poutiainen, 2019.)

Social inclusion is defined as involvement, relatedness, belongingness, and togetherness. It is about coherence and inclusion. It is participation and, by implication, representation and democracy. It is also the organisation and governance of all the above. (Isola et.al, 2017.) Social inclusion is described generally as an emotional, personal or subjective phenomenon that occurs through social interaction. On an individual level, inclusion is the experience of feeling part of a group or community that is meaningful. From a social policy perspective, social inclusion is seen as the responsibility of the state to enable and support citizens' participation in society. Additionally, social inclusion is seen both as a value and a way to fight against poverty, prevent exclusion, promote justice, equality, and an egalitarian society. It is a broad and multidimensional umbrella concept that brings together different perspectives and approaches. (Leemann et al., 2015.)

The need to belong includes the idea of belonging, the emotional side of a person to be associated with something and to be accepted as part of a group. The sense of belonging involves more than getting to know the people in a group. It is important to be accepted and to feel being seen in a group and at the same time, to be accepted and seen by others reciprocally. (Putnam, 2000.) Wenger describes that sense of belonging in a group formulates when “a group of people or its participants come together around ideas or topics of interest and interact with each other’s to learn together” (Wenger, 2004).

#### 2.4 Interaction in and through music-making

The World Health Organization (2019) has made a review on the evidence of the role arts promoting health and well-being, how arts-based methods have been used and researched using a wide variety of studies with diverse methodologies in social and health fields. Overall, the promotion of arts and health care promotion has increased during the past decades in the healthcare sector of European region. For example, music practitioners with different kind of backgrounds (musicians, music educators, music therapists and other practitioners using musical approaches) have worked in many healthcare contexts such as in health promotion, preventive work, in patient, nursing and palliative care etc. (WHO, 2019.) According to the WHO review (2019), both the preventive work and health promotion showed that arts can support child’s development and mother-infant bonding, and additionally support in acute conditions as care of premature infants. Moreover, the evidence of different studies using diverse methodologies demonstrate that by using arts for health promotions can have impact on both mental and physical health and can develop social cohesion. (WHO, 2019.) The value of arts promoting health and well-being has been recognised in the Act of Cultural Activities of Municipalities (The Finnish

Act of Cultural Activities of Municipalities 166/2019) as well. The aim of the law is to strengthen the health and well-being of the citizens and increase social inclusion and sense of community through art-based methods. Municipalities need to promote arts and cultural services. (The Finnish Act of Cultural Activities of Municipalities 166/2019 2§.)

Musicality is an essential part of being human. Music has existed in all cultures since ancient prehistoric times and it has been presented to have helped in the development of the species to promote a sense of social belonging, group effort and the development of motor skills. (Mithen, 2006.) Music has an ability to stimulate the brain better than many other sensory stimuli and it does not only have emotional effects but physiological changes as well, e.g., in heart rate, skin temperature, respiration, oxytocin and endorphin levels (Särkämö et al. 2013. pp. 441–451) Music has a strong emotional impact, and it can affect all three key areas of emotions: physiology, experience, and expression. (Scherer, 2004.) Music offers positive emotional experiences, in addition, it enables the processing of negative and difficult emotions, and provides opportunities for experiencing, understanding, modifying and expressing a wide range of very different emotions (Saarikallio, 2007). Music strengthens cohesion and the feel of sense of belonging when other people are present. Moreover, music can strengthen the identification with the peer group as well. (Koelsch, 2013; North et al. 2000.) When choir singers have been studied, findings show that singing together can synchronise heart beats, since music and singing guide respiration (Vickhoff et al. 2013). Additionally, singing in a choir can have psychological affects and promote well-being by bringing joy for the participants and making feel togetherness and sense of belonging in the group (Judd and Pooley, 2013, pp. 269–283).

When people come together to cooperate or communicate, whether to make arts, music or everyday encountering, there is always interaction between individuals. There are many definitions for defining the meaning of interaction, but the simplistic view is its reciprocal action between human beings in different

surroundings. The concept of interactions includes communication and relations between individuals, societies, organisations and cultures. (Mönkkönen, 2018, pp. 19.) When people are making music together, they need to cooperate and communicate by listening, making eye contact and sensing others around them bodily. Since music effects on the brain circuits involved with empathy, trust and cooperation, it can strengthen social bonds and moreover, it has an impact to increase the ability of being in contact with others. Hence, this can lead to increased social cohesion. (Koelsch, 2013.) Creativity and arts in group activity, such as musical groups, allow people to share experiences, ideas and feelings in a safe way. Being seen and experiencing the acceptance of others through musical or other creative expression strengthens and connects the group to positive interaction. (Huhtinen-Hilden and Isola, 2019.)

With music everybody can communicate despite of social, medical, psychological or educational aspects (Elliot, 2004). Community music is a concept or a way of leading arts and making music in a group, where musicking is taken outside of the formal educational setting to increase the access of music making for everybody (Hallam and MacDonald, 2008). In a community music setting, the musical activity connects the ideas of multidisciplinary practices integrating social, educational, medical and therapeutic practices (Ruud, 2004). Belonging to the group plays a part in our cultural, social and emotional development (Turner, 1969). Music helps people tune-in to others and through sharing the same experience and moment in time we feel more cooperative (Kirschner and Tomasello, 2010). Bonding and belonging through listening and making music together are important to human nature. Huhtinen-Hilden and Pitt (2018) describe sensitiveness of the musicking process in a group context: “Learning in a group and musical group processes and activities need careful attention in terms of creating a safe learning environment in the learning process”. (Huhtinen-Hilden and Pitt, 2018, pp. 30–42.) For a leader in a group, it is important to enable an atmosphere in a dialogue with all participants and in an open dialogue, where everybody is being in interaction listening to each other emphasising the reciprocity, equality and openness (Jordan-Kilkki and Pruuki, 2013, pp. 18–27). For reaching the goal of equality and openness, the leader needs to think their

position in the group, for not to make their expertise to be an obstacle for learning or experiencing together. It is essential for the leader to bring out their knowledge in a way that the dialogue is possible to continue in an equal manner. (Huhtinen-Hilden and Pitt, 2018, pp. 49–50.)

Additionally, early interaction can be supported musically (Marjanen, 2009). Music used as a non-verbal communication is a key to interact with infants who are not able to understand the meaning of the words yet. Music contains non-verbal meanings and we can bring our own meanings through emotions into the music for example through a song. (Gfeller, 2002.) Music can help quickly to get from one mood to another non-verbally. Art and music are a preliminary stage through which we get to a higher level of concepts in emotions. Music gives us the tools to process our emotions, the ones we cannot always say in words. The rhythm of sound, touch, colours, visuality, tonal weighting, and the colourful elements of sound expression are fundamental in music, easily and accessibly understood even by a small baby. (Saarikallio, 2007.) Non-verbal communication includes gestures, facial impressions, eye contact, smell, body language, movements and vocal features. When babies are born, their communicative skills are quite limited, and they mainly communicate by crying. However, newborns do not have many tools to regulate their own feelings and the regulation happens in interaction with their parents. (Cohn and Tronick, 1989; Sroufe et al. 1995; 1982.) Parents' job is to try to understand the signals of baby's cry and emotional states and match their own rhythm and emotional state with the baby (Silvén and Kouvo, 2008). Intuitively, parents try to calm baby down e.g., by making rhythmic hissing sounds, slowing down the tempo of their speech and raising intonation of their voice (Persico, 2017). Infant's hearing is precise to separate many characteristics and conceptual contents of the speech. This ability helps infants to identify their mothers voice and feel mother's emotions through the different intonations of the mother. (Särkämö et al. 2013.) Biologically, babies are programmed likely to follow their mother's voice than an unknown female voice (Beauchemin, et al. 2010. pp. 1705–1711). Mother's voice is the most beautiful and mesmerising thing to an infant, because of the familiarity of hearing it during the prenatal time (Huotilainen, 2009, p. 123). Babies can recognise the mother's voice already in

33-34 weeks in the womb (Huotilainen, 2009, p. 123; Jardri, R. et al. 2012, pp. 159–161) and hence that is a reason why a mother's own voice is a great tool for a mother to interact with her baby and regulate baby's emotions by calming down it with her voice (Marjanen, 2009). The brain development of an infant is structured in the way that it is looking for eye contact. When baby hears any voice or sound it will automatically try to turn its heads towards the sound or the mother's voice. (Carvalho et al. 2019.) Listening to mother's voice can increase premature babies promote healthy weight gain and autonomic stability (Williamson and McGrath, 2019). Active music making can increase musical, communicative and social development as well in adults as in babies (Gerry et. al., 2012; Overy et.al., 2009). Parents and babies dancing together to the beat of music is linked to the favourable behaviour of young babies in interactions with other babies. 14 months old babies acted more likely selflessly after having been bounced to the music in synchrony with other babies in a group, than compared to babies who had been bounced to music asynchronously with others. (Cirelli, 2014.)



### 3 Implementation of the research

This chapter entails how this qualitative research and case study was implemented such as the choice of methods that were chosen and the methodological grounds, and how the data was collected and the study group was gathered, along with the data analysis methods and process. The research process will be opened in a chronological order. The ethicality and reliability of this research will be shown and it will be defined how it was implemented through the whole research process.

#### 3.1 Research task and question

The aim of this case study is to examine how the interaction between parents and the baby can be strengthened through music-making in a group context. Even though there are a great number of studies and theories covering the basis of the importance of mother-infant early interaction (Ainsworth et. al, 1978; Bowlby, 1969; 1973; 1980; Erikson, 1950; Mäntymaa, 2006; Piaget 1971; Särkämö et. al, 2013) and about the strong evidence of the positive impact that music can have in a communicative context, to regulate emotions (Saarikallio, 2007), supporting the early interaction (Marjanen, 2009) and overall, music used in improving health and well-being (Langston et al., 2008; WHO, 2019), this case study focuses on providing more understanding and examine families' experiences in music-making supporting the early interaction in the group context.

There is strong evidence of the consequences of a poor-quality mother-infant early interaction and the kind of negative consequences it will have in a child's psychological development connected to brain development and child's whole emotional development. However, the evidence is strongly supporting the fact that a warm, good, strong, reciprocal, and communicative connection can instead have a positive impact for the early interaction experiences and child's whole

development. (Ainsworth et al.1978; Bowlby, 1969; 1973; 1980; Erikson, 1950; Emde, 1998; Emde et. al, 2001; Piaget 1971.)

In addition, later it will be brought out what kind of support families get in child health clinic check-ups and family training sessions and moreover it will be discussed about the effect the competence of music educators could have in interprofessional teams in encountering families, promoting, and strengthening mother-infant early interaction in a group context.

The research question is:

How the interaction between parents and the baby can be strengthened through music-making in a group context?

### 3.2 Methodological starting points

This empirical research is a qualitative study using a case study approach (Eriksson and Koistinen, 2014, pp. 11–12). The meaning of qualitative research is to build knowledge and generate meanings by exploring, explaining and describing dimensions of human's lives and social worlds (Fossey et al., 2002, pp. 717–732; Leavy, 2017, p. 9). Qualitative research is an umbrella term to different types of studies and the main research purpose is not to find one single way or one truth but making new observations about the subject or the phenomenon. A qualitative case study focuses on answering why and how, and it cannot necessarily be generalised to the wider population. (Eriksson and Koistinen, 2014, p. 4.) The qualitative case study approach gives an opportunity for the researcher to examine the research problem deeper by understanding and explaining more about the research problem (Baxter and Jack, 2008, pp. 544–599).

The aim of this research is to examine experiences and study how music-making can strengthen the mother-infant early interaction in a group context. A qualitative case study approach was a natural choice for this study where the aim is to examine experiences and try to understand the effect of these approaches in the group context. The research process took about 22 months starting in January 2021 with bringing together thoughts on the possible topics and ideas, selecting the topic from them and applying to the master studies. The research topic was approved in March-April 2021 and the conceptual framework started to form around the topic in the end of 2021 with conducting a literature review by reading various studies, doctoral theses, articles, and theories related to the topic. The study group was aimed to organise in March 2022, but the then current Covid situation in Finland was not favourable to group gatherings, so it was postponed to May 2022. Luckily the pandemic situation allowed the group to gather safely. The video-observations were made to examine music-making in the group and the interview data was collected in June 2022. The data analysing process started in August 2022 and was completed by the end of October 2022.

I have written the pertaining Bachelor thesis about music with mothers-to be concept, which was also a qualitative case study for pregnant mothers and their spouses. In the previous thesis I ended up defining and setting aims for the musical group for expecting parents. After having the study group in a music educational setting, I wanted to study how music could be used as an approach for promoting health and well-being by strengthening the early parent-infant interaction. In the discussion section of my previous thesis left me to wonder whether groups organised in a music institute or in another private institutional setting, reach up to those families as well who have fewer reserves of strength and more difficulties to find support themselves

### 3.3 Data Collection

My educational background is based on music and music pedagogy specialising in early childhood music education and the community music. In addition, I have a degree in vocal pedagogy. In Finland, I have worked over 10 years with families and small children in music education. I want to bring my expertise in music pedagogy and the work I have done encountering hundreds of families in my previous work to help new parents to create a stronger early interaction connection, give the concrete tools to transfer their loving emotions to the baby and help the parents to regulate the babies' emotions by using musical approaches.

The group was organised in an artificial setting in collaboration with the Metropolia University of Applied Sciences. The sampling of the study group followed the convenience sampling style where the musical group was advertised on different Facebook groups aimed at families with small children. Leavy (2017) writes that in the convenience sampling the researcher looks “for the best cases within the larger group that you have access to” to find participants for case study. The advertisement stated that the group is intended for babies from one to six months and for the baby's mother or primary caregiver. (Leavy, 2017, p.149.) A limit up to 12 families to participate was set for the group, in order to avoid having too big a group, so it would be possible to interact with all the mothers and babies in the best possible manner. However, not much advertisement was needed because the group was already filled with 12 families in 24 hours. One mother and baby cancelled their participation later due to sickness, so the total number of participants was 11. The families met four times, once in a week, in 35-minute music sessions. Eleven mothers and eleven babies, aged between 1-6 months, participated in the group. The Group sessions were organised so that the mothers would have an easy access to come with strollers and the atmosphere would be welcoming every time they came. A big, colourful blanket was placed in the middle of the floor where the mothers could easily sit and lay the babies down.

The musical baby group sessions were built on a pedagogical learner-centred view where the plan of the music session worked as a tool and guidance for the leader to work with, which allowed the leader to make changes in the plan, if needed (Huhtinen-Hilden and Pitt, 2018). The pedagogical improvisation is a way to take impulses, listen and react to the group and answer their needs. It is important to the leader to take care of how to guide and lead the group in a way that it opens possibilities for experiences and meaningful encounters. The structure of the musical sessions with parents and babies were carefully planned and the goals were written out in every section. All the parts of the session were aiming at strengthening the early interaction between mothers and babies yet additionally helping the mothers to interact with each other's and the others' babies, enabling a well-functioning and mutually supportive group. In the session plan there was room for pedagogical improvisation and sensitivity for living in a moment as well, meaning that if the leader felt intuitively that the group or the babies' alertness needed something to be changed, the plan was flexible for that. (Huhtinen-Hilden, 2017, pp.389–411.) The session plan was made in a way that different styles of experiencing or making music alternated naturally for example using dance and movement, playing, making nursery rhymes together, singing and playing small percussion instruments together. The way the different parts of the plan moved naturally and in a sensitive way to another was also planned well. (Huhtinen-Hilden and Pitt, 2018, pp.100–131.)

The music sessions were built on using traditional Finnish folk songs and lullabies, Finnish poems, and songs for children. Mothers were encouraged to sing or hum along with the songs by the leader telling the mothers how babies love listening to their own mothers' voices and the voices might be even the most beautiful and mesmerising thing their baby has ever heard (Huotilainen, 2019, pp. 121–129; Persico et. al, 2017). Lullabies were also sung using A and U vocals to emphasise the idea that it is not necessarily needed to have any words for transferring emotions to the baby (Baker and Mackinlay, 2011; pp.69–89; Huhtinen-Hilden and Pitt, 2018, pp.100–111; Persico et. al, 2017). Giving instructions that by changing the tempo, volume or intonation in speech or songs,

it gave mothers tools to make more colours when interacting with their babies (Young, 2015, pp. 281–291). In addition, dance and movement with music were used to interact and encounter with others by dancing in circles and in lines families facing each other's in pairs. This way it made the mothers and babies to interact with each other, too. In dance and movement parts babies were able to feel the rhythm and the quality of the movement bodily by mother's movement from rocking to more rhythmic movements. Dancing and moving together was also a pedagogical way to make babies and adults feel more togetherness and cooperate better in the group. (Cirelli et al. 2014.)

A major goal in the group was also to help the mothers to verbalise qualities that they have started to recognise in their babies (Lok et.al, 2006). On the first session they were not given any words beforehand, but they could talk freely about their baby. The second time they were given some helpful adjectives on a board that they could use if they wanted. With these describing words the group made music together by tapping and touching the rhythms of the words to babies' bodies. The aim of this exercise was to combine eye contact, vocal expression and touch in interaction.

With every quality the mothers were naming, a discussion was had in the group whether the others were recognising the same features and qualities in their babies. This kind of approach made it possible for the mothers to share experiences and emotions together and a way to realise that sometimes mother's and baby's personalities or temperaments are not being in synchronised. (Kendall-Tackett, 2010, pp. 25–40.) The musical sessions ended up every week the same way asking the mothers if they remembered any lullabies they were sung to as babies. These familiar and new lullabies were sung together verbally, by humming and using different vowel sounds. (Baker and Mackinlay, 2011; Huhtinen-Hilden and Pitt, 2018, pp. 89-99; Persico et. al, 2017.)

### 3.4 Data Analysis

Analysing the data is a part in the qualitative study where the researcher makes notes, memos and codes for the transcribed data and starts to make interpretations. Leavy (2017) writes “The process of data analysis and interpretation helps us to answer the question what does it all mean?” (Leavy, 2017, p.150). Semi-structured questions enable to ask the participants a set of open-ended questions and to follow them with more in-depth questions to explore more of their thoughts and the topic of the question (Paavilainen, 2012, p.37). Semi-structured interview method was used in this case study, because it is a good way to explore participant’s thoughts, beliefs, and experiences. It is important for the researcher to follow the interview guide but there is still room for autonomy to stray from it and ask deeper questions about other topics the theme seems to be guided to. (Tuomi and Sarajärvi, 2018.) In this study the conceptual framework guided the interview questions and the seven questions for the semi-structured interviews were made leaning on to the conceptual framework and the research question, even though the framework in that time was still in progress. Semi-structured interviews were made personally for four mothers in the group. Further and clarifying questions were made in between the main interview questions to find out more about the interviewee's thoughts and to clarify what has been said. All the participants for the interviews had signed a research content form for the agreement to take part to the interviews. (See Leavy, 2017, pp. 138–142.) The interviews were made on Zoom, and they were video recorded so both the interviewer and the interviewee could see each other’s faces. Interviews lasted from 20 to 50 minutes.

After all the interviews were conducted, the data was transcribed, changed to a text-form (See Leavy, 2017, p. 142; Vilka, 2021). It takes a lot of time for the researcher to write in a text form all the interviews, but also at the same time it gives a great opportunity to get deeper to the data and get to know it better. Some of the interviews included a lot of sentences and ideas that did not deal with the

subject or the asked question. (Vilkkä, 2021.) It is important to do the transcription word for word, however, those words and invalid sentences were left outside in transcription, which did not really deal about the topic and were more likely considered as a small talk. In the semi-structured interviews, 16 pages of transcription data was gathered. All the details of the interview participants were removed and pseudonymised, so they could not be identified. The data of the interviews were coded with P1, P2, P3 and P4, as a chronological order, where P1 was the first interview made and P4 was the last. (See Leavy, 2017, p. 35; Vilkkä, 2021.)

After the interviews transcriptions were made, the data was analysed applying a qualitative thematic analysis. A thematic analysis is a method used to find the essential and important themes for the research question. (Eskola & Suoranta 2008, 174–180.) Thematic analysis is one of the data analysis methods used in qualitative research and it is a form of content analysis to organise and describe the data (Tuomi and Sarajärvi, 2018). Most of the qualitative research analysing methods are based on the content analysing. The aim of qualitative content analysis is to create a verbal and clear description of the phenomenon being studied. It can be used as a single content analysing method itself for the data or use it more as a theoretical framework for the analysing process. (Tuomi and Sarajärvi, 2018.) Here below are the Figures 1 and 2 to explain how the thematic analysis in this study was conducted.



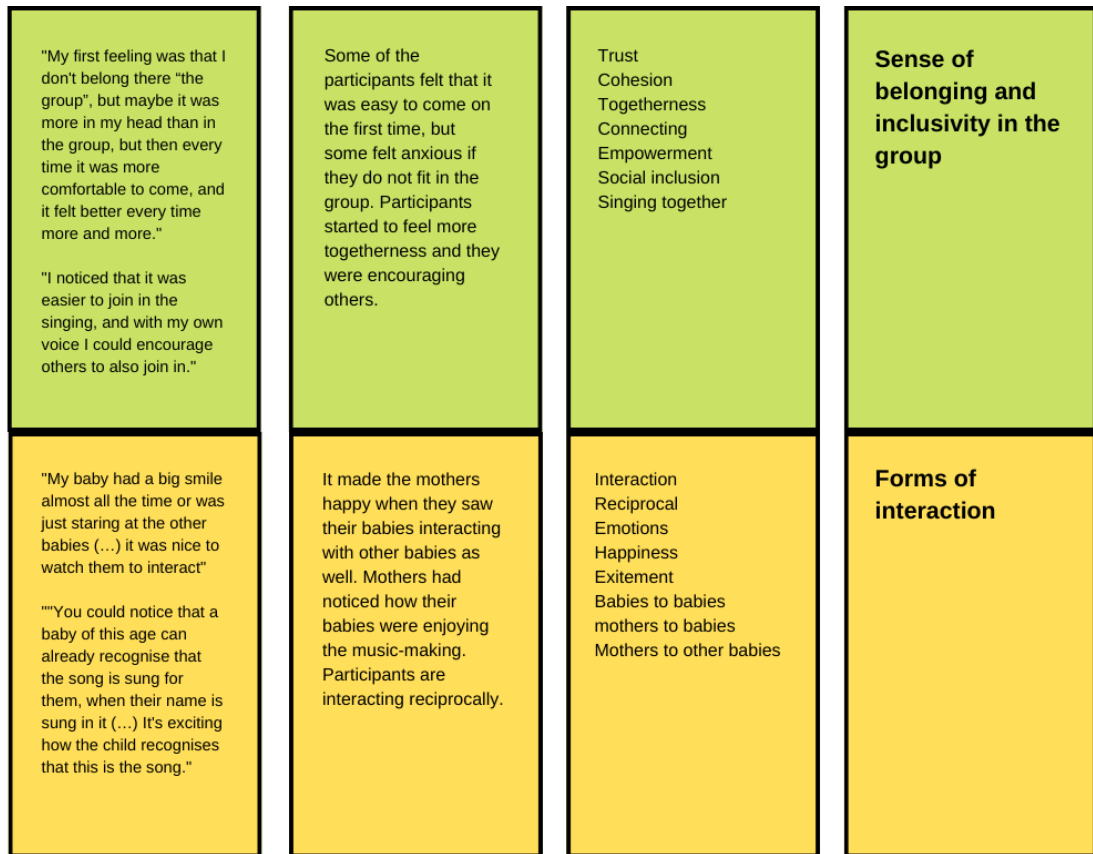


Figure 1. This example demonstrates the thematic data analysis process in this study, how the coding was done and grouped together.

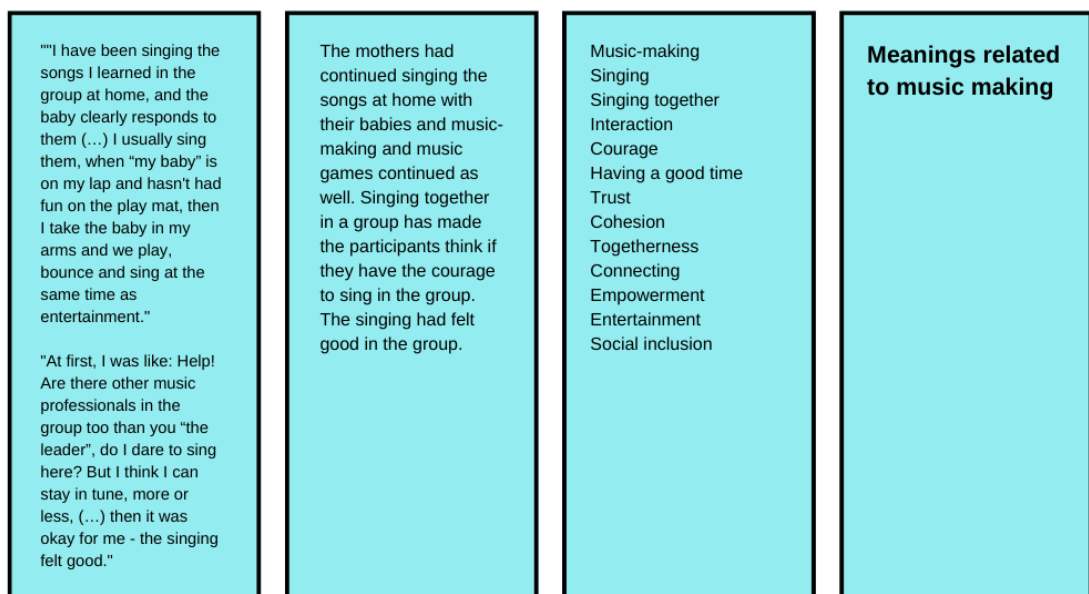


Figure 2. The second example of the thematic data analysis process demonstrates how the coding was done and grouped together.

The thematic analysis in this study was data-driven. In thematic analysis, the themes are not the same as the themes made in the beginning of the study leaning on the conceptual framework and making the ground for the interview questions. It is important for the researcher to make this difference clear and follow the themes emerging from the theme. In the data analysis, the conceptual framework and the data interact to produce systematic categories of content from which the results can be examined, and conclusions drawn. (Tuomi and Saarijärvi, 2018.)

In addition, the musical baby group sessions were video recorded to monitor the interaction situations and to observe how music-making affected the interaction between the participants (the mothers and the babies) and the leader. The video analysis was data-driven and it aimed precisely to analyse the forms of interaction in the group. In the video data analysis, preliminary and general notes were made, starting with who interacted with whom and the codes based on interaction on different levels helping to interpret the interview data.

### 3.5 Research ethics

Already in the beginning, when a researcher starts to plan and design a study, ethical considerations come into the picture. The values researchers bring to the research shape naturally all the decisions which are made in the consideration of the study. Even a researcher's choice of study topic is influenced by the researcher's previous research, interests, values, beliefs, and way of observing the world. (Leavy, 2017, pp. 24–25.) Good research is guided by an ethical commitment (Tuomi and Saarijärvi, 2018). Reliable studies made in Finland are committed to the general ethical principles which are guided by the Finnish National Board on Research Integrity. Ethical instructions for the researchers in all disciplines have been made to follow by TENK. (TENK, 2012.) Research ethics should be involved in the whole research process starting from the beginning and planning (Vilkka, 2021).

From the point of view of research integrity, the premises for the responsible conduct of research are (TENK 2012):

1. The research follows the principles that are endorsed by the research community, that is, integrity, meticulousness, and accuracy in conducting research, and in recording, presenting, and evaluating the research results.
2. The methods applied for data acquisition as well as for research and evaluation, conform to scientific criteria and are ethically sustainable. When publishing the research results, the results are communicated in an open and responsible fashion that is intrinsic to the dissemination of scientific knowledge.
3. The researcher takes due account of the work and achievements of other researchers by respecting their work, citing their publications appropriately, and by giving their achievements the credit and weight they deserve in carrying out the researcher's own research and publishing its results.
4. The researcher complies with the standards set for scientific knowledge in planning and conducting the research, in reporting the research results and in recording the data obtained during the research.
5. The necessary research permits have been acquired and the preliminary ethical review that is required for certain fields of research has been conducted.
6. Before beginning the research or recruiting the researchers, all parties within the research project or team (the employer, the principal investigator, and the team members) agree on the researchers' rights, responsibilities, and obligations, principles concerning authorship, and questions concerning archiving and accessing the data. These agreements may be further specified during the course of the research.

7. Sources of financing, conflicts of interest or other commitments relevant to the conduct of research are announced to all members of the research project and reported when publishing the research results.

(TENK, 2012, pp.30–31.)

The reliability of the research must be assessed in the study. There is no clear instructions or guidelines for assessing reliability in qualitative study, but the study needs to be assessed as whole in a big picture. In a quantitative research numbers and measurements can be assessed based on whether they answer the questions and whether the measurements can be repeated and are in that way reliable. In qualitative research the case cannot be assessed in a same light as in a quantitative study approach, so the reliability and validity cannot be evaluated in the same way. In a qualitative study the best indicator of reliability is the researcher themselves with an honest and ethical approach. (Vilkka, 2021.)

The participation in the study group was voluntary and all participants were informed about the research by sending them participant information forms and participant consent forms beforehand by email. Information forms were signed voluntarily. (Leavy, 2017, pp. 32–33.) Processing of personal data was taken care of by pseudonymising all the parts by codes that could be identified. For ethical reasons it is important that all the participants may stay anonymous. (Leavy, 2017, p. 35.) In addition, ethical and scientific evaluation was made when choosing literature for the study. All the literature sources were carefully chosen favouring peer-reviewed articles, recognised theories of developmental psychologists and doctoral theses. Some books, journal articles and literature from the leading Finnish music educators, psychologists were used as reference. In addition, topical newspaper and internet article were used to discuss about the current situation in the Finnish society and various policies and sections of law were referred to. Theses of the same level were not used as sources and the use

of pro-graduate theses was also carefully considered. References are properly indicated in the study. (See Leavy, 2017, pp.24–38.)

When assessing the reliability of the study, the impartiality aspect should also be considered (Vilkka, 2021). In this study, the researcher acted in two roles in relation to the group: as the researcher and as the group leader. This can be seen as an opportunity, particularly in the observation and facilitation of the group, but it must be also considered when regarding the ethical aspects of the research. It may have unintended effects on the research interpretation in data analysing, if not carefully reviewed, and on the data collection when interviewer is asking questions of the group experiences and has been the leader of the group as well. The double role of the researcher must be made clear to the interviewees. Although research should be value-free, the values of the researcher influence the choices made in the research. In research, it is important to make all aspects of the research transparent, which is linked to research ethics. (Vilkka, 2021.)

## 4 Findings

This chapter focuses on presenting the findings of the mothers' interviews thematically and to make an overview reflecting the common ideas in the conceptual framework. Video observation was used to examine the interaction between the group members (the mothers, the babies, and the leader) while making music, and these findings will be presented in the second chapter of the findings, the forms of interaction together with the interview data. Furthermore, semi-structured interviews were made with four participants. The data collected through interviews and video-observation were both analysed using thematic content analysis. The aim of this research was to examine how the interaction between parents and the baby can be strengthened through music-making in a group context. Direct quotes of the interviews are also used to present the results of the study to bring more content, understanding and depth for the analysis. If a definition has been added to the text to clarify for example what the interviewee has meant by the word "it" or "they", this is indicated in square brackets. If a sentence in an interview quote is deleted as irrelevant, it is marked with (...). To ensure the anonymity of the interviewees, the interviews are coded P1, P2, P3 and P4 with the idea that the participants are listed in chronological order according to the time the interviews were made.

### 4.1 Sense of belonging and inclusivity in the group

The first theme that naturally emerged in the interview data was a feeling of sense of belonging and inclusivity in the group (Coleman, 1988; Putnam, 2000; Ruuskanen, 2001; Wenger, 2004). This theme came from three different perspectives: did the mother herself have a feeling of sense of belonging in the group in relation to other adults, did the mother feel that the baby, their mood and behaviour were considered, did the leader and the group were being sensitive and make the mother feel they were considered and welcomed together with the baby as part of the group, in a safe and tolerant atmosphere. In the research

question about how the interaction between parents and the baby can be strengthened through music-making in a group context, the sense of belonging in the group emerges as a significant factor to enable the shared and interactive musical processes. (Isola et.al, 2017; Koelsch, 2013; Leemann et al., 2015; North et al. 2000.)

Overall, the experience of the four-time musical baby group sessions was good, inspiring and meaningful. All the four mothers described their feelings of the group being only positive. Two mothers mentioned the group being their first experience of seeing other mothers and babies in a group context. The pandemic had also made it difficult for some to naturally meet other families with small babies, so the social context of seeing other mothers with babies was, all in all, a waited and expected moment. Mothers' need of encountering other families in a similar life situation showed as theme that brought them joy and helped to increase social capital for them, when feeling a sense of belonging in the group (Isola et.al., 2017; Putnam, 2000; Ruuskanen, 2001). The pandemic was also mentioned in three of four interviews describing the situation families not being able to meet easily other baby families.

It was really nice because we hadn't had any kind of baby contact or other activities, because the baby is still so small and the covid (...) so it was really nice to just join the group. It felt like it was a low-threshold kind of thing to take part and to try something more social. Quite an approachable thing. (P4)

The first factor emerging through data, affecting on the sense of belonging (Putnam, 2000; Wenger, 2004; Ruuskanen, 2001; Coleman, 1988) in the group context was mother's whether doubtful thoughts or negative preconceptions of herself as working in a group. Joining the group activities on the first time made one mother feel stress, but it became easier with time. As the group became more familiar with the group activities, the group environment and its members, it was also easier for the mother to integrate into the group and to start enjoying more. The idea that she was in the group with the baby and her role being a mother also helped her to enjoy the group more. (Coleman, 1988; Putnam, 2000;

Ruuskanen, 2001.) Additionally, the community music setting (Hallam and MacDonald, 2008), singing, playing, dancing and musicking together made the whole experience more positive. Musical activities and coming together with the music in a way that mothers can join in their own terms and share same experiences made the mothers feel more relaxed and accepted in the group. (Huhtinen-Hilden and Isola, 2019; Judd and Pooley, 2013; Kirschner and Tomasello, 2010; Koelsch, 2013; Mithen, 2006; North et al. 2000; Scherer, 2004; WHO, 2019.) All the mothers wished the group to continue after the four-time sessions.

My first feeling was that I don't belong there "the group", but maybe it was more in my head than in the group, but then every time it was more comfortable to come, and it felt better every time more and more. It's a pity that they "musical sessions" ended. (P3)

In addition, three of four mothers had worries whether their baby would behave in an expected way in a social situation e.g., crying and not focusing on the musical activities. They were worried whether the child's behaviour would disturb the other participants. Some of the babies had naptimes at the music sessions and this was a factor that made some mothers to think if they could join the group. Increasing social capital and building a sense of belonging in a group involves creating and understanding community norms and how you adapt to the roles in the group (Coleman, 1988; Putnam 2000; Ruuskanen, 2001). Families seem to think a lot where they can go with their baby, as concerns about baby misbehaviour are raised in the norms of the Finnish society, where it is appropriate to bring a baby. Even if the group activities are aimed for baby families, the concern about whether my baby will behave worse than others is clearly linked to preconceptions about what the norms and rules might be in the group or not (Ruuskanen, 2001).

Maybe I was feeling a little bit nervous at the first time, if the child would be little bit cranky and tired (...) but then I realised that "the child" is able to concentrate to the music (...) So, in the beginning there was a little bit of stress if the child cries or cannot concentrate,



but then you realise... yes, it happens, and then I just give a pacifier or something else. (P2)

Moreover, a factor that affected on the feeling of sense of belonging in the group context (Coleman, 1988; Putnam, 2000; Ruuskanen, 2001; Wenger, 2004) was mothers' being concerned whether the baby would enjoy the music and musical activities. It brought them joy seeing how the babies were fascinated the live music and musical activities made in the group, and the music being able to fully capture the babies' attention and even regulate their emotions (Marjanen, 2009; Saarikallio 2007; Scherer, 2004; Särkämö et al. 2013). "It's a different thing to watch a music video for babies on YouTube, when it's actually live and the child was clearly interested in music." (P2)

The leader seemed to be a factor enabling a safe and tolerant atmosphere for the mother and the baby together. The leader of the group had a great impact on the participants having a sense of belonging in the group by using pedagogical sensitivity and understanding the needs of the group in certain times. (Coleman, 1988; Huhtinen-Hilden and Pitt, 2018; Jordan-Kilkki and Pruuki, 2013.) The leader had helped the mothers e.g., to relax in the beginning by mentioning, that there is no need to worry if babies are crying or if they need to be fed. The leader was able to create a safe environment in the group where everybody was reciprocally in interaction to each other by emphasising the equality and openness by showing it in a concrete way when leading the musical sessions and verbalising it to the participants (Coleman, 1988; Jordan-Kilkki and Pruuki, 2013; Putnam, 2000; Ruuskanen, 2001). One of the mothers emphasised many times this factor being a key to releasing their stress.

You "the leader" made it so clear right from the start that this "group" is on the child's terms, that everyone can breastfeed or if the baby cries or has something, that it was really good that every mother realises that there is nothing to be afraid of. (P1)

Additionally, the group was a supportive element for the mother-infant interaction in the session when singing and making music together, and it was important for the participants to feel trust towards the other participants of the group (Koelsch, 2013; North et al. 2000; Ruuskanen, 2001; Wenger, 2004). The facilitator helped participants, considering them as individuals and together as a group, to feel welcomed in the group and enabled each of them feeling social inclusion in the group sharing experiences, which allowed them to feel more sense of belonging (Huhtinen-Hilden and Isola, 2019; Huhtinen-Hilden and Pitt, 2018; Isola et.al, 2017; Jordan-Kilkki and Pruuki, 2013; Leemann et al., 2015).

In the data, sense of belonging and inclusivity appears also as a team spirit, feeling togetherness and supporting other participants (Putnam, 2000). The self-consciousness of participants' own musicality and vocal skills seemed to be a factor influencing how mothers compared themselves in relation to the group and the feeling of sense of belonging. The Community music setting idea of singing, dancing, listening and making music together helped to create a better group spirit, trust and cooperation (Hallam and MacDonald, 2008; Koelsch, 2013). However, their own voice and singing seemed also be a way to support other participants to join singing. It was seen as positive factor that by listening to others it is easier to sing along. One mother described that her feelings of insecurity in singing became, but eventually it became a strength to support other mothers in the group. (Elliot, 2004; Hallam and MacDonald, 2008; Judd and Pooley, 2013.)

I noticed that it was easier to join in the singing, and with my own voice I could encourage others to also join in. In the beginning I felt that not all the people did dare to sing right away. (P2)

Overall, what united the sense of belonging in the group as well was the fact that despite the participants had different backgrounds, being less or more familiar with the music, already having a child before or other elements, they were all united by a new-born baby with whom they wanted to spend time and interact by making music together. All the mothers had a common interest which helped feel

more sense of belonging when formulating a group. (Wenger, 2004.) “It was quite fun to have different people in the group. But I felt the baby is a unifying factor, so it doesn't matter what anyone's singing background is.” (P1)

When the mothers saw and recognised how the music helped them to interact with their babies (Sroufe et. al, 1982; 1995; Cohn and Tronick, 1989) and to enjoy making music together, even they had their own insecurities about being in the group or worrying about whether their baby will behave in an expected way, the musical experiences helped them both overcome the struggles together (Mäntymaa, 2006) and enjoy the having lovely time in interactive music sessions (Judd and Pooley, 2013).

I am usually very sceptical about baby groups in general, but I wanted to try this group anyway, and it was much more fun than I thought it would be (...) you can see that the baby enjoys it, and you can see that it is useful, even if it doesn't show in concrete right away. (P3)

The key element in the mother-infant mutual adoption (Mäntymaa, 2006) to the group and feeling sense of belonging was the pedagogical sensitivity when leader giving instructions and guiding the group (Huhtinen-Hilden, 2017; Putnam, 2000). The leader played also an important role of releasing mothers' concerns of the babies' possible bad behaviour. Additionally, the team spirit and the support of the group emerged as one of the things that helped to feel more sense of belonging (Putnam, 2000). All these factors intertwined tightly together each component contributing to the others creating an important whole and a meaningful sense of belonging in the group. Huhtinen-Hilden (2017) states that to open possibilities for experiences and meaningful encounters, it is important for the leader to care how to lead the group by using pedagogical improvisation and take impulses, listen and react to the group and answer their needs (Huhtinen-Hilden, 2017).

Hence, the findings of this study showed that three factors that affected sense of belonging and inclusivity were mothers' preconceptions of her own relations to other mothers and adaption to the group, mothers' concerns about the baby's possible bad mood and behaviour, and mother's and baby's mutually adaption to the group in a safe and tolerant atmosphere. These different factors are illustrated in the figure 3 below.

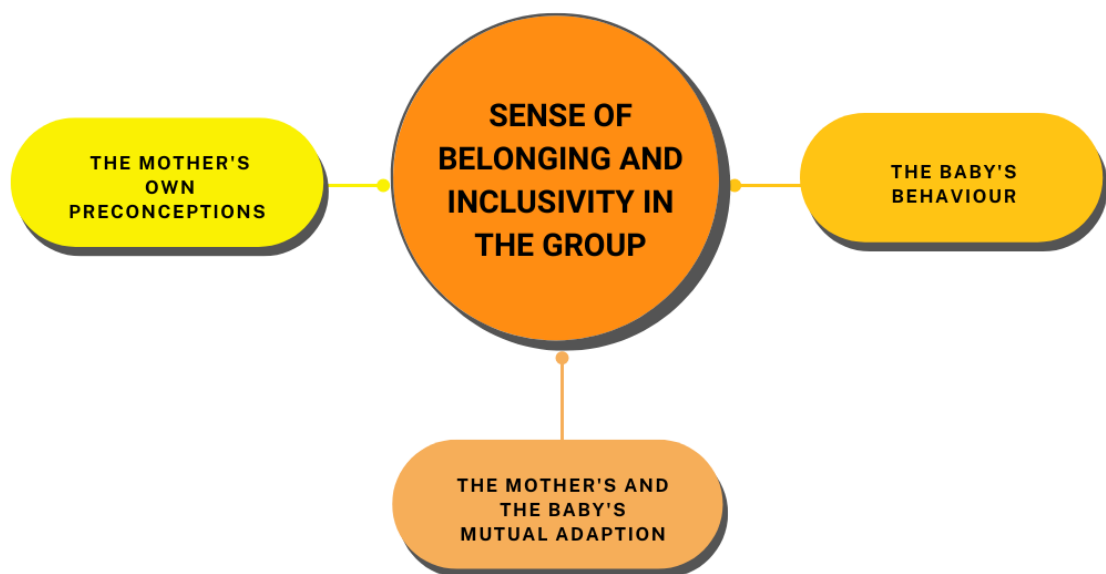


Figure 3: Sense of belonging and inclusivity in the group

## 4.2 Forms of interaction

The second theme that emerged through the data analysis were the forms of interaction and interaction showing on several levels. In a group context interaction emerges as a clear perspective in relation to the research question, which aims to examine how the interaction between parents and the baby can be strengthened through music-making in the group context. Interaction is key element when people gather and the enabler of making music and singing

together, the group cooperation and the factor to examine when aiming to strengthen the parent-infant early interaction and attachment bond. Interaction on several levels emerges through the semi-structured interview answers as well as in the video observations showing, how all the group members are interacting reciprocally with each other. These several levels of interaction were mothers interacting with their own babies and babies with their own mothers, mothers interacting reciprocally with others' babies, mothers interacting with other mothers, mothers interacting with the group leader and the group leader interacting mutually with all the mothers and the babies.

In the mother-baby group music was also a communicative tool for the participants, the babies and the leader to interact mutually, get to know and to bond with each other as a group (Huhtinen-Hilden and Pitt, 2018). Music enabled the interaction on several levels to happen in a natural way, when music was leading the situation in multiple layers directing the focus in the group whether working in pairs or in all together in a circle or just the mother and the baby face-to-face, regulating the levels of alertness and regulating emotions (Hallam and MacDonald, 2008; Koelsch, 2014; 2015). Mothers enjoyed seeing their babies interacting through music and watching them reacting to it. They were delighted also to see their babies interacting with other people around (Gerhardt, 2007; Överlund, 2009), not just family members.

The song we started with every time, where we sing the baby's own name, you could notice that a baby of this age can already recognise that the song is sung for them, when their name is sung in it (...) It's exciting how the child recognises that this is the song. (P2)

Some of the babies were also interacting with each other when laying on the blanket or in the group dances if they were interacting face-to-face with each other's on their mothers' laps and moving together with the beat.

My baby was so excited, so that of course it made me very happy and especially as I have never seen "my baby" in such social situations. My baby had a big smile almost all the time or was just

staring at the other babies (...) it was nice to watch them to interact.  
(P4)

The possibility to exchange ideas and experiences about the everyday life with small babies delighted the mothers as well. Two of the four mothers mentioned going for a cup of coffee together after the group session. "It was really nice to see that the child liked it and I also liked seeing families in the same life situation." (P2) Hence, the interactive situations continued naturally after the groups.

The forms of interaction appeared several levels in the data in many perspectives. When you look at the activities among people and people gathering, it is very natural and typical to expect the interaction angle to emerge through. However, it can be concluded that interaction was examined in four levels on interaction: mothers interacting reciprocally with their own babies, mothers interacting reciprocally with other mothers, babies interacting reciprocally with other babies and the leader interacting reciprocally with the mothers and the babies. The figure 4 below illustrates these six factors.

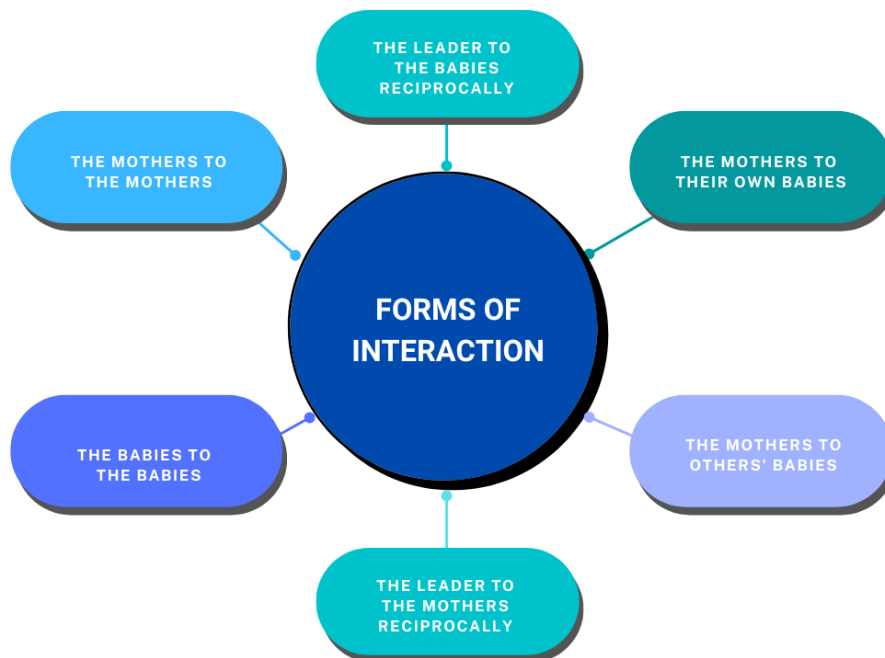


Figure 4: The Forms of interaction showing the interaction emerging on several levels in the group

### 4.3 Meanings related to music making

The third theme emerging through the data was the meanings related to music making. In the research question the aim is to examine how musical approaches could strengthen the mother-infant early interaction. The music forms the clue for many factors in the social interaction, regulating the level of alertness and regulating emotions, strengthening the sense of belonging and increasing social capital in the group context, and it is the approach in this study to enable to strengthen the early interaction connection.

All the mothers continued using songs, poems or dances they had learned in the group. One mother of the fourth reported not being using songs or music games before the musical group. The three others had been using music to a certain extent. One mother mentioned her singing with her baby every day. All mothers were encouraged to use music for as a non-verbal communication with their babies e.g., for entertainment and amusement, cheering up and calming down, and in bedtime situations by singing lullabies to help the babies to fall asleep (Baker and Mackinlay, 2011; Helliwell and Putnam, 2004; Persico et al. 2017; Putnam, 2000; Ruuskanen, 2001; Sroufe et. al, 1995; 1982; Cohn and Tronick, 1989). Mothers got concrete tools to interact and regulate the emotions of the babies and adapt their own rhythm and emotional state by using musical approaches (Silvén and Kouvo, 2008).

I have been singing the songs I learned in the group at home, and the baby clearly responds to them (...) I usually sing them, when "my baby" is on my lap and hasn't had fun on the play mat, then I take the baby in my arms and we play, bounce and sing at the same time as entertainment. (P3)

Three of the four interviewed were first time mothers, and one mother had a child before. Three mothers felt of having a warm interaction relationship with their babies, but support and concrete piece of advice could be useful to interpret or regulate their baby's emotions (Putnam, 2000; Ruuskanen, 2001). One

interviewed mother described been looking for support for the early interaction connection and she had asked help for the current situation in the public health care. They had been sent to a therapeutic family care programme by a psychologist to strengthen the early interaction connection. The mother felt they did not get any concrete help in the therapeutic family care to the mother-infant early interaction.

I did go about four times to the therapeutic family care, but I feel that it was more like for my own reflection. I thought it would be more like that we would be working on different things with me and “my baby” and I would really get something concrete to take home to improve our interaction, but I didn't get that from there, it was more like me thinking about why I feel this way and why I think things are the way they are. I stopped going there, when I didn't feel that it had any benefits that I thought I would get from it. (P3)

The musical mother-baby group had given the mother concrete tools to interact, sing and play with her baby and she was encouraged to use music in everyday situations (Marjanen, 2009; Putnam, 2009; Ruuskanen, 2001). “I've never sung before except maybe occasionally something small during a diaper change. I didn't sing any songs before...”. (P3)

Mothers seemed also to be aware of their own musicality and possible musical skills. One mother explained how singing is naturally to her, especially with her baby. Two of the mothers described them preferring to listen the participants' singing, and by listening they created their assumptions of their own singing voice. One mother described that she doesn't want to sing at home with her children, but she rather puts radio on, and they listen to music together instead. Singing was mentioned by all the mothers, weather describing that it felt natural to sing with others, or some described not being musical at all.

At first, I was like: Help! Are there other music professionals in the group too than you “the leader”, do I dare to sing here? But I think I can stay in tune, more or less, (...) then it was okay for me - the singing felt good. (P2)



For the participants it was helpful that the same songs were repeating and varying during the four times group gatherings. It helped them to join in when the music was familiar, and it has helped them to learn the songs better (Coleman, 1988).

It was nice to sing the same songs every time, so you kind of learned the songs, so it wasn't like every time there were new, different songs. Otherwise, you wouldn't have remembered any of them, and it was nice to move and make movements to music with the child. I feel that it was a good thing for us. (P2)

In addition, the mothers were encouraged to use their speech voice in a colourful way to enrich the interaction situations (Marjanen, 2009). One mother told especially about paying attention to the intonation when speaking to her baby and it had affected on other siblings too at home:

It was quite funny when you "the leader" said that babies enjoy also if you use different tones of voice and if you are a bit more enthusiastic, that you get a better contact with the baby. So, I feel that I'm a person who uses different tones in my voice (...), but I used it even more and the result was that my firstborn became jealous of me for the first time because of the baby. Then I decided to take more of those excited tones for both and wow! What a result!

It was asked in the interview, if the mothers thought this kind of musical baby-mother group could be useful for other families in terms of supporting early interaction. All the four mothers thought it would be useful and it would be a needed group to offer for families who want to strengthen the early interaction connection, especially for parents who do not naturally sing and play with their

babies. One mother thought this kind of group could be useful for fathers as well for getting pieces of advice to interact with the infant, when they try to get to know for the new-born and try to create a stronger bond.

If you are not such a singing or creative person, so I think in such a situation, especially in a group like this would be useful to get a kind of kick start and then you could continue them “songs”. Or if you don’t really know any songs to sing for your baby, then there you learn, and maybe mothers can bond there together and get baby friends and mothers get company. But I feel that I have got the most help for, that I can start to sing the songs myself.

The study clearly revealed that music and music-making can give parents more concrete tools to enrich the early interaction with their babies. More songs and interaction games were used at home with babies after the group, and colourful intonation of speech was used increasingly in the mother-infant interaction moments. Moreover, it was considered important for the learning of music and the songs, that they were repeated and varied many times in the four-time gatherings. See the figure 5 below illustrating the meanings related to music making.

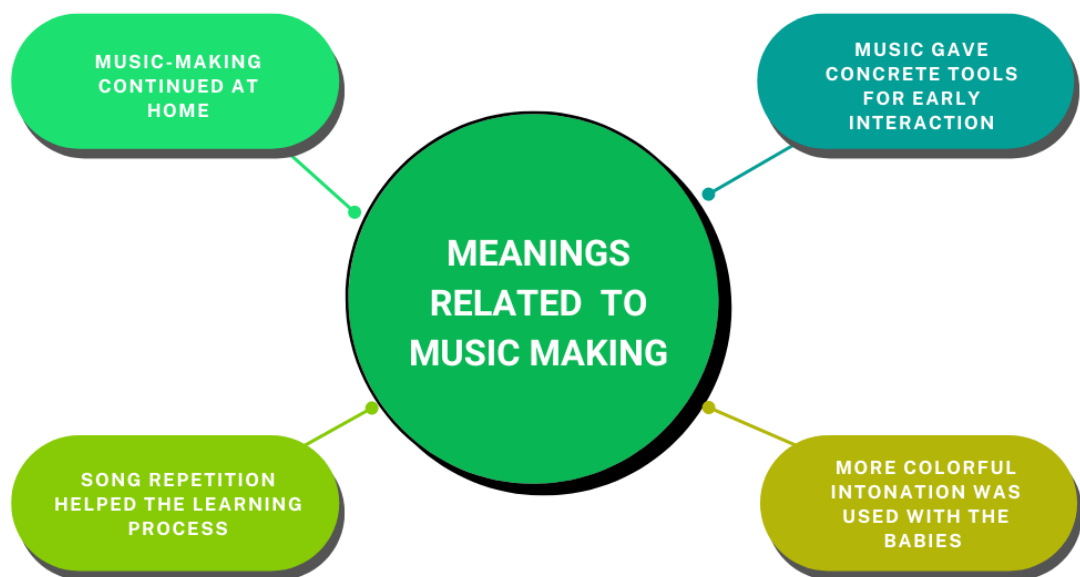


Figure 5: The meanings related to music-making

All the four mothers said they did not remember hearing anything about the importance of the early interaction connection neither in child health clinic checks nor in family training. They described that the checks had been mostly focused on physical measurements. Interaction was not mentioned, or any piece of advice were not given in the public health care even though the guidelines state it is essential to discuss the importance of early interaction in family training and in the child health clinic checks (The Finnish Health Care Act 1326/2010 15 §). One mother remembered reading in the doctor's report how the mother and infant are interacting well. One mother tried to remember whether they had received some website links to read about the early interaction and two mothers mentioned reading literature on their own of the subject during the pregnancy.

I don't remember much about the family training except for things related to childbirth and breastfeeding, but I don't remember that there was much discussion or talk about the early interaction. I read more about it in online, but I have links from everywhere, and it could be that they have given a link to a related topic, but they didn't really talk about it. (P4)

Therefore, the knowledge of the importance of the attachment bond, early interaction connections and concrete advice on how to support them was left for these mothers to take care of themselves. However, the research question did not aim to find out whether the families received support for early interaction or whether its' importance was discussed in public health care, it does provide important insights and basis, why there is a need for musical baby groups promoting and strengthening early interaction in preventive family work.

## 5 Conclusion

The aim of this case study was to explore how the interaction between parents and the baby can be strengthened through music-making in a group context. The study aimed to provide information and perspectives on how music-making and singing in a group with other parents could encourage the parents to sing, play and musicking together with babies to enrich early interaction connection and strengthen the attachment bond. The musical baby group gave mothers concrete tools to interact with their babies, to communicate their feelings and to bring joy and entertainment for daily moments together. Additionally, musical activities provided families non-verbal tools and helped to regulate the baby's emotions. The use of music and songs increased during family interactions even after the group ended.

It is natural to expect interaction to take place when people come together (Newcomb et.al, 1965). However, musical approaches provided an opportunity to share experiences and meanings related to the interaction moments with babies, and in addition to interact and communicate with each other through shared activities (Hallam and MacDonald, 2008; Huhtinen-Hilden and Isola, 2019; Kirschner and Tomasello, 2010). Interaction happened on several levels when all the mothers, babies and the leader interacted reciprocally with each other. Moreover, the group leader's dialogic approach and pedagogical sensitivity in interaction with everyone in the group helped to build a feeling of sense of belonging among the mothers, together with the support of the group (Huhtinen-Hilden, 2017; Jordan-Kilkki and Pruuki, 2013; Putnam, 2000). The way the leader structured the process played a major role in building a sense of belonging and trust (Putnam, 2000; Ruuskanen, 2001), and security in the group and it enabled joyful musical experiences (Huhtinen-Hilden and Pitt, 2018). Music itself can be a versatile approach to support the early interaction (Marjanen, 2009), but in a group context it needs a professional who is familiar with group facilitation and using musical approaches in a group context. Music education is about pedagogical sensitivity, sensing the group and its needs, listening carefully and

reacting to its impulses. Pedagogical approach to the arts refers to the ability of the facilitator to create activities that support the group process, where music or arts help to create experiences and build bridges around goals, such as how music can be used to support the early interaction (Huhtinen-Hilden and Pitt, 2018). It needs a professional facilitator to enable the use of the arts to promote health and well-being, particularly in group activities (Huhtinen-Hilden and Isola, 2019). However, it is not relevant to the group whether the facilitator or the leader is a music or arts professional or not. What is important is that the leader can take a pedagogical or dialogical approach to use arts for promoting health and well-being.

A surprising and alarming finding in the study was that none of the mothers recalled hearing anything about the importance of early interaction. Neither were they given any concrete supportive pieces of advice in family training or in child health clinic check-ups. In addition, the guidelines of the child health clinic work outlines that their aim is to promote the child's physical, psychological, and social growth and development as well as to support parenting. The family training aims to promote prenatal, parent-foetus, early interaction as well. (The Finnish institution of social and welfare.)

Aspects that could have been done or implemented differently in this study are dealing with the angle of diversity of the participants in the study group. In terms of giving more consideration to families coming from more diverse backgrounds when designing the study might have had an impact on the data by bringing a new perspective, such as how families with different languages would have experienced the sense of belonging in the group when Finnish songs are used for supporting early interaction. The participation of families with different languages could also have influenced the leader's pedagogical choices in relation to material options, adding even more non-verbal songs. In addition, families with difficulties may lack the resources to be proactive in finding support or alternative support groups themselves. The need of family support for parenting has also been recognised at the government ministerial level. The ministry of social affairs and health in Finland has stated (2020) that the pandemic has had a significant

impact on the well-being and the rights of children, young people, and families. The exceptional time has put a strain on parents, which increased the need for parenting support as well (The Ministry of Social Affairs and Health in Finland, 2020). Diversity could be increased through different types of cross-sectoral co-operations and communications between health services and organisations to find families in need. Co-operation with child health clinics and family training could be a way to increase the diversity in the groups and accessibility finding families. These cross-sectoral co-operation opportunities would enable the multidisciplinary teams to encounter and help families in many ways.

What is causing the concern about the future of multidisciplinary in the social and health sector is the reform, the new health and social services counties that officially start operating in January 2023. These new counties have plenty of work to figure out in their region, how to create and secure basic social, health and welfare services for people. MOT, the investigative journalism unit of the Finnish Broadcasting Corporation, published a documentary "The really long queue for treatment" in October 2022, with a clear message stating the nurse shortage and shortage of professional healthcare staff being in acute crisis and people's waiting time for example in surgery and health care services is increasing (YLE News, 10/22). This is just an example of the crisis brewing beneath the surface, which the new health and social services counties will have to face and find urgent solutions for by financing and creating new structures. One of the social welfare and healthcare reform aims to include saving money by investing in preventive work and health promotion (The Finnish Government, 2020). There are concerns whether the new counties have required funding and interest to ensure preventing services such as family training, which have been provided less, if at all, during the pandemic, and support services for families. The first years of a child's life are a crucial time to create the foundation in a safe and caring interaction with the parents for a good later growth and development (Ainsworth et. al, 1978; Bowlby, 1969; Erikson, 1950; Mäntymaa, 2006, Mäntymaa et al., 2003; Stern, 1985). Hence, there is no time to wait years in a child's life for all the preventive family services to take shape.

However, the reform may bring new opportunities in the future as well, hoping the new health and social services counties could see the possibilities in multidisciplinary projects in preventive work and cultural well-being services. In their four-year studies, the music educators who specialise in early childhood music education and community music in Finland go deeper in their four-year studies working with different groups of people in interprofessional team using musical approaches, community music, creativity, and arts in a wide range of environments. Moreover, early childhood music educators specialise as well in the holistic development of young children and become experts in group facilitation, which is useful in interprofessional approach when encountering families and leading musical groups. Intake of students specialising in early childhood music education and community music, or other pedagogues or professional groups using arts and creative approaches, need to be increased as well to ensure that Finland has enough professionals who work in interprofessional teams promoting health and well-being in social and health sectors in the future.

## 6 Discussion

The topic of this study how the interaction between parents and the baby can be strengthened through music-making in a group context, has interested me ever since I started to study music education, specialising in early childhood music education and community music. Already during my Bachelor studies, I was fascinated by the impact of music in transferring emotions and enabling early interaction already in the prenatal period. Ever since I finished my bachelor's studies my interest in the importance of early interaction and attachment bond has increased. While working as a music educator closely with families in Finnish music institutes and kindergartens, I became more interested in how creativity, arts and music can be used in preventative family work and how to promote health and well-being among families.

I could not guess when I submitted my research plan and application to my master studies in January 2021 that face-to-face family training and antenatal classes would still be on hold or provided online via YouTube videos in the end of 2022. The topic of my thesis has become even more current, and the number of families who need more support for parenting and strengthening the early interaction relationships has increased. Even the major Finnish newsrooms have written how the pandemic has accelerated more the reduction of family training and antenatal classes more, and families watch YouTube -videos home alone (MTV News 07/22, YLE News 06/22).

Conducting the qualitative case study has not only increased my knowledge of how to design and conduct a study, but it has also broadened my knowledge of the Finnish family support services, the child health clinic system and the laws governing them. In addition, the research has brought to my knowledge more perspectives and new research and evidence to my knowledge of the multiple positive effects of creativity, arts and music-making improving a human being's holistic health and well-being, and the crucial importance of early interaction connections in the early years of children.



As for the ethical evaluation in relation to choosing a research topic, Leavy (2017) writes that it is natural for the researcher's topic to be intuitively driven by the researcher's previous research interests, personal interests, experiences and values, and possible collaborations (Leavy, 2017, p. 54). As a researcher, I am aware that my values in relation to work among families and my previous research experience have influenced my choice of the research topic, and my interest and educational background in music education have guided me to choose for example musical approaches as the perspective for this research. The data collection in this study followed the principles of good scientific ethics e.g., selecting all interviewees randomly from the group. In the semi-structured interviews, I asked the right questions for the study, but in the process, I learned that it is important to ask good clarifying questions to define what the interviewees are saying. Through the interviews, I was able to learn more about the thoughts of the four mothers' everyday life with small babies and their interaction.

In this study, I acted in two roles in relation to the group: as the researcher and the leader of the study group. I found this two-role position as natural, but of course as a researcher it made me think this from the ethical point of view, how different would the mothers' interview answers have been if the interviewer would have acted only in a researcher's role. Although I sensitively raised the issue of having a double role at the beginning of the interviews and described the importance for the study to answer honestly, I think this aspect needs to be considered. It is in the human nature that such factors may influence even unconsciously, how interviewees choose their words. Additionally, it is important to consider that the diversity of the participants was quite minimal in the study group. This aspect might show in the findings that all the families were originally born in Finland and overall, the diversity in the group was not that outstanding.

Leavy (2017) writes about researchers practicing strong objectivity involving "actively acknowledging and accounting for one's biases, values and attitudes". Instead of practicing objectivity and adapting a neutral position in a study process, in a qualitative research process pure objectivity is not something to achieve or even desirable but to value that all people have life experiences, beliefs, and

attitudes how people think, act, and see things. (Leavy, 2017, pp. 38–39.) The fact that I value my life experiences makes me a better researcher interpreting meanings related to the findings. To understand the data and make the conclusions after first transcribing, coding, memo writing and theming the data into categories, it helps to have my own thinking, life and professional experiences when combining the data and the conceptual framework, making links between different categories, and how those two discuss together. Vilkkä (2021) writes that in practice, a study can never be repeated as it is, because each study conducted using a qualitative research method is unique in its entirety (Vilkkä, 2021). The conceptual framework of this study was formed around: research and theories addressing the importance of early interaction connections and attachment bond, building a picture of the Finnish child health clinic system and laws protecting the family support services, defining social capital and the importance of a sense of belonging in our society, creativity and arts improving health and well-being and music and music-making having a strong emotional impact for human's emotions in physiology, experience and expression.

To support parent-child interaction is an important, versatile, and interesting topic and this study has given ideas for further research in the future. This study did not manage to reach diverse families and interprofessional teamwork was not conducted, so I suggest the next research topic is to examine how music educators could be working and developing interprofessional collaboration with child health clinics, family training or support services for families to increase accessibility and furthermore, develop and study the work where it could take root. A second idea for research in the future is a survey to examine the thoughts of health care professionals in child health clinics, whether they feel they have time to talk about the importance of early interaction with families during check-ups and provide support when needed.

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## **Appendix 1**

### **Interview questions in Finnish**

1. Kerro kokemuksistasi yleisesti, millaisena koit musiikillisen vauva-vanhempiryhmän?
2. Kerro ryhmäkokemuksestasi, millaisena koit ryhmän?
3. Koetko saaneesi vauva-vanhempiryhmästä musiikillisia keinoja ja välineitä varhaiseen vuorovaikutukseen lapsesi kanssa?
4. Jatkuivatko ryhmässä opitut laulut, musiikilliset leikit ja/tai musisoiminen yhdessä vauvan kanssa kotona ryhmän jälkeen?
5. Voisiko tällaisesta musiikillisesta vauva-vanhempiryhmästä olla hyötyä ja tukea muille lapsiperheille varhaisen vuorovaikutuksen tukemiseksi? Jos voisi, niin miten?
6. Minkälaista tukea olette saaneet varhaiseen vuorovaikutukseen, raskauden aikana ja vauvan syntymän jälkeen, neuvolassa tai perhevalmennuksissa?
7. Mitä haluaisit lopuksi vielä sanoa yleisesti kokemuksestasi tässä vauva-vanhempi ryhmässä?



## **Appendix 2. Tutkittavan informointilomake**

### **TIEDOTE TUTKIMUKSESTA**

#### **Äiti ja vauva - musiikin avulla varhaista vuorovaikutusta vahvistamassa ryhmässä**

##### **Pyyntö osallistua tutkimukseen**

Teitä pyydetään mukaan tutkimukseen, jossa tutkitaan, miten musiikin avulla voidaan tukea varhaista vuorovaikutusta vauvan ja ensisijaisen vanhemman välillä ryhmässä. Olemme arvioineet, että sovellutte tutkimukseen, koska lapsenne ikä soveltuu tutkimusryhmälle asetettuun raamiin n. 0-6kk. Tämä tiedote kuvaa tutkimusta ja teidän osuuttanne siinä. Perehdyttyänne tähän tiedotteeseen teille järjestetään mahdollisuus esittää kysymyksiä tutkimuksesta, jonka jälkeen teiltä pyydetään suostumus tutkimukseen osallistumisesta.

Tutkimus on osa maisteriopintojani Metropolia Ammattikorkeakoulussa Crash-ohjelmassa (Luovuus ja taide sosiaali- ja terveysaloilla). Olen koulutukseltani musiikkikasvattaja sekä laulaja, laulopedagogi. Olen työskennellyt yli kymmenen vuoden ajan musiikkikasvattajana ja kouluttajana musiikkikasvatuksen kentällä. Taiteen perusopetuksessa olen työskennellyt lukuisten perheiden parissa niin muskareiden kuin odottavien vanhempien ryhmien kanssa. Tällä hetkellä työskentelen opettajana Metropolia Ammattikorkeakoulussa musiikin tutkinnossa kouluttaen tulevia musiikkipedagogeja ja olen mukana opettajana sekä asiantuntijana Metropolian monissa monialaisissa kulttuurihyvinvoinnin hankkeissa.

##### **Vapaaehtoisuus**

Tutkimukseen osallistuminen on täysin vapaaehtoista. Voitte myös keskeyttää tutkimuksen koska tahansa syytä ilmoittamatta. Mikäli keskeytätte tutkimuksen tai peruutatte suostumuksen, teistä keskeyttämiseen ja suostumuksen peruuttamiseen mennessä kerättyjä tietoja ja näytteitä voidaan käyttää osana tutkimusaineistoa.

##### **Tutkimuksen tarkoitus**

Tämän tutkimuksen tarkoituksena on tutkia, miten musiikin avulla voidaan tukea varhaista vuorovaikutusta äidin / ensisijaisen vanhemman ja vauvan välillä.

##### **Tutkimuksen toteuttajat**

Tutkimus tehdään yhteistyössä Metropolia Ammattikorkeakoulun kanssa ja tutkimusta tekee Laura Juvonen. Tutkimusta ohjaa ohjaavaopettaja Sanna Kivijärvi (MuT).

##### **Tutkimusmenetelmät ja toimenpiteet**

Tutkimus toteutetaan siten, että tutkimusryhmä kokoontuu neljä kertaa, jonka jälkeen osalle ryhmässä mukana olleille vanhemmista tehdään yksilohaastattelu. Haastattelut tehdään puolistrukturoiduilla kysymyksillä. Haastattelut, aika ja paikka, sovitaan erikseen

haastateltavan kanssa. Haastattelut on mahdollista tehdä esim. etäyhteyden kautta. Yhteen haastatteluun varataan noin 1 tunti aikaa.

#### **Tutkimuksen mahdolliset hyödyt**

Äiti ja vauva saavat nauttia yhteisestä ajasta yhdessä muiden perheiden kanssa. He saavat mukaansa myös tietoa ja musiikillisia keinoja arkisiin tilanteisiin, miten vahvistaa heidän välistään sanatonta vuorovaikutusta.

#### **Tutkimuksesta mahdollisesti seuraavat haitat ja epämukavuudet**

Tutkimuksesta ei ole haittaa perheille.

#### **Kustannukset ja niiden korvaaminen**

Tutkimukseen osallistuminen ei maksa teille mitään. Osallistumisesta ei myöskään makseta erillistä korvausta.

#### **Tutkimustuloksista tiedottaminen**

Tutkimus on osa Metropolia Ammattikorkeakoulun YAMK opinnäytetyötä, joka julkaistaan julkiseksi luettavaksi Theseus tietokantaan.

#### **Tutkimuksen päättyminen**

Myös tutkimuksen suorittaja voi keskeyttää tutkimuksen, jos ryhmäläisistä yli puolet keskeyttää ryhmän ja ryhmästä ei ole mahdollista kerätä tarpeeksi dataa tutkimukseen.

#### **Lisätiedot**

Pyydämme teitä tarvittaessa esittämään tutkimukseen liittyviä kysymyksiä tutkijalle/tutkimuksesta vastaavalle henkilölle Laura Juvoselle.

#### **Tutkijoiden yhteystiedot**

##### **Tutkimuksessa teistä kerätään seuraavia henkilötietoja**

Henkilötietojen käsittely on oikeutettua ainoastaan silloin, kun se on tutkimukselle välttämätöntä. Kerättävät henkilötiedot on minimoitava, niitä ei saa kerätä tarpeettomasti tai varmuuden vuoksi.

Haastateltavan sekä vauvan ikä ja sukupuoli. Haastateltavan kokemuksia, tunteita ja ajatuksia vuorovaikutustilanteista vauvan kanssa sekä suhteessa muihin ryhmäläisiin. Haastatteluista voidaan käyttää suoria lainauksia tutkimustyöhön. Musiikilliset hetket ryhmässä tallennetaan myös videoiden, joiden avulla tutkija voi tehdä havaintoja vuorovaikutustilanteista myös videotallenteiden kautta. Teillä ei ole sopimukseen tai lakisääteiseen tehtävään perustuvaa velvollisuutta toimittaa henkilötietojanne vaan osallistuminen on täysin vapaaehtoista.

**Henkilötietojenne suojausperiaatteet**

Tutkijan kerätessä henkilötietoja sekä tutkimusdataa käytetään tallentamiseen suojattuja Metropolia Ammattikorkeakoulun verkkolevyasemaa. Tutkimukseen osallistumisen paperiset suostumislomakkeet säilytetään tutkijan lukitussa kaapissa.

**Henkilötietojenne käsittelyn tarkoitus**

Henkilötietojenne käsittelyn tarkoitus on käyttää apuna tutkimuksessa selvittämään, miten *musiikin avulla voidaan tukea varhaista vuorovaikutusta vauvan ja ensisijaisen vanhemman välillä.*

**Henkilötietojenne käsittelyperuste**

Käsittelyperusteena on suostumus

## **Appendix 3. Tutkittavan suostumus**

### **Tutkittavan suostumus**

**Tutkimuksen nimi:** Vanhempi ja vauva - musiikin avulla varhaista vuorovaikutusta vahvistamassa ryhmässä

**Tutkimuksen toteuttaja:** Metropolia Ammattikorkeakoulu, Laura Juvonen,  
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**Vastaava ohjaaja:** Sanna Kivijärvi, sanna.kivijarvi@metropolia.fi

Minua \_\_\_\_\_ on pyydetty osallistumaan yllämainittuun tutkimukseen, jonka tarkoituksena on tutkia, miten musiikin avulla voidaan tukea varhaista vuorovaikutusta vauvan ja ensisijaisen vanhemman välillä ryhmässä.

Olen saanut tiedotteen tutkimuksesta ja ymmärtänyt sen. Tiedotteesta olen saanut riittävän selvityksen tutkimuksesta, sen tarkoituksesta ja toteutuksesta, oikeuksistani sekä tutkimuksen mahdollisesti liittyvistä hyödyistä ja riskeistä. Minulla on ollut mahdollisuus esittää kysymyksiä ja olen saanut riittävän vastauksen kaikkiin tutkimusta koskeviin kysymyksiini.

Olen saanut tiedot tutkimukseen mahdollisesti liittyvästä henkilötietojen keräämisestä, käsittelystä ja luovuttamisesta ja minun on ollut mahdollista tutustua tutkimuksen tietosuojaselosteeseen.

Osallistun tutkimukseen vapaaehtoisesti. Minua ei ole painostettu eikä houkuteltu osallistumaan tutkimukseen.

Minulla on ollut riittävästi aikaa harkita osallistumistani tutkimukseen.

Ymmärrän, että osallistumiseni on vapaaehtoista ja että voin peruuttaa tämän suostumukseni koska tahansa syytä ilmoittamatta. Olen tietoinen siitä, että mikäli keskeytän tutkimuksen tai peruutan suostumukseni, minusta keskeyttämiseen ja suostumukseni peruuttamiseen mennessä kerättyjä tietoja ja näytteitä voidaan käyttää osana tutkimusaineistoa.

**Allekirjoituksellani vahvistan osallistumiseni tähän tutkimukseen.**

**Jos tutkimukseen liittyvien henkilötietojen käsittelyperusteena on suostumus, vahvistan allekirjoituksellani suostumukseni myös henkilötietojeni käsittelyyn. Minulla on oikeus peruuttaa suostumukseni tietosuojaselosteessa kuvatulla tavalla.**

\_\_\_\_\_ , \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_

Allekirjoitus:

\_\_\_\_\_

Nimenselvennys:

\_\_\_\_\_

Alkuperäinen allekirjoitettu tutkittavan suostumus sekä kopio tutkimustiedotteesta liitteineen jäävät tutkijan arkistoon. Tutkimustiedote liitteineen ja kopio allekirjoitetusta suostumuksesta annetaan tutkittavalle.