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DOCTORAL THESIS

Inclusive Playgrounds: Insights Into Play and Inclusion From the Perspectives of Users and Providers



Ines Wenger

Occupational Science & Occupational Therapy

The thesis is the result of a collaboration between Luleå University of Technology and University College Cork that aims towards a double degree

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Inclusive playgrounds: Insights Into Play and Inclusion From the Perspectives of Users and Providers

by

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Inclusive Playgrounds: Insights Into Play and Inclusion From the Perspectives of Users and Providers

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To the children,
may you have lots of time and space for play.

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Abstract

Play for play's sake is an important part of a child's life. In this sense, play is also enshrined as a child's right and understood from an occupational therapy and occupational science perspective as a central occupation in children's lives. Children report that outdoor environments, such as playgrounds, are some of their favourite places to play. However, studies also show that children's experiences of play occupation in playgrounds can be limited by barriers related to the physical, social and political environment, especially for children with disabilities. To address these barriers, so-called inclusive playgrounds have been developed and implemented. The aim of such playgrounds is to provide play and social experiences for all children to foster a sense of belonging and inclusion.

Inclusive playgrounds could therefore be considered places created by playground providers for children where situational elements of the physical, social and political environment converge with children's play occupation. The Transactional Model of Occupation (TMO) was chosen as the theoretical underpinning of the thesis, providing a framework for interpreting playground users' and playground providers' perspectives in relation to the intertwined nature of the situational elements from an occupational and child-centred perspective. Furthermore, the TMO was found to be useful in integrating other concepts related to inclusive playgrounds and their transactions with situational elements, such as play value, affordances, place-making, inclusion and Universal Design (UD).

The overall aim of the thesis was to gain a deeper understanding of play and inclusion on inclusive playgrounds from the perspectives of playground users (children with and without disabilities and advocates of children with disabilities) and playground providers (including experts in UD).

The thesis was informed by four studies. Study I and Study III looked at the children's perspectives; Study II at the perspectives of playground providers and advocates of children with disabilities; and Study IV at the perspectives of experts in UD. Study I explored the experiences of children with (n=18) and children without (n=14) disabilities of playing on inclusive playgrounds through the use of interviews and observations. Data were analysed using qualitative content analysis. Study III aimed to expand current knowledge from a child-centred perspective of how environmental characteristics influence play value and inclusion for all children in outdoor playgrounds. The study was conducted as a

meta-ethnography and included 17 studies. Study II explored the design and use of inclusive playgrounds with a particular focus on how design supports or hinders inclusion from the perspective of people involved in designing (n=14) or advocating for children with disabilities (n=12). Data consisted of focus group interviews and were analysed with thematic analysis. Study IV aimed to advance the understanding and use of UD in inclusive playground provision by identifying expert's (n=6) strategies and experiences of applying UD in playgrounds. Data consisted of expert interviews conducted using a go-along method of walk and talk interviews and analysed using qualitative content analysis.

The synthesis of the findings provided insights into three areas; firstly, children's experience of participation in play occupation and play value on inclusive playgrounds; secondly, how play value emerges from transactions of the situational elements; and, thirdly, what UD adds to playground design to create a welcoming atmosphere and make playgrounds inclusive.

Children's experiences of play value were found to emerge from transactions of the play occupation and the physical and social environmental elements, and sociocultural, and geopolitical elements. These experiences created a sense of belonging. A sense of belonging was found to be associated with inclusion from the perspective of children and advocates of children with disabilities, and from the perspective of experts in UD. Thus, children's perspectives on play value and participation in play occupation were found to contribute to an understanding of what makes a playground inclusive from a child's perspective. Furthermore, findings suggest that UD may be a useful design approach to ensure inclusion in playgrounds. Thus, for the UD experts, the social environmental elements and the sociocultural and geopolitical elements were pivotal at the beginning of the design process and guided the design of the physical environmental elements accordingly. This focus is also reflected in four strategies identified from the synthesis of the findings for designing playgrounds to promote a sense of belonging. To further explore play occupation and inclusion in playgrounds, it may be useful to focus on the social aspect by perspectives that encompass communities rather than individuals, such as communal or collective occupations.

Keywords: inclusive playground, play occupation, children, playground provision, Universal Design, belonging, place-making

List of original studies

This dissertation is based on the following original studies, which are referred to in the text by their Roman numerals:

I. Wenger, I., Schulze, C., Lundström, U., & Prellwitz, M. (2021). Children's perceptions of playing on inclusive playgrounds: A qualitative study. *Scandinavian Journal of Occupational Therapy*, *28*(2), 136–146. https://doi.org/10.1080/11038128.2020.1810768

II. Wenger, I., Prellwitz, M., Lundström, U., Lynch, H., & Schulze, C. (2023). Designing inclusive playgrounds in Switzerland: Why is it so complex? *Children's Geographies*, *21*(3), 487–501. https://doi.org/10.1080/14733285.2022.2077093

III. Wenger, I., Lynch, H., Prellwitz, M., & Schulze, C. (2023). Children's experiences of playground characteristics that contribute to play value and inclusion: Insights from a meta-ethnography. *Journal of Occupational Science*, *0*(0), 1–28. https://doi.org/10.1080/14427591.2023.2248135.

IV. Wenger, I., Schulze, C., Lynch, H., & Prellwitz, M. (2023). *Applying Universal Design to playgrounds: Experts perspectives* [Unpublished manuscript]. Department of Health, Education and Technology, Luleå University of Technology, University College Cork, Zurich University of Applied Sciences.

Original Studies I, II and III have been published with open access.
Original Study IV is in manuscript form.

List of abbreviations

Abbreviation	Meaning
CRC	Committee on the Rights of the Child
GC	General Comment
ESR	Early Stage Researcher
LTU	Luleå University of Technology
NCPHS	National Comission for the Protection of Human Subjects of Biomedical and Behavioral Research
SD	Standard deviation
TMO	Transactional Model of Occupation
UCC	University College Cork
UD	Universal Design
UNCRC	United Nations Convention on the Rights of the Child
UNCRPD	United Nations Convention on the Rights of Persons with Disabilities
WFOT	World Federation of Occupational Therapists
ZHAW	Zurich University of Applied Sciences

Preface

Playgrounds have been an important part of my life for the past five years; something I had never imagined before embarking on this PhD journey. The journey began when I observed the renovation of the playground at my previous workplace while working as an occupational therapist at a school for blind and visually impaired children. Shortly thereafter, together with Christina, who later became one of my supervisors, I had the opportunity to conduct interviews with the first children in the same playground. This experience laid the foundation for my subsequent analysis as a PhD student a few months later. As my PhD journey continued about two years later, I had the chance to become one of eight Early Stage Researchers (ESRs) in the P4Play project, a PhD programme in Occupational Science for Occupational Therapists with a focus on play and children at risk of play deprivation. I consider myself very lucky that during my PhD I had the chance to explore play and occupations in such depth in a stimulating learning atmosphere. The learning and discussions, sometimes challenging, but always playful, were facilitated by my esteemed supervisors Dr. Maria Prellwitz, Prof. Dr. Christina Schulze and Dr. Helen Lynch, as well as Prof. Jeanne Jackson and Dr. Sarah Kantartzis. However, it is important to acknowledge that this journey would not have been possible without my fellow students, the other P4Play ESRs. I firmly believe that the turn towards occupational science in my journey has provided me a whole new and deeper understanding of occupations. My curiosity and enthusiasm for exploring human occupations will undoubtedly continue to be a guiding force in my future.

At the same time, another significant event unfolded during I was doing my PhD: I became a mother, leading me to spend more and more time on playgrounds in my personal life as well. Interestingly, this development revealed that visiting playgrounds was the perfect way for me to combine my work and personal life.

Dear reader, I hope you enjoy reading this thesis and that it offers you some insights into play and inclusion in inclusive playgrounds from the perspective of children and advocates of children with disabilities as playground users, on the one hand, and from the perspective of playground providers, including experts in UD, on the other hand.

Sincerely,

Ines

Introduction

The importance of play in a child's life has been internationally recognised by the United Nations Convention on the Rights of the Child (UNCRC) (1989). The convention endorses play as a right for every child. The recognition of play as a right includes an understanding of the multiple benefits that play brings to a child's life in terms of well-being, health and skills development (Committee on the Rights of the Child [CRC], 2013). However, based on the reports from the member states, the CRC (2013) is concerned that play and its benefits for children are at risk. This concern shows as a reduction in time and opportunities for free, unstructured play for children in general, with a particular focus on children with disabilities, who are identified as one of the most vulnerable groups. The concern is rooted in various barriers to play identified in the reports, including lack of provision of play spaces, a reduced number of opportunities for children to have a voice in the planning of these spaces and the absence of legislation to protect children's rights (CRC, 2013). These barriers identified affect different interest groups, including children, their families and carers, playground planners and politicians. However, before describing each group's perspectives and interests in more detail and how these interests may intersect, it should be clarified what is meant by free, unstructured play and which play spaces will be studied in more detail in this thesis.

Free, unstructured play is enshrined in General Comment (GC) No. 17 (CRC, 2013) as play for play's sake, with the aim of reinforcing children's right to play freely without being bound to other demands such as development, learning or physical activity. It is defined as "non-compulsory, driven by intrinsic motivation and undertaken for its own sake, rather than as a means to an end" by children themselves (CRC, 2013, art. 31 para.1).

The wider focus of this thesis is on playgrounds as a type of play space that is "specifically designed and designated" for children's free, unstructured play (Woolley & Lowe, 2013, p. 54), open to the public and located in communities. As stated in GC No. 17 (2013) and in the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) (2006), public spaces, including playgrounds, should be inclusive and welcoming all people, including children or carers with disabilities, and provide a safe environment for play. However, research has shown that playgrounds are often not inclusive because they do not adequately address the (play) needs of children with disabilities. This was also one of the concerns that led the CRC to issue the GC No. 17 (2013). So, there is a lack in the provision of inclusive playgrounds, compounded by a general lack of

knowledge about how to create such inclusive environments. Therefore, this thesis focuses specifically on inclusive playgrounds and seeks to raise the understanding of the diversity in playground users' and providers' perspectives in relation to play and inclusion in these playgrounds.

Inclusive playgrounds should first and foremost be play environments for children. This implies that their design should be substantially guided by the needs of children as users of playgrounds. However, inclusive playgrounds are also embedded in the specific context of a local community and therefore need to comply with local spatial planning aspects and specifications. In addition, playgrounds must adhere to various laws and regulations, encompassing safety, financial considerations and maintenance. These circumstances underscore the inherent tension between professional expertise and user insights, emphasising the need to consider and combine perspectives to address a multitude of needs and demands.

The fact that children have no decision-making power in legal matters makes them dependent on adults actively seeking their perspective. However, the UNCRC (1989) recognises children's right to express their views on all matters affecting them, to be heard and to have their views taken into account in accordance with their age and maturity. For example, processes such as the Lundy Model have been developed to implement this right and consult with children (Lundy, 2007). Specifically, in relation to the built environment, UNICEF and UN-Habitat have launched the Child Friendly Cities initiative to bring together children and various adult decision-makers in municipalities to strengthen children's right to participate in decision-making processes that directly affect them (Brown et al., 2019; UNICEF, n.d.).

Universal Design (UD) is another approach to the built environment that combines the perspectives of users with those of professionals in the specific case of inclusive playgrounds and playground providers (Iwarsson & Ståhl, 2003; Lid, 2013). In addition, UD is also enshrined as a design approach in the GC No. 17 (2013) and the UNCRPD (2006) for the design of inclusive (play) environments that accommodate children and their carers in all their diversity.

This thesis operates on the premise that inclusive playgrounds serve as spaces for all children, embracing their diverse backgrounds and abilities. Consequently, the thesis predominantly references children to reflect this inclusive perspective. Only when a distinction between children with and without disabilities is important for understanding will this be mentioned.

The introductory chapter is divided into five parts. The first part focuses on play; it introduces play as a subject that has been extensively researched within

the context of various disciplines. This part outlines what the unique contribution of occupational science and occupational therapy to this research might be by exploring play as an occupation; it describes current tensions between the understanding of play as an occupation and how it is practised in occupational therapy; it describes how play as an occupation is perceived from the children's perspective and co-constituted by the environment. The second part briefly introduces the transactional perspective on occupation, which theoretically underpins the Transactional Model of Occupation (TMO). This is followed by a more detailed description of the TMO, the model on which this thesis is based and how it relates to children's play occupations and playgrounds. The third part focuses on playgrounds; defining them as specific play spaces for outdoor play in the community; describing barriers that can limit children's play opportunities on playgrounds; and introducing the concepts of play value, affordances and place-making as relevant for the understanding of how children's play experiences and occupations transact with the environment. The fourth part introduces inclusive playgrounds as a new way of designing playgrounds to promote play and inclusion for all children; it introduces the concept of inclusion and the experiences children associate with inclusion; and it introduces UD as a design approach for inclusive environments; and, finally, it provides an overview of how UD has been used in playground design to date.

Play

Play itself and how children play is fascinating and has attracted the interest of many disciplines. For example, scholars from the field of psychology (Piaget, 1962; Vygotsky & Cole, 1978), folklore (Opie & Opie, 1969), or sociology (Huizinga, 1950) have studied play. They have looked, for example, at the relationship between play and development (Pellegrini, 2011), play and learning (Kernan, 2007) or, more generally, the effects of play on health and well-being (Cole-Hamilton et al., 2002; National Playing Fields Association, 2000). The types of play children engage in have also been studied (Hughes, 2013; Sandseter, 2009; Sutton-Smith, 1997) as has how and where play happens in interrelation with the environment (Fjørtoft, 2001; Hart, 1992; Heft, 1988).

Occupational science and occupational therapy have also studied play, looking at how children play, what meaning they experience when they play and how play is interrelated with the environment (e.g., Bundy et al., 2009; Lynch et al., 2016; Pierce, 1996; Prellwitz & Skär, 2007; Reilly, 1974; Spitzer, 2003). Occupational therapy is a discipline that is concerned with knowledge about

human doings, in other words, occupations, such as play (Yerxa, 1990). This knowledge informs, amongst others, occupational therapy, which is concerned with enabling people to engage in meaningful and necessary occupations allowing them to participate in daily life, often with a focus on health and well-being (WFOT, 2012). What permeates both the discipline of occupational science and the profession of occupational therapy is the centrality of considering occupations as "a way of looking at or thinking about human doing" (Njelesani et al., 2014, p. 226). Njelesani et al. refer to this as an occupational perspective. Another core assumption of both disciplines is the understanding that the environment with its various elements (physical, social, political, cultural, temporal, etc.) is interrelated with people and their occupations, and that they mutually shape each other (Yerxa, 1990). The relation between occupational science and occupational therapy can also be described as a process in which knowledge about play as an occupation is compiled within the discipline of occupational science. Subsequently, this knowledge finds practical application in occupational therapy (WFOT, 2016). The unique contribution of occupational science and occupational therapy to the broader research on play may lie in their ability to apply an occupational perspective to play. In this sense, they delve into the exploration of play as an occupation as it is performed and experienced by children in interaction with the environment.

However, as will be outlined in the next section, occupational therapy is facing certain challenges in moving towards a practice that focuses on play as an occupation and approaching play for play's sake rather than as a means to an end.

Play in occupational therapy: Tensions between understanding and practising play

In occupational science and occupational therapy, play is seen as one of the central occupations in children's lives (Parham, 2008). Children's participation in play for play's sake should therefore be an important part of occupational therapy. However, studies from Europe and the USA investigating the use of play in occupational therapy have found that occupational therapists primarily use play as a means to achieve therapeutic goals that relate to developmental aspects of a child with a disability, for example, rather than as an end in itself (Couch et al., 1998; Lynch et al., 2018; Lynch & Moore, 2016; Miller Kuhaneck et al., 2013; Moore & Lynch, 2018a; Nordström et al., 2023; Schlager-Jaschky, 2019). Consequently, play as an occupation is rarely addressed as a primary goal in occupational therapy interventions. This could mean that occupational

therapy fails to address one of children's most central occupation. A study conducted in Sweden suggests that this is, indeed, often the case, especially for children with disabilities, where the focus is on achieving therapeutic goals to improve skills promoting a more independent future life (Nordström et al., 2023). Nevertheless, studies from Ireland, Sweden and German-speaking countries also report that occupational therapists are aware of the importance of play as a central occupation in a child's life but face several challenges in the implementation of a practice focusing on play for its own sake (Lynch et al., 2018; Moore & Lynch, 2018a; Schlager-Jaschky, 2019). Lynch, Prellwitz, et al. (2018) have proposed using the term "play-centred practice" as a name designating a practice that focuses on play as an occupation from the child's perspective. Challenges in implementing a play-centred practice were identified by occupational therapists as being related to several factors; firstly, a lack of knowledge, training and intervention tools; secondly, structural aspects of the workplace in terms of insufficient spatial and time resources; and thirdly, the embeddedness in the healthcare system (Lynch, Prellwitz, et al., 2018; Moore & Lynch, 2018a; Schlager-Jaschky, 2019). These challenges suggest, on the one hand, a lack of knowledge and resources for a play-centred practice and, on the other hand, that the priorities set by adults in the healthcare system often take precedence over children's right to play. In order to meet these challenges and to promote play-centred practice in the sense of play for the sake of play, the authors of the studies emphasize, among other things, the need to develop knowledge about play as an occupation and how it interrelates with the environment. Such endeavours should focus, in particular, on how play and inclusion in the community can be supported through the design of the environment (Lynch, Prellwitz, et al., 2018; Lynch & Moore, 2016; Moore & Lynch, 2018a; Schlager-Jaschky, 2019).

In line with a play-centred practice and the need to develop knowledge about play as an occupation focused on play for play's sake and on the basis of the rights of the child, Lynch and Moore (2016) propose to speak about "play occupation" to reflect this focus. The term play occupation, which is adopted in this thesis, includes an understanding of supporting a child's active participation in *doing* play for its own sake rather than practicing skills as a preparation for play (Lynch & Moore, 2016). This may mean that the focus of the occupational therapy intervention shifts from the child itself (practising skills for play) to the environment and how the environment supports or can be adapted to underpin the child's participation in play (Anaby et al., 2013, 2014; Law et al., 2013).

The following section provides a more detailed insight into play occupation from children's perspectives. This includes, in a first part, a description of the characteristics and meanings of play occupation, summarising research that has examined play from children's perspectives combined with an occupational perspective. The second part, based on the same research, describes the close relationship between play occupation and the environment.

Play occupation from children's perspectives

Characteristics and meanings of play occupation

Children are the experts when it comes to their own play. Listening to children's perspective on how they perceive play and the meaning it has for them is one way for adults to learn about play occupation in childhood. The below section summarises the perspective and findings of six studies from occupational science and occupational therapy applying a child-centred focus to play to gain an understanding of play from children's perspective.

The studies were conducted in different geographical and cultural contexts, such as Europe (Ireland) (Fahy et al., 2021; Moore & Lynch, 2018b), the USA (Miller & Kuhaneck, 2008), Africa (South Africa (Bartie et al., 2016) and Tanzania (Berinstein & Magalhaes, 2009)). The adoption of a child-centred perspective on play was evident through the use of a range of qualitative methods for data collection, such as interviews, focus groups, photo voice, drawings and observations. The study conducted by Graham et al. (2018) was a thematic synthesis of qualitative studies and included 13 studies from Europe (Sweden and Iceland, UK), North America (USA and Canada), Australia and South Africa. In terms of the children's, the review by Graham et al. (2018) covered the widest range with 0-18 years. Bartie et. al. (2016) focused on preschool children (5-6 years), while the other studies included school-aged children (Berinstein & Magalhaes, 2009; Fahy et al., 2021; Miller & Kuhaneck, 2008; Moore & Lynch, 2018b). Four studies looked at the perspectives of children without disabilities (Bartie et al., 2016; Berinstein & Magalhaes, 2009; Miller & Kuhaneck, 2008; Moore & Lynch, 2018b), and two studies studied the perspectives of children on the autism spectrum (Fahy et al., 2021) and children with physical disabilities (Graham et al., 2018).

A study investigating the question of what makes children happy as a way to explore well-being from children's perspective found that they identified play as

an occupation significantly contributing to their happiness (Moore & Lynch, 2018b). In order to better understand the meanings that children attribute to play as an occupation and how these meanings are experienced, the following section elucidates play occupation by drawing on the characteristics identified in the studies presented in the previous paragraph.

The experience of having fun was described by children across cultures as one of the essential characteristics. This was also found to be one of their primary motivation for engaging in play (Bartie et al., 2016; Berinstein & Magalhaes, 2009; Miller & Kuhaneck, 2008; Moore & Lynch, 2018b). Another central characteristics was the experience of being challenged at the just right level (Fahy et al., 2021; Miller & Kuhaneck, 2008). Berinstein and Magalhaes (2009) describe that children enjoyed playing competitions against each other (e.g. running, wrestling or doing gymnastics), which could also be associated with the experience of being challenged. A third characteristic of play described by children was social interactions with others, for example through playing together with other children or animals, which was often mentioned together with a preference for outdoor play (Bartie et al., 2016; Berinstein & Magalhaes, 2009; Graham et al., 2018; Miller & Kuhaneck, 2008; Moore & Lynch, 2018b). From this description, it becomes clear that children with and without disabilities described the same characteristics of play. In addition, children with disabilities shared their unique perspectives on play, noting instances where they engaged in play in a "non-conventional manner" (Fahy et al., 2021, p. 119). This involved modifying the rules of traditional games, such as tag, or using equipment for uses other than their original intent. In the study by Graham et al. (2018), children with physical disabilities described their experience of participating differently in play as they might experience themselves to be playing even if they were "only" watching their peers' play.

The above summary of the literature suggests that children associate play with the characteristics of achievable challenges and social interactions; and with the experience of fun. These characteristics and experiences are also reflected in the way play is characterized in the GC No. 17 (2013, p. 6), which states: "The key characteristics of play are fun, uncertainty, challenge, flexibility and non-productivity." In addition, play can take place alone or in groups and is always related to the environment. These descriptions also form the basis for how play occupation is understood in this thesis. The next section offers a more detailed

description of the relationship between play occupation and the environment experienced from children's perspectives.

Play and the environment

The interrelatedness of play with the environment was another characteristic that was evident in all studies. Findings from the studies of the different geographical and cultural contexts show that children with and without disabilities perceived the physical environment as referring to the natural and built surroundings of a play space. They perceived the social environment as referring to people and attitudes, either as enabling or limiting their play occupations (Bartie et al., 2016; Berinstein & Magalhaes, 2009; Fahy et al., 2021; Graham et al., 2018; Miller & Kuhaneck, 2008; Moore & Lynch, 2018b). The environmental factors most frequently mentioned by children were places, materials, play partners (people or animals) and, in some geographical contexts, also weather. From the studies, it became clear that play occupation was inextricably linked with the physical, social and geographical environment. In studies from Europe and the USA, children expressed that the outdoor environment was their preferred play environment because it offered them the most possibilities for play in terms of physical space and materials for play (Fahy et al., 2021; Miller & Kuhaneck, 2008). Children's engagement with materials in the environment was particularly evident in the studies conducted in African countries. These studies found that children found creative ways to incorporate materials from the environment into their play, e.g. sand, sticks or trash (Bartie et al., 2016; Berinstein & Magalhaes, 2009). Also, the children played with other loose materials from their homes or the school (Bartie et al., 2016; Berinstein & Magalhaes, 2009), or they created new play objects with the materials, for example a ball made from plastic bags (Bartie et al., 2016). The use of materials from the environment in play has also been identified in studies conducted in Ireland (Hinchion et al., 2021; Moore & Lynch, 2018b). In particular, Hinchion et al. (2021) described how children engaged in risky play by using loose materials found in nature. However, in this particular geographical context, children also stated that rainy weather was a barrier to playing outside (Moore & Lynch, 2018b). Besides the availability of space and materials, the importance of the presence of other children, i.e. friends to play with, was also evident across the studies (Bartie et al., 2016; Berinstein & Magalhaes, 2009; Fahy et al., 2021; Graham et al., 2018; Miller & Kuhaneck, 2008; Moore & Lynch, 2018b; Njelesani et al., 2011). Thus, play occupations emerged from children's engagement with the environments; and at the same

time, the environments created play occupations. This suggests that a mutual interaction exists between the children, the play occupation and the various environments. Such a mutual interaction could also be described as a person-environment-occupation relationship.

While occupational science and occupational therapy have long viewed the relationship between environment and occupation as one of interaction (Dickie et al., 2006; Yerxa, 1990). Dickie et al. (2006) proposed to develop this view, seeing the relationship as more co-constitutive and mutually shaping. In this view, the elements of person, occupation and environment are in an ongoing relationship with each other. Dickie et al. (2006) formulated this view as a transactional perspective on occupation, drawing on Dewey's theory of pragmatism. Later on, Fisher and Marterella (2019) proposed the Transactional Model of Occupation (TMO). This model is theoretically underpinned by a transactional perspective on occupation and intends to translate this knowledge for occupational therapy. The next section provides a brief introduction to how Dewey's theory of pragmatism informed the transactional perspective on occupation. Afterwards follows a more detailed introduction to the TMO, which theoretically builds on the transactional perspective on occupation. The transactional perspective on occupation and the TMO both theoretically underpin this thesis and were found to be useful for exploring the relationship between children, their play occupation and the environments.

Transactional perspective on occupation

Dewey proposed a perspective for considering human action in the environment in which he saw human action as caused by a stimulus in the environment. This stimulus in turn caused a sensory impression that triggered a new action. He originally termed this process "trans-action" (Dewey & Bentley, 1949, p. 55), describing an ever-repeating dialectic process, constantly modified by the elements involved (Cutchin & Dickie, 2013). Dickie, Cutchin and Humphry (2012; 2006) then translated this understanding of trans-action by proposing the transactional perspective on occupation to inform the understanding of occupations as always existing in a dynamic interrelationship or trans-action with the environment and constantly changing through this relationship. From a transactional perspective, occupations are seen as inseparable from the environment and the person; rather, these elements are seen as co-constitutive of each other (Aldrich, 2008). Since its introduction, the transactional perspective

on occupation has been widely used and developed in occupational science by various authors (cf. Aldrich, 2008, 2018; Bunting, 2016; Cutchin et al., 2017; Heatwole Shank & Cutchin, 2010). It has also been adapted by Fisher and Marterella (2019) to theoretically underpin a model, the TMO, in which occupations are understood as arising from ongoing transactional relationships with the environments and the person(s).

Transactional Model of Occupation

Fisher and Marterella (2019) describe that they have proposed the TMO to promote an understanding in occupational therapy that therapy should focus not on changing the individual person but on addressing occupations in relation with situational elements[1] as the occupations and situational elements form a co-constituting relationship through transactions. In my view, this understanding is consistent with the play-centred practice described above that, rather than just focusing on the child, aims to promote play and inclusion in the community by focusing on how play emerges in transaction with situational elements. Furthermore, I also consider the TMO as a useful model for analysing and exploring play occupation and how it transacts with various elements of the environment described in the section on play occupation from children's perspectives above.

The main components of the TMO are the occupational and situational elements. Occupational elements are understood to be composed of occupational performance, occupational experience and participation (Fisher & Marterella, 2019). Occupational performance refers to the doing of the occupation itself. This doing, the occupational performance, is observable by others, whereas the occupational experience, how the occupation is experienced by an individual, can be only "self-reported" (Fisher & Marterella, 2019, p. 20). The combination of the occupational performance and the occupational experience results in participation. From this understanding follows that participation is the engagement in occupation combined with meaningful (whether positive or negative) experiences of doing an occupation (Fisher & Marterella, 2019; Hammel et al., 2008; Hemmingsson & Jonsson, 2005; Hoogsteen & Woodgate, 2010; Martin Ginis et al., 2017), and that participation can be described only by those engaged in the occupation. Since a child's occupational performance

[1] Situational elements refer to elements of the social and physical environment, sociocultural, geopolitical, temporal, client and task elements (Fisher & Marterella, 2019). A more detailed description of the elements follows below.

during play occupation can sometimes give the impression of non-engagement (Fisher & Marterella, 2019), it is important to recognise that this outward appearance may not accurately reflect the child's actual occupational experience (Burke, 2005; Fahy et al., 2021; Graham et al., 2018; Rasmussen, 2004). This means that a child may not look like they are participating, but when asked, they are being involved.

Situational elements are subdivided into physical and social environmental elements, and geopolitical, sociocultural, temporal, client and task elements. Referring to the above description of play occupation from children's perspective and the environments in which play occupation takes place, elements of the physical environment relate, for example, to the built and natural environment, and materials. Elements of the social environment relate to children's description of their preference for play with other children or animals. Sociocultural elements can, for example, be associated with adults' attitudes towards children's play occupation or rules where children are allowed to play. Geopolitical elements include the weather conditions mentioned above, as well as for example policies regarding play and inclusion such as the UNCRC or the GC No. 17. These are examples only, and the account here is not intended to be exhaustive, nor does it mean that the other situational elements are less important and should be explored in future research. However, the physical and social environmental elements, including the sociocultural and geopolitical elements, were considered particularly relevant for this thesis for two reasons; first, because they were identified from the children's descriptions as transacting with their play occupation; second, because they may form barriers to children's play occupation in playgrounds which will affect children's participation in play occupation and their inclusion in society, as will be explained in the next section. Furthermore, the TMO is considered to be a valuable framework for other concepts that are integral to the ongoing transactions between children, their play occupation and situational elements on (inclusive) playgrounds. These concepts include play value, affordances, place-making, inclusion and participation. The next section focuses specifically on playgrounds as they represent a specific outdoor space designed for children to play and introduces the concepts of play value, affordances and place-making.

Playgrounds

From the description of children's perspectives on play occupation, a preference for outdoor play was identified. Studies conducted in Sweden and the Netherlands informed by the children's perspectives also reported that children identified playgrounds as one of their favourite places for play (Prellwitz & Skär, 2007; van Heel et al., 2022).

Playgrounds are often equipped with specific playground equipment (Burke, 2013; Lee et al., 2022; Woolley & Lowe, 2013) and can be located in a variety of community locations, including parks, schools and preschools (Burke, 2013). Depending on the country, differences in legislation may determine which playgrounds are open to the public. For instance, in Switzerland and Sweden, school playgrounds can be used by the public (Larsson & Rönnlund, 2021; Meile et al., 2018), whereas in Ireland their use is limited due to legal restrictions.

Barriers for children with and without disabilities on playgrounds

From the perspective of children, a scoping review identified that children in general and children with disabilities in particular regularly encounter barriers related to elements of the physical and social environment and geopolitical elements on playgrounds and are therefore often excluded from play and social experiences (Moore & Lynch, 2015). These findings were supported by two systematic reviews that investigated the relationship between the built environment and the time children play outdoors (Lambert et al., 2019) or are physically active (Smith et al., 2017). These findings were further substantiated by a position statement on active outdoor play informed by evidence (Tremblay et al., 2015) and a study investigating the relationship between social determinants and outdoor play (Parent et al., 2021). I also looked at a range of studies examining the experiences of children with physical disabilities (Bloemen et al., 2015; Graham et al., 2018; van Engelen et al., 2021), children on the autism spectrum (Fahy et al., 2021), children with different disabilities, including intellectual and visual ones (Prellwitz & Skär, 2007; Siu et al., 2017), and also encompassed the perspective of their carers, often family members (Dunn & Moore, 2005; Horton, 2017; Law et al., 1999; Stanton-Chapman & Schmidt, 2017; Sterman et al., 2016; Sterman et al., 2019). These studies collectively illuminate the experiences of children with disabilities and their families in relation to the barriers they face in playground settings.

Barriers in the physical environment

For children in general and children with disabilities in particular, elements in the physical environment are usually the most obvious barriers determining whether they can access the playground at all. Such barriers are often related to accessibility and usability. Accessibility pertains to the interaction between people and their environment, emphasising that the physical environment should be designed in a way that accommodates a person's specific physical attributes. Accessibility is often governed by standards and regulations, e.g. standards define the steepness of a ramp or the width of a gate for a person in a wheelchair to pass through (Iwarsson & Ståhl, 2003). Usability also refers to a person-environment interaction, but also takes into account a person's subjective experience while performing an occupation, e.g. how well individuals can use the environment given their skills and abilities (Iwarsson & Ståhl, 2003).

En route to the playground, traffic-related issues may be a barrier to access for all children (Lambert et al., 2019; Moore & Lynch, 2015; Smith et al., 2017). In addition, children with disabilities often face extra hindrances due to inaccessible pathways and inadequate parking facilities, compounding the barriers they encounter (Horton, 2017; Moore & Lynch, 2015).

Within the playground itself, from the perspectives of children with disabilities, studies have found that barriers related to the accessibility and usability of the playground equipment, for example difficulties in entering the playground and unsuitable surface conditions, such as sand (Bloemen et al., 2015; Horton, 2017; Moore & Lynch, 2015). Because of these barriers, children with disabilities had to rely on adults' assistance to navigate in the playground and use the equipment (Bloemen et al., 2015; Moore & Lynch, 2015). Barriers related to usability were identified as children did not understand how to use the equipment due to its design or colour (Prellwitz & Skär, 2007). A lack of amenities (e.g. toilets) was identified as a further barrier by children with disabilities (Bloemen et al., 2015; Horton, 2017; Moore & Lynch, 2015), and shade formed a barrier for all children (Moore & Lynch, 2015).

Barriers of social environment and sociocultural elements

Children without disabilities encountered barriers related to the social environment, and sociocultural elements were related to socio-economic status and place of residence (Moore & Lynch, 2015). Parent et al. (2021) recently

investigated these factors among carers of children aged 4-5 years in Canada. They found that the most important factor influencing the likelihood of outdoor play for children living in rural and urban areas was a trustworthy environment, and that lower socio-economic status was a barrier to outdoor play only in rural areas. Interestingly, the study found that children from European ethnic backgrounds were significantly more likely to play or be allowed to play outside (Parent et al., 2021). In addition, carers' concerns about injury or safety also formed a barrier for children to (be allowed to) play outdoors (Moore & Lynch, 2015; Tremblay et al., 2015).

However, most of the barriers observed within the social environment and pertaining to sociocultural elements have been described in relation to children with disabilities and the impact they have on these children's participation and inclusion.

A number of studies have described the experiences of children with disabilities and their families with negative attitudes towards them. Playground providers (Moore & Lynch, 2015; Sterman et al., 2019) and fellow playground users (Horton, 2017; Stanton-Chapman & Schmidt, 2017a; Sterman et al., 2016) can be sources of these adverse attitudes. Thus, research found that playground providers lacked knowledge about different types of disabilities and how to provide play opportunities for children with various abilities (Lynch et al., 2020; Prellwitz & Tamm, 1999; Sterman et al., 2019). Playground providers have predominantly directed their attention towards enhancing the physical environment. However, playground users (e.g. children with disabilities and their families) from Australia, Europe and Asia reported that the most substantial barriers lie within the social environment and sociocultural elements (Siu et al., 2017; Sterman et al., 2019; van Engelen et al., 2021). For example, children with physical and developmental disabilities described how they missed out on social experiences such as being out of sight of adults, being with peers and friends, because they needed the support of an adult to access and use the playground (Graham et al., 2018; Prellwitz & Skär, 2007). As a result, children with disabilities were less likely to report experiences related to friendship and finding meaning in play than children without disabilities were (Graham et al., 2018; Prellwitz & Skär, 2007). In addition, children with disabilities reported that they were worried about using the equipment incorrectly and being teased by other children as a result (Prellwitz & Skär, 2007). For children on the autism spectrum, a study conducted in Ireland found that their play occupations were

restricted by sociocultural elements in the form of social rules, such as no running (Fahy et al., 2021). These findings suggest a transaction between barriers of elements of the physical environment with elements of the social environment and socio-cultural elements for children with disabilities. Hence, barriers related to social elements, such as negative attitudes or being excluded from social experiences, often arise because of barriers related to elements of the physical environment, such as inaccessibility, restricted usability or limited space (Fahy et al., 2021; Moore & Lynch, 2015; Prellwitz & Skär, 2007). For example, children with disabilities may not be able to enter a playground at all and are therefore excluded from play and social interaction from the outset. Other examples include that they can use the swing only with an adult's support, and consequently cannot experience being on the swing with a friend and having "secret" conversations. Other examples are that children do not feel comfortable in the playground because it is too noisy and crowded, or because social rules exist that do not support children's play styles.

From the perspectives of children with disabilities, it becomes apparent that they greatly value the opportunity to participate in play occupations with other children. This inclusive play also takes focus away from their disability (Graham et al., 2018). Graham et al. (2018) found that children with disabilities prioritise participation in play occupation with other children over their own play preferences. However, when the opportunities for children with disabilities to participate in play occupation are limited, they feel excluded (Prellwitz & Skär, 2007). Dunn and Moore (2005, p. 341) state that for children with disabilities and their families "inclusion is the major benefit…from making play space accessible [or inclusive]". However, they also recognise the need to address elements of the social and physical environment, as well as socio-cultural elements, and that these elements are equally important (Dunn & Moore, 2005). Looking at the results of a study conducted more than 20 years ago, it is disheartening to observe that the barriers within the physical and social environment and the consequences of these barriers for children with disabilities and their families persist unchanged even after the passage of 20 years (Law et al., 1999).

Barriers of geopolitical elements

In most countries, local governments are responsible for the provision of playgrounds, including their design, construction and maintenance. However,

most countries and municipalities do not have an (inclusive) play policy (Armstrong & Gaul, 2023; Lynch, Moore, & Prellwitz, 2018; van Melik & Althuizen, 2020). As a result, studies that have investigated how municipalities in Australia, Ireland, the Netherlands and Sweden provide for playgrounds and inclusion identified several barriers that resulted from the absence of (inclusive) play policies. Building on the barriers within elements of the social environment, an important observation is that if municipalities have policies for play provision, these policies focus on accessibility for children with physical disabilities (van Melik & Althuizen, 2020). In addition, the design of inclusive playgrounds was often not a priority for local authorities because they, or the playground providers, were unaware of the needs of children with disabilities and their families and the demand for inclusive playgrounds (Lynch et al., 2020; Moore & Lynch, 2015; Sterman et al., 2019; van Melik & Althuizen, 2020). Playground providers also reported limited knowledge of how to design for play and inclusion, and a lack of knowledge about the (play) needs of children with various disabilities (Lynch et al., 2020; Moore & Lynch, 2015; Sterman et al., 2019; van Melik & Althuizen, 2020). Furthermore, local authorities also mentioned that restricted finances formed a barrier for inclusive playground provision (Lynch et al., 2020; Moore & Lynch, 2015).

In summary, the barriers described above show that while the play of children without disabilities may also be affected by playgrounds that are not designed for inclusion, the consequences for children with disabilities are more far-reaching and place them at risk of exclusion from participating in play occupation. The barriers identified also highlighted that exclusion from social experiences is most drastic for children with disabilities and their families, but that social barriers often arise from transactions of elements of the physical environment and geopolitical elements. Informed by the TMO, it is evident that these barriers cannot be addressed in isolation. Indeed, a holistic approach is needed that recognises them as relational. Inclusive playgrounds emerge as a potential solution to address the above-described barriers that provides play value and inclusion for all children, offering a promising and somewhat ambitious avenue. They represent a paradigm shift from conventional playgrounds to new ways of designing playgrounds. Inclusive playgrounds are the type of playgrounds studied in this thesis. Before describing in more detail how inclusive playgrounds are currently described in the literature, I would like to introduce the concepts of play value, affordances and place-making. I consider these concepts relevant to

understanding how children's play occupation and related experiences emerge from transactions with situational elements in playgrounds.

Play value

The concept of play value has been introduced into the literature in recent years from a variety of disciplines, such as landscape architecture (Woolley & Lowe, 2013), occupational science and occupational therapy (Lynch et al., 2020a; Lynch, Moore, & Prellwitz, 2018; Moore, Boyle, et al., 2022a; Parker & Al-Maiyah, 2022), and from a child's rights perspective (Yuen, 2016).

Play value is understood as the meaning that children derive from the quality of their play experiences when they play, or in other words, play value describes the richness of play experiences that children can have in a particular play space (Yuen, 2016). Using the terminology of the TMO, play value can be considered the occupational experience of a play occupation. Play spaces that are characterized by high play value allow children with different abilities to be played with in many different ways (Parker & Al-Maiyah, 2022; Yuen, 2016) and thus "maximise fun experiences" (Lynch, Moore, Edwards, et al., 2018, p. 20). An important aspect of this experience contributing to inclusion is playing with other children and feeling welcome in the playground. Play value often emerges from transactions of elements of the physical and social environment, the children and their play occupation. It is therefore also related to the concepts of affordances and place-making. In my understanding, play value can be seen as the overarching play experience that a playground offers to children, where affordances and place-making can contribute to this experience.

Affordances

The concept of affordances describes transactions of elements of the physical and social environment with people's perceptions. These interactions, in turn, trigger and influence various occupations (Gibson, 1979; Heft, 1988). In my understanding, this concept also bears resemblance, to a certain extent, to Dewey's understanding of human actions which are caused by stimuli in the environment (Dewey & Bentley, 1949). However, it places a distinct emphasis on the relationship between the environmental elements, the occupation and the person, rather than on other situational elements. Heft (1988), one of the first authors to develop Gibson's concept of affordances in relation to children and their play outdoors, extended the concept of affordances beyond merely

describing the inherent attributes of environmental characteristics to include their functional aspects - specifically what actions individuals undertake in response to these environmental attributes. For example, a slide affords sliding, but it also affords sitting or making noise with the feet. Both Heft and Gibson describe affordances as a person's *observable* action, which corresponds to a child's occupational performance. Kyttä (2002, 2004, p. 181) further developed the concept and presented the notions of "actualised affordances" and "potential affordances" to distinguish between two ways of perceiving affordances. Kyttä suggested that potential affordances relate to how affordances are interpreted through observations, for example an adult who observes that water affords splashing. Whereas actualised affordances refer to a person experiencing the affordance and engaging in the occupation, for example the child perceiving water as splashable and splashes. Furthermore, Kyttä also describes how an environment can have more or less affordances depending on how rich or varied the physical environment is. In terms of the social environment, Kyttä (2002, p. 109) proposed to extend the concept of affordances to include social elements by describing "affordances for sociality". Lerstrup and Konijnendijk van den Bosch (2017) further elaborated on social affordances, addressing the social environmental and sociocultural elements by describing affordances in relation to other people which, in the case of the study, meant mostly children. They described these affordances as "probably…the most attractive affordances of all" (Lerstrup & Konijnendijk van den Bosch, 2017, p. 56). From my perspective, affordances of sociality undeniably play an important role in relation to play occupation. As described above, social interactions with others were identified as a key aspect of play occupation from the child's perspective. Also, Lerstrup and Konijnendijk van den Bosch (2017, p. 47) further developed the understanding of affordances by defining affordances as the "meaningful action possibilities of the environment". This definition introduces the crucial element of meaning and, in my interpretation, it advances the concept of affordances beyond a mere transaction between the physical and social environmental elements and the individuals. Instead, it underscores a dynamic and evolving relationship between the individual and their environment.

Place-making

Place-making is a concept that describes how people develop a sense of belonging to a place through creation of meaningful emotional bonds (Altman & Low, 1992), mostly emerging from transactions of physical, but sometimes also

social environmental elements, with occupations. Often place-making develops and changes over time (Manzo & Devine-Wright, 2020). Underlying the concept is the notion that a physical location or a space can have meaning for people. As a concept, place-making began to emerge in the 1970s (Cresswell, 2020; Manzo & Devine-Wright, 2020). Subsequently, it has been adopted by various disciplines, such as for example geography, sociology, urban design, environmental psychology, and others (Manzo & Devine-Wright, 2020), including occupational science (e.g., Huot & Rudman, 2010; Rowles, 1991; Zemke, 2004). Place-making has been referred to with different terms, such as place attachment, topophilia, place identity, place making or place-making (Altman & Low, 1992). In this thesis, I use the term place-making because, in my understanding, this term best captures the ongoing co-constitutive process of the physical place, the occupation and the person(s).

Relph (1980), a geographer, was one of the authors who wrote about place-making. He describes place-making as a process accomplished through an interplay between the physical space, the activities that people do in that space and the meanings they attribute to it. A similar understanding of place-making has been adopted in occupational science, where scholars have described occupation as the driving element in this process to which people attach meaning and which transforms spaces into places (Delaisse et al., 2020; Johansson et al., 2013; Rowles, 2008; Zemke, 2019). Furthermore, Johansson et al. (2013) and Zemke (2004) emphasize that meaning often arises from occupations involving social interactions with others in the process of place-making. Thus, place-making could be conceptualised as a process resulting from transactions of the social and physical environmental elements, play occupation and the children themselves. For example, children actively transform and shape the physical place in a playground by creating secret hiding places together with other children (Wenger et al., 2023).

Social interactions seem to be a key characteristic of play occupation. This is evident in the description of play occupation from the children's perspective, but also in the broader concepts of play value, affordances and place-making. However, social interactions, or rather exclusion from social interactions, were identified as one of the most frequently experienced constraints, especially for children with disabilities, within the barriers described in conventional playgrounds above. The next section therefore introduces inclusive playgrounds

as a specific type of playground designed to tackle the barriers to social interaction, ultimately aiming to enhance play value and promote inclusion.

Inclusive playgrounds

As inclusive playgrounds are a relatively new type of playground and have been the subject of academic discussion only in recent years (cf. Fernelius & Christensen, 2017; Siu et al., 2017; Stanton-Chapman & Schmidt, 2017b), it is important to note that there is currently no universally accepted definition of inclusive playgrounds within the existing literature. However, from the existing literature, one can infer that an inclusive playground overall aspires to offer play and social experiences for all children, with a focus on maximising play value and inclusion, by facilitating the following key experiences:

- enabling a variety of play opportunities for all children (Fernelius & Christensen, 2017; Joint Children's Play Policy Forum and UK Play Safety Forum, 2022),
- creating a welcoming atmosphere for people of all ages and abilities that fosters belonging and inclusion (Casey & Harbottle, 2018; Dunn & Moore, 2005; Fernelius & Christensen, 2017; Jeanes & Magee, 2012; Stanton-Chapman & Schmidt, 2017a), and
- enabling social experiences, such as playing together and making friends (Fernelius & Christensen, 2017; Stanton-Chapman & Schmidt, 2017a).

As a playground is a tangible part of the physical environment and often includes built elements such as play equipment and access to the playground itself, it is essential that inclusive playgrounds meet a fundamental requirement: the design of physical environmental elements must ensure accessibility and usability (Fernelius & Christensen, 2017).

Another pertinent concept that has not yet been introduced yet hold great relevance to inclusive playgrounds is inclusion. Therefore, the following section elucidate the concept of inclusion, particularly from the viewpoint of children with disabilities.

Inclusion

The literature on inclusion shows that inclusion is closely linked to participation. Although inclusion is not specifically mentioned in the TMO, or perhaps can be

understood as being part of participation, I feel that it is relevant in the context of the present thesis to discuss the different nuances of participation and inclusion. Whiteford and Pereira (2012, pp. 189, 201) describe inclusion as a "process and outcome" of personally meaningful participation in the community that can lead to "inclusion through participation". The opposite of inclusion is experienced as exclusion which can lead to situations of occupational and social injustices (Bartolac & Sangster Jokić, 2019). In my interpretation of this understanding, inclusion and exclusion form a continuum that includes participation. If participation in occupations is experienced as meaningful (in a positive sense), this may contribute to inclusion (Bartolac & Sangster Jokić, 2019). To gain a deeper understanding of the continuum between inclusion and participation, I will try to illustrate this below by drawing on relevant literature that explores the experience of inclusion, particularly from the perspective of people with disabilities.

Research on the experiences of adults and children with disabilities found that inclusion is often associated with the experience of belonging or with "social connectedness" to a group or community (Piškur et al., 2014; Whiteford & Pereira, 2012, p. 198) through participation in (shared) occupations (Bartolac & Sangster Jokić, 2019; Hammel et al., 2008; Hoogsteen & Woodgate, 2010; Whiteford & Pereira, 2012). In the context of inclusive playgrounds, I am particularly interested in how inclusion is experienced from the perspective of children with and without disabilities. To explore this further, I have conducted a review of literature that focuses on children's experiences of inclusion in recreational settings, as to my knowledge there is a lack of literature exploring inclusion within the context of inclusive playgrounds. Drawing on this literature, I extracted the following experiences that children associate with inclusion:

- The experience of *having control and choice* refers to children's opportunities for self-directed choices about the play occupations in which they want to engage, and to perform the occupations in their own ways according to their possibilities and preferences (Edwards et al., 2019a, 2021; Hoogsteen & Woodgate, 2010; Powrie et al., 2015, p. 993). It also refers to the opportunity to choose whether the children want to be on their own or together with other persons (Edwards et al., 2019a).
- The experience of *self-efficacy* refers to children's possibilities of "discovering, developing, and displaying potential" (Hoogsteen &

Woodgate, 2010; Powrie et al., 2015, p. 993), and is often associated with the children's experiences of challenges and mastering challenges. To experience a sense of self-efficacy or fulfilment, children need an environment that supports them by offering just right challenges (Powrie et al., 2015).

- The experience of *a sense of belonging* describes the children's experience of feeling connected to/or being part of a group or community (Edwards et al., 2019a; Powrie et al., 2015; Woodgate et al., 2020). Thereby, the presence of other children and opportunities to play with them or in the proximity of other children are inherently part of and a prerequisite for this experience (Edwards et al., 2019a; Hoogsteen & Woodgate, 2010). Children also associate the experience of belonging with friendships (Powrie et al., 2015; Spencer-Cavaliere & Watkinson, 2010; Woodgate et al., 2020). Other factors contributing to a sense of belonging include similarity of interests of children without disabilities and children with disabilities (Edwards et al., 2019b), a true and authentic display of interest by others (Edwards et al., 2019a; Spencer-Cavaliere & Watkinson, 2010) and the opportunity of children with disabilities to engage in occupations without an adult's assistance (Woodgate et al., 2020). Further factors contributing to a sense of belonging encompass children with disabilities specifically experiencing a welcoming atmosphere in which children feel "safe and comfortable to talk to anyone and do anything" (Edwards et al., 2021, p. 8), the presence of children with different abilities and the opportunity to provide and receive help (Edwards et al., 2019a). In line with other literature, these factors show that sociocultural elements, such as the attitudes and actions of others, contribute significantly to a sense of belonging of children with disabilities (Townsend & Wilcock, 2004).

From the experiences described above, I conclude that children associate inclusion with experiences of belonging to a group, a sense of control and choice over the occupations in which they want to engage and a sense of self-efficacy. Thus, I understand inclusion and participation to be interrelated and not sharply separable because the experiences of choice and control over the occupations to be engaged in and self-efficacy could also be associated with participation. However, in my understanding, the experience of feeling part of or belonging to a group indicates a shift towards inclusion. In this sense, I would argue that inclusion is more than participation; it is the sense of belonging to a group or community.

Inclusion itself seems to emerge from transactions of social and physical environmental elements, sociocultural and geopolitical elements, and children's play occupation including the above-described barriers on conventional playgrounds. This leads me to acknowledge the complexity involved in designing inclusive playgrounds capable of surmounting these barriers. Furthermore, perceptions of barriers seem to vary according to the perspective adopted (e.g., playground providers often see a need to focus on reducing barriers of physical environmental elements, while children with disabilities and their families focus on barriers of social environmental and sociocultural elements as more important for their participation and inclusion). The question is how to overcome these barriers when designing inclusive playgrounds? On the one hand, it seems that knowledge and experience of playground provision are needed from the perspective of playground providers but also from the perspective of playground users, such as children and their carers, in terms of experiencing play and inclusion. This highlights the necessity of soliciting and integrating diverse perspectives to develop a comprehensive foundation for the design of inclusive playgrounds. One approach that seeks to encompass these varied perspectives throughout the design process and in the final outcome is UD. This, alongside with the overall goal for designing for social inclusion, is likely why UD has been recognised as a suitable approach for designing inclusive environments. UD is specifically endorsed for the design of inclusive environments, amongst others in the UNCRPD (2006) and in particular for playgrounds in the GC No. 17 (CRC, 2013). The next section gives a broad overview of UD as a design approach and describes how it has developed over the years, also in relation to playgrounds.

Universal Design

UD is a design approach that encompasses the built environment, aiming to create spaces and structures that are accessible and "usable by all people, to the greatest extent possible, without the need for adaptation or specialized design" (UNCRPD, 2006, art. 2, para. 4). This approach should enable all people in all their diversity to participate in occupations and be included in society (Preiser & Smith, 2011; Steinfeld et al., 2012). Thus, UD could be considered as a process that transacts with physical and social environmental elements. As UD is also anchored at the policy level in human rights documents (cf. CRC, 2013; UNCRPD, 2006), it also transacts with geopolitical elements. UD has been

proposed as an approach "that aims to operationalise issues of inclusion and justice" across different levels of society, such as the level of an individual person, the level of a group or community and a societal level (Egilson & Jónasdóttir, 2023, p. 1). To put UD into practice, a set of seven principles of UD[2] has been devised to clarify how environments or products designed according to UD should be created. Each principle has four sub-points that specify the application of the principle and together serve as a kind of guideline for the implementation of UD (Preiser & Smith, 2011). However, the principles have been criticised for lacking clarity and evidence, and to not fully address the scope of UD in relation to human diversity. A particular point of critique is that UD omits social interactions and personalisation and the influence of situational elements (Steinfeld et al., 2012). To address these limitations and to advance the development of the conceptual clarity in UD, eight goals of UD[3] have been established to describe the scope of UD from a more holistic perspective. It also has to be acknowledged that the term "universal" may appear somewhat misleading; however, the essence of UD is not imply a single design solution that fits all. Rather, it signifies that design solutions should be created to be accessible and usable by all people living in a particular context. This approach ultimately fosters equal rights and possibilities for all individuals.

Yet, despite this ambitious aim, it also has to be acknowledged that UD does not yet have a long history or a firmly rooted conceptual foundation as the brief historical overview that follows will show. The design approach of UD was originally coined in 1985 by Ronald Mace, an American architect and advocate for people with disabilities (Tauke, 2019). Almost simultaneously, parallel efforts were being made globally to develop design solutions for the built environment for people of different abilities. In Japan, the focus was predominantly on the elderly population, while the USA centred on people with disabilities (Preiser & Smith, 2011). These parallel developments also led to the emergence of various synonyms for UD, such as inclusive design (often used in the UK) or design for all (frequently used in other European countries). Regardless of the terminology employed, these terms collectively embody the conceptualization of designing to accommodate the broadest spectrum of human diversity (Dolph, 2021; Preiser &

[2] 7 principles of UD: 1. Equitable use, 2. Flexibility in use, 3. Simple and intuitive use, 4. Perceptible information, 5. Tolerance and error, 6. Low physical effort, 7. Size and space for approach and use (Preiser & Smith, 2011, p. 59)

[3] 8 goals of UD: 1. Body fit, 2. Comfort, 3. Awareness, 4. Understanding, 5. Wellness, 6. Social Integration, 7. Personalization, 8. Cultural appropriateness (Steinfeld et al., 2012, p. 90)

Smith, 2011). Over the years, the understanding of UD has transformed, moving away from seeing it as a static design outcome and instead recognising it as a dynamic process. This evolving perspective places emphasis on fostering the participation and inclusion of all people in all their diversity (Preiser & Smith, 2011; Steinfeld et al., 2012). UD has also been further developed for the areas of learning (UD for learning), UD for technology/ICT and UD for the built environment (Preiser & Smith, 2011), the latter being the specific area of UD addressed in this thesis. Although UD has undergone some conceptual development over the years, the concept is still being criticised for its lack conceptual clarity and evidence as to how it can enhance inclusion (Lid, 2013; Steinfeld et al., 2012). Critique has also been raised from an occupational and play perspective regarding the predominant focus on theoretical development within UD, as opposed to its practical application in enabling people's occupations, for example play (Moore, Lynch, et al., 2022b; Watchorn et al., 2021).

To illustrate the origins of this criticism, the next section discusses the discourse and historical developments of UD as they pertain to the realm of play.

Universal Design and playgrounds

The idea of applying UD in playground design to make playgrounds more inclusive for a broader public has been a topic for scholarly discussion for several years. Prellwitz and Skär (2007) and later Ripat and Becker (2012) were amongst the first who referred to UD in relation to playgrounds; suggesting, based on their findings, that UD could be an approach that would be productive in informing playground design for children with diverse needs. Prellwitz and Skär also refer to a chapter by Goltsman (2011) in the Universal Design Handbook (first published in 2001). Goltsman describes the key elements of an inclusive playground designed in accordance with UD principles and offers a practical example of a playground. However, from the descriptions and examples provided, one might get the impression that the focus is on children with physical disabilities. Burke (2013) then expanded the concept by providing a theoretical argumentation for the value that UD brings to playgrounds. She touches upon the underlying societal values of UD that are to design for all and argues that this could be a way to get away from the idea that a playground needs to be explicitly designed for children with disabilities. In 2015, Moore and Lynch conducted a scoping review to gather evidence about the accessibility and

usability of playgrounds for children with diverse abilities. Based on the findings, their suggestion is that a playground designed according to UD could be a way to include all children. Yet they conclude that UD has found only little entry into guidelines for playground design. So far, the level of discussion about UD and playgrounds has been rather theoretical. Stanton-Chapman and Schmidt (2016) then took a next step and described the procedure for planning an inclusive playground according to the seven principles of UD. As part of this, they consider the inclusion of the voices of children with disabilities and their families to be central. However, they only address the seven principles of UD at a general level and do not specify how these principles could be conferred to playgrounds. Casey (2017) then describes ideas around the practical application of the seven principles to playgrounds. She outlines the potential challenges that might arise from applying the seven principles to playgrounds in the quest to create play opportunities for children with diverse abilities. In a subsequent review of policies and guidelines about play, Lynch, Moore, and Prellwitz (2018) take up this challenge and describe how the seven principles of UD could be connected to play value. Furthermore, they describe an overall lack of play policies; and if there is a play policy, UD is often absent (Lynch, Moore, & Prellwitz, 2018). If UD is included, then the focus is merely on accessibility and public buildings, not on playgrounds (Lynch, Moore, & Prellwitz, 2018). Lynch, Moore, Edwards et al. (2018) then expand on this theoretical work by investigating the practical application of the seven principles for playgrounds. As outcome they present a description of the seven principles for play spaces, practical guidance and concrete examples for application (Lynch, Moore, Edwards, et al., 2018). Stanton-Chapman and Schmidt also describe the practical implementation of UD on a playground in several articles (2020; 2017b, 2019). However, the authors are not specific about how the seven principles are implemented in the design (Stanton-Chapman & Schmidt, 2017b). Lynch et al. (2020) further explore how UD is implemented in local parks and communities in an Irish context. From the consultations with park and playground providers, their results in relation to UD identified a lack of knowledge (amongst others expressed through the opinions that UD is only for people with disabilities and requires higher costs for building). The findings from the consultations with the users of the parks and playgrounds (children and their families) indicated the effects of absence of UD, resulting in the playground being perceived as boring by older children. Inversely, carers wished specific play equipment and atmospheres that address the needs of children with disabilities. Later, Moore, Lynch et al. (2022) extended the survey of playground designers' knowledge of

UD to the whole of Ireland. The results confirm that playground designers need knowledge and training in UD (Moore, Lynch, et al., 2022a). To gather the evidence pertaining to UD and playgrounds, Moore et al. (2022b) conducted a scoping review on the topic. However, they found no evidence that UD had been applied to playgrounds. Furthermore, they identified a notable absence of consultation with children during the playground planning process. Particularly striking was the lack of input from children with a migration background or from lower socio-economic areas, whereas in the case of children with disabilities, it was often their carers who were consulted rather than the children themselves. In a systematic literature review, Watchorn et al. (2021) investigated the use of UD in the built environment (not limited to playgrounds). They also found a lack of evidence for how UD was applied, especially in relation to how people participated in the environment through occupations, which would be an important predictor of inclusion. In another scoping review, Moore, Boyle et al. (2022) looked at guidelines for inclusive playground design and identified that UD was applied only in a limited number of guidelines. Furthermore, there seemed to be conceptual ambiguity about the meaning of UD in the context of playgrounds, with understandings ranging from designing for accessibility to designing for inclusion (Moore et al., 2023; Wahab et al., 2022).

At the level of policies that specifically relate to play or play spaces, UD is anchored in the GC No. 17 (2013) and has recently been included in the European standard for accessibility and usability of the built environment with a specific section on playgrounds (European Standards, 2021).

In summary, the essence of UD can be distilled as an approach striving to create design that accommodate the greatest possible human diversity in order to enable participation and facilitate inclusion in society (Steinfeld et al., 2012; UNCRPD, 2006). UD is often described as a process, or even a way of thinking, that focuses on users' needs in relation to inclusion (Preiser & Smith, 2011). By involving users and considering all people as equal, UD is also an approach that promotes social justice and human rights. Consequently, it addresses the issues of people's participation and inclusion, including in decision-making, from the perspectives of individuals, communities, and how their needs and rights are represented in policy (Egilson & Jónasdóttir, 2023; Lid, 2013, 2014). This corresponds to the core values of participation in terms of engagement in occupation but also in terms of co-determination at the decision-making level (Arnstein, 1969; Hart, 1992). As such, UD seems to represent one

way in which children's voices can be increasingly heard in the planning process of inclusive playgrounds across all levels of society. At the same time, UD also seems to acknowledge transactions between the physical and social environmental elements and geopolitical elements and persons.

The next section summarises the introduction and provides a summary of the rationale behind this thesis.

Rationale

Playing is a fundamental right of every child and one of the main occupations in which they engage (Parham, 2008; UNCRC, 1989). For children, fun is one of the most important experiences they want to have when playing. Fun includes, for example, experiencing challenges and playing with other people or animals in the environment. These experiences are created through a dynamic relationship between the situational elements, including the physical and social environmental elements, sociocultural and geopolitical elements, the person (child) and the play occupation, which mutually interact with each other. Also, children report the outdoor environment to be one of their preferred environments in which to play. Playgrounds in communities are places specifically built for children to play outdoors. However, studies investigating children's play experiences on outdoor playgrounds have documented the presence of several barriers impacting play and inclusion, especially for children with disabilities. For children without disabilities, the main barriers are related to physical environmental elements, that is whether they have access to a playground or not. However, for children with disabilities, the barriers constituted by social environmental elements are more incisive and related to negative attitudes towards them and their families. These experiences were underpinned by barriers associated with geopolitical elements, notably the lack of comprehensive play policies, or, in cases where such policies existed, a lack of emphasis on inclusion. In addition, from the perspective of local authorities and playground providers, limited knowledge and awareness of how to design for play and inclusion, as well as limited funding, was a barrier for children with different abilities. In recent years, these barriers have been increasingly recognised and a new type of playground, the inclusive playground, has emerged with the aim of overcoming these barriers. The provision and design of inclusive playgrounds has also been underpinned by the GC No. 17, that anchored UD as a design approach for building inclusive playgrounds (CRC, 2013). However, a literature review conducted on UD and the built environment concluded that

the focus in UD has so far been theoretical rather than practical (Watchorn et al., 2021). This review also highlights a notable lack of focus on people's occupations in the environment and how UD facilitates their participation in the environment to achieve inclusion (Watchorn et al., 2021). A similar situation has been identified for the specific case of inclusive playgrounds in terms of a lack of evidence reporting on the use of UD and whether or how it contributes to inclusion (Moore et al., 2023; Moore, Lynch, et al., 2022). So far, the majority of studies related to inclusive playgrounds have offered suggestions for designing inclusive playgrounds at a theoretical level (Lynch et al., 2020; Stanton-Chapman & Schmidt, 2017a, 2019) and design recommendations for how to build them (Alsarawi, 2020; Brischetto et al., 2019; D. M. Y. Brown et al., 2021; Fernelius & Christensen, 2017; Harris et al., 2022; Hill & Chawla, 2019; Kianfar & Brischetto, 2021; Moore, Boyle, et al., 2022b). Only recently have studies started to evaluate playgrounds built with the intention to be inclusive. However, some of the studies only included children without disabilities and focused on physical activity in the United States (Stevens et al., 2023). Alternatively, some studies centred on observations within inclusive playgrounds (Dalpra, 2022; Siu et al., 2017) or conducted interviews with carers of children with disabilities (Wahab et al., 2022). Nevertheless, the two studies that did evaluate inclusive playgrounds in terms of play and inclusion for children with and without disabilities provided valuable insights. One study was conducted in Malaysia and found that the playgrounds still did not meet the play needs and overall goal of inclusion (Wahab et al., 2022). Another study, conducted in Hong Kong (Siu et al., 2017), reported findings similar to those of the Malaysian study. However, it also revealed that that they did not encounter children with disabilities in the inclusive playgrounds, and it highlighted barriers related to local authorities' understanding of what inclusive playground provision entailed. Aligned with the recognition of the importance of subjective experience in participation and a child's right to express their view and be heard, as stipulated in the UNCRC (1989), it becomes evident that there is a need to include children's own perspectives on how they experience play and inclusion in inclusive playgrounds. Furthermore, there seems to be a lack of studies from Europe that investigate how well inclusive playgrounds provide for play and inclusion from the perspective of playgrounds users, such as children and their carers, and the perspective of playground providers. There is also a lack of knowledge about how to use UD in inclusive playgrounds to promote play and inclusion. This thesis intends to bridge this knowledge gap through the following

overall aim and the aims of four individual studies, which are presented in the next section.

Overall aim of the thesis

The overall aim of the thesis was to gain a deeper understanding of play and inclusion on inclusive playgrounds from the perspectives of playground users (children with and without disabilities and advocates of children with disabilities), and playground providers (including experts in Universal Design).

Aims of the studies

Study I Aimed to explore the experiences of children, with and without disabilities, of playing on inclusive playgrounds.

Study II Aimed to explore the design and use of inclusive playgrounds with a particular focus on how design supports or hinders inclusion from the perspective of people involved in designing or advocating for children with disabilities.

Study III Aimed to expand the knowledge, from a child-centred perspective, of how environmental characteristics influence play value and inclusion for all children in outdoor playgrounds.

Study IV Aimed to advance the understanding and use of UD in inclusive playground provision by identifying experts' experiences and strategies for applying UD in playgrounds.

Methods

As this thesis aims to gain a deeper understanding of children's and playground providers' perspectives on play and inclusion on inclusive playgrounds, qualitative methods were deemed to be the most appropriate means of gaining insights into the understanding and experiences from the point of view of the participants themselves. Underpinning the thesis and study designs is the understanding that knowledge is constructed and emerges and develops through a transactional relationship between participants, researchers and the environment (Lincoln & Guba, 1985, 2013). Building on this understanding, participants were seen as experts in their everyday experiences of play, disability, playground provision or UD, each having a distinct and individual perspective. This premise rests on the belief that every person has his or her own way of understanding the world (Lincoln & Guba, 1985). The researcher, or more specifically myself as a PhD student, was seen as influencing the constructed knowledge with my own values, background, skills, knowledge and choices (Creswell, 2009; Lincoln & Guba, 1985). Furthermore, the geographical, cultural, social, organisational and political context in which the research was conducted also influenced this transactional relationship (Lincoln & Guba, 1985). The influence and composition of knowledge from different perspectives, contexts and experiences is also reflected in the fact that the individual studies of the thesis gradually developed and informed each other, also in terms of the underlying theoretical understanding.

In the following, the context in which the four studies of the thesis were conducted is described. This is followed by a description of the study designs. Then, the sampling strategies, study participants, recruitment procedure and data collection are described. Initially, this is delineated for studies that captured the children's perspectives and, subsequently, for those studies that captured adults' perspectives. This is succeeded by a description of the data analysis methods used in the studies. The chapter concludes with a description of the ethical considerations of the studies.[4]

[4] In the chapter *My contributions to this project* I describe in more detail how I contributed to each of the studies.

Context and study design

The larger framework of the funded projects within I was able to realize this thesis influenced the geographical and institutional context in which the individual studies were conducted. Table 1 provides an overview of Studies I-IV, including the study context.

Studies I and II were conducted in Switzerland within a project located at Zurich University of Applied Sciences (ZHAW) aimed at improving the quality of inclusive playgrounds in Switzerland (Schulze, 2020).

More specifically, Study I was conducted in the German-speaking part of Switzerland. The sites for data collection were six publicly accessible playgrounds designed to be inclusive. Four of the playgrounds were located on the shared grounds of special and regular schools. In Switzerland, separate schooling of children with and without disabilities is still common and leads to children with disabilities attending special schools (Kronenberg, 2021). One playground was located in the neighbourhood of housing blocks and educational institutions for children. Another playground was located on a greenspace next to a lake and a campsite. Four of the playgrounds were situated in urban areas; two of the playgrounds, in rural areas.

Study II was also conducted in Switzerland. A central location in a major Swiss city was chosen for the data collection in order to bring together people from the German and French-speaking parts of Switzerland in focus groups.

Studies III and IV were conducted within P4Play, a European project encompassing four universities (Luleå University of Technology in Sweden (LTU), Queen Margaret University in Scotland, University College Cork in Ireland (UCC), ZHAW in Switzerland). On the one hand, the project aimed to produce new knowledge on the occupation of play, and on the other hand to offer a PhD education in Occupational Science across Europe (Jackson et al., 2021). Within the context of this project, I am affiliated to LTU, UCC and ZHAW. Furthermore, I am also linked to a secondment partner, which is the Centre for Excellence in Universal Design in Ireland.

Study III was conducted as a systematic literature review of qualitative evidence, manifesting as a meta-ethnography, purposefully designed to include the perspectives of children from different regions of the world. The literature

search resulted in the inclusion of studies from countries in Europe (10), Australia (4), Asia (2) and Africa (1). The play spaces included in the studies were school playgrounds (9), community play spaces (5) and community playgrounds (4).

Study IV was conducted in the city of Dublin in Ireland. This particular context was the result of collaboration with the secondment partner of the PhD project who is based in Dublin. The sites for data collection were four playgrounds designed according to UD and with the intention of being inclusive. All the playgrounds were open to the public, at least during the day. Two of the playgrounds were located in Dublin city centre; the other two, on the city outskirts.

A qualitative descriptive design was used for Studies I, II and IV as these studies aimed to explore participants' experiences and perspectives in relation to play and inclusion in inclusive playgrounds. Qualitative descriptive designs are described as appropriate for studies that explore participants' experiences and perspectives in relation to everyday events in their lives (Bradshaw et al., 2017; Doyle et al., 2020; Sandelowski, 2000). Furthermore, a qualitative descriptive design also aligns with the understanding that knowledge is subjective and constructed by the participants, the researcher and the context (Bradshaw et al., 2017). It is also described as a useful design for exploring areas of research that do not yet have a deep knowledge base, such as inclusive playgrounds. This approach places primary emphasis on presenting the experiences and perspectives of team members in close proximity to the data collected, eschewing the formulation of theories (Doyle et al., 2020; Sandelowski, 2000). Qualitative descriptive designs often apply more straightforward methods, such as purposive sampling, interviews or focus groups and content or thematic analysis, which are also consistent with the procedures and methods used in the studies of the thesis, as described below (Bradshaw et al., 2017; Doyle et al., 2020; Sandelowski, 2010).

Study III used a meta-ethnographic approach, which describes a specific study design, method of data collection and analysis that aims to generate theory by translating and synthesising the included qualitative studies into a new whole. The meta-ethnographic approach is situated in the interpretive paradigm, which is in line with qualitative methods and an understanding that knowledge is co-constructed (France et al., 2019; Noblit & Hare, 1988).

Table 1. Overview of Studies I to IV

Study	Aim	Design	Data collection methods	Study context	Participants	Data analysis	Status of study
I	To explore the experiences of children, with and without disabilities, of playing on inclusive playgrounds	Qualitative descriptive design	Semi-structured interviews and observations	Six inclusive playgrounds in Switzerland	32 children (9 girls, 23 boys), mean age 10 years; 18 children with a disability (2 girls, 16 boys), 14 children without a disability (7 girls, 7 boys)	Qualitative content analysis (Graneheim & Lundman, 2004)	Published
II	To explore the design and use of inclusive playgrounds with a particular focus on how design supports or hinders inclusion from the perspective of people involved in designing or advocating for children with disabilities	Qualitative descriptive design	Focus groups	Playground designer and advocates for children with disabilities	26 participants (15 female, 11 male), mean age 47 years, with a background in playground design (architect (1), landscape architects (6), playground planner (1), playground safety managers (2), spatial planner (1), construction manager (1), urban researchers (2)) and advocates for children with disabilities (ethnologist (1), social workers (5), occupational therapist (1), psychologist (1), movement scientist (1), representatives of parent's associations for people with intellectual disabilities (3))	Thematic analysis (Braun & Clarke, 2006)	Published

III	To expand the knowledge, from a child-centred perspective, of how environmental characteristics influence play value and inclusion for all children in outdoor playgrounds	Meta-ethnography	Systematic search of qualitative literature in the databases AMED (Allied and Complementary Medicine Database), Avery index, Cinahl Complete, Emcare, Eric, Medline, PsycINFO, Scopus, and Web of Science	Included studies were conducted in European countries (10): on school playgrounds (6), community playgrounds (3), community play spaces (1); Australia (4): on school playgrounds (3), community playgrounds (1); Asia (2): on community play spaces (2); Africa (1): on community play spaces (1)	17 qualitative studies, investigating the perspectives of 594 children aged 0-12 years [a]	Meta-ethnography (Noblit & Hare, 1988)	Published
IV	To advance the understanding and use of UD in inclusive playground provision by identifying experts' experiences and strategies for applying UD in playgrounds.	Qualitative descriptive design	Expert interviews (Bogner et al., 2018) using a go-along method (Carpiano, 2009; Kusenbach, 2003)	Four community playgrounds designed according to UD	6 participants (3 female, 3 male), mean age 41 years, who were all experts in Universal Design	Qualitative content analysis (Graneheim & Lundman, 2004).	Unpublished manuscript

Note. [a] One study included in study III did not report on samples size.

Participants, procedures, data collection

To gain a deeper understanding of play and inclusion on inclusive playgrounds, Studies I and III explored the perspective of children; and Studies II and IV, the perspectives of adults who were involved in playground provision, had expertise in UD or were advocates for children with disabilities. For all studies, purposive sampling strategies were applied. According to Sandelwoski (2000) and Patton (2015), the strategies allow participants to contribute their rich and diverse experiences related to the specific research topic under investigation. This aligns with the underlying purpose for choosing these sampling strategies.

Children's perspectives

Study I: Children with and without disabilities

Study I was designed to explore how children with and without disabilities experienced inclusive playgrounds and if they experienced a sense of belonging and inclusion. Because we assumed that the experience of inclusion included children with and without disabilities being together in the playground, we included both groups in the study. In total, 32 children (9 girls, 23 boys, mean age 10 years, standard deviation (SD) ± 1.6 years) participated in this study. Thereof, 14 children (7 girls, 7 boys, mean age 9.5 years, SD ± 1.7 years) did not have a disability, and 18 children (2 girls, 16 boys, mean age 10.4 years, SD ± 1.4 years) had various physical, visual or cognitive disabilities or a combination hereof (see Table 1).

Inclusion criteria

To be included in the study, children needed to be aged between 7 and 12 years. This decision was based on two assumptions. First, we assumed that children in the school age have built relationships and possibly friendships with their peers in school and may visit playgrounds together in their free time. This assumption was also informed by the local context in Switzerland, where school playgrounds are often used by children living in the community when they want to meet outside of school hours. The second assumption was informed by literature on children's ability to provide answers in a research interview framed as a conversation (Trautmann, 2010). In addition, the children and their legal representatives had to agree or consent to the study, and the children had to be able to express themselves in any way as we collected data through semi-structured interviews.

Recruitment

We operated under the assumption that inclusive playgrounds should be places where children from the community meet, expecting that we would meet children with and without disabilities on playgrounds during our visits to these playgrounds. Visiting the playgrounds, we were successful in recruiting children without disabilities by asking them and their carers if they were interested in participating in the study. However, we encountered no children with disabilities and therefore had to adapt the recruitment strategy. In order to include the voices of children with disabilities, we contacted special schools for children with disabilities that had an inclusive playground open to the public. Contact persons at the schools, such as occupational therapists or teachers, facilitated the recruitment of children with disabilities. However, this approach also meant that we could not collect the views of children with and without disabilities on the same playground but rather interviewed children with and without disabilities on different playgrounds.

Data collection

For data collection, we primarily chose to use semi-structured interviews (Brinkman, 2018) as we considered this to be an appropriate method for capturing children's perspectives on their experiences of play and inclusion in inclusive playgrounds. In addition, we collected observational data on the playground itself and of the children playing on the playground, guided by the PlayAUDIT (Lynch, Moore, Edwards, et al., 2018). The PlayAUDIT is a tool for making structured observations on playgrounds. The PlayAUDIT focuses on accessibility, usability and play value of the built play equipment. The collection of observational data served a dual purpose. One purpose was to be able to refer to children's immediate play experiences to open up conversations with the children. Therefore, we began by observing the children during a short sequence of play before interviewing them in a quiet place directly on the playground. The other purpose of the observations was to collect further information on children's social interactions and the design of the built environment of the playground after the interviews. The interviews were conducted by myself and one of my supervisors (CS). While we noticed that the younger children around the age of seven provided shorter answers relating to their immediate experiences, the older children from the age of 10 and older could talk about their experiences at a more abstract level and also provided further explanations in response to the researchers' enquiries during the interviews. Furthermore, as I

gained more experience in interviewing children, the depth and richness of the information gathered through the interviews also increased. We noticed that the synergy between interviews and observations proved helpful in establishing a direct link to children's play experiences during the interview, especially when dealing with the younger children. Furthermore, the fact that both I and CS worked with children with disabilities as occupational therapists helped build rapport and underpinned conversations with the children, especially children with disabilities. In some of the interviews with children with intellectual disabilities, their special education teachers or occupational therapists supported us in formulating the questions during the interviews. Reflecting on the data collection process, the use of more creative, child-friendly methods, such as drawings, craft materials or pictures, as suggested by Clark (2001) in her Mosaic Approach, may have provided additional ways of gaining insight into children's perspectives. Data was collected between summer and autumn 2018.

The combination of interviews and observations allowed us to make a direct connection to children's play experiences in the interview, which was beneficial for the conversation, especially with the younger children. On the other hand, the observations provided further information about the children's social interactions in the playgrounds and the design of the physical environment, including the built environment of the playground itself.

In order to prepare the data for analysis, the interviews were audio recorded, transcribed and pseudonymised.

Study III: Children with and without disabilities

Study III was designed to gain evidence from a broad group of children from different backgrounds and contexts on how environmental characteristics influence play value and inclusion in outdoor playgrounds. For this purpose, the meta-ethnography method was considered appropriate, as it offers a synthesis of qualitative evidence that aims to translate the findings of individual studies into a comprehensive overall understanding. However, the choice of type of systematic literature review was somewhat ambiguous initially and evolved progressively. The decision to conduct a systematic review was determined, among other things, by a) the intention to ensure inclusion of children's perspectives and b) the number of studies meeting the inclusion criteria, which influenced the type of synthesis (Booth, 2016). In total, 17 studies were included because they reported on the perspectives of 594 children (with one study not specifying the

sample size) (see Table 1). All but one study included both boys and girls. One study specifically looked at the perspectives of girls. Most of the studies (12) included children aged 6-12 years of age. Three studies included children aged five and younger. Two studies included children from the younger and older age group. Four studies included children with various disabilities. Five studies included children from lower socio-economic backgrounds.

Inclusion criteria

The main inclusion criteria stated that only studies reporting on children's voices collected using appropriate qualitative methods should be included. The following additional inclusion criteria were established: The age range of children included in the studies was set at 0-12 years as we assumed that children up to the age of 12 were most likely to use playgrounds. Studies were included if they were about playgrounds as we assumed that the places where children play outdoors might vary depending on the cultural context. However, it was imperative that the play spaces conformed to the concept of outdoor play spaces. The studies also had to be peer-reviewed to ensure that they were based on evidence. Finally, for practical reasons, the studies had to be published in English as this was the common language of myself and my supervisors. The intention was also to reach theoretical saturation by applying a purposive sampling strategy (Booth, 2001, 2016).

Data collection

The entire process, from data collection to data analysis and writing up the findings, was guided by a meta-ethnographic approach, coined by Noblit and Hare (1988). This approach includes seven phases; phase one is about determining the need for a qualitative evidence synthesis, and phase two includes the data collection (Noblit & Hare, 1988). To gain a deeper understanding of how each phase is conducted in practice, taking into account further methodological advances in the approach, and to adhere to the guidelines for reporting a meta-ethnography, supplementary insights were sought from the studies by France et al. (2019), Cahill et al. (2018), Toye et al. (2014) and Sattar et al. (2021). These sources proved invaluable in offering valuable methodological guidance.

Preparation for the data collection phase began with the development of the search strategy, which was informed by key studies relevant to the meta-

ethnographic research question, and in consultation with university librarians. Furthermore, the SPIDER tool presented by Cooke et al. (2012) provided further guidance for the development of the search terms and strategy. Prior to conducting the literature search, the study protocol was published on PROSPERO with the number CRD42021268705 (Wenger et al., 2021).

The literature search was conducted in August 2021 and re-run in November 2022 in nine databases in the fields of health sciences, psychology, social sciences and architecture (see Table 1 for database names). The results were managed using the Covidence software (https://www.covidence.org) for removing duplicates, screening titles and abstracts with supervisors, and assessing full-text eligibility. Working with Covidence was found to be very helpful in managing the large volume of literature from the searches in the databases and for team collaboration.

In a meta-ethnography, data is extracted from the results parts of the included studies. In this process, a distinction is made between two types of data. Quotes in the studies that come from the participants of the original studies are called "first-order constructs" and interpretations of the data of the original authors are called "second-order constructs" (Toye et al., 2014, p. 7). Both types of data form part of the body of data that will be analysed. To facilitate the extraction of first- and second-order constructs from the studies, and to prepare the analysis, a spreadsheet in Word was developed following Sattar et al. (2021). The spreadsheet included information on the study (year, author, title), key concepts/themes and first- and second-order constructs identified in the studies. Furthermore, an Excel spreadsheet was created based on Toye et al. (2014) to prepare the extraction of information about the study aim, methods of data collection and analysis, participants and information related to the aim of the meta-ethnography. In retrospect, these tables were very helpful in organising the data extraction and preparing the analysis.

Adults' perspectives

Study II: Playground providers and advocates for children with disabilities

Study II was designed to explore how playground providers design for inclusion. As the GC No. 17 suggests using UD as a design approach for inclusion and UD includes the involvement of users in the design process, we assumed that bringing together playground providers with playground users would be a way

of obtaining information about how to design for inclusion. Although children are the most direct users of playgrounds, we did not include children themselves as participants but rather their representatives because we were concerned about possible power imbalances between decision-makers (playground providers) and users (children). Since we assumed that the advocates of the parents' organisations of disabled children have prior experience from contact with professional bodies, we thought it was justifiable to include them as participants. Overall, 26 participants (15 female and 11 male, mean age 47.0 years, SD ± 9.6 years) were included (see Table 1).

Inclusion criteria

To be included in the study, participants had to have experience in the provision of inclusive playgrounds, and/or being an advocate for children with disabilities and/or having experience of regular playground visits with children with disabilities. Table 1 provides more information on the backgrounds of the participants.

Recruitment

Participants were recruited in a number of ways. Firstly, people involved in the provision of playgrounds, either as professionals or as advocates, were identified through a conference contact list of a play conference in Switzerland. I attended the conference myself, and the list of participants was distributed to all participants at the conference. Potential participants identified from this list were contacted by e-mail. Another way of recruiting was done by asking the contacted potential participants to forward the invitation to other people they knew who were involved in the topic of inclusive playground provision. This strategy is known as a snowball sampling strategy. These recruitment strategies were used to gain access to people who were known to have experience of inclusive play provision and who represented the different professions involved in inclusive play provision. In order to maximize the perspectives on inclusive playground provision and include the perspective of users, also advocates for children with disabilities were recruited. Therefore, parents' association of children with disabilities were contacted by email.

Data collection

As Study II aimed to bring people with different backgrounds together to explore their perspectives in relation to playground provision, the method of

focus groups was deemed appropriate for data collection. Dahlin Ivanoff and Hultberg (2006, p. 131) argue that the focus group interview is a method of data collection in itself that investigates the "collective understanding" of a group. In that sense, we decided that focus groups were an appropriate method for exploring if a) participants had a collective understanding of designing for inclusion in inclusive playgrounds, and b) what their understanding was. In total, we conducted four focus groups interviews in May 2019. Each focus group had between five to nine participants and lasted between 100 and 150 minutes with a mean duration of 135 minutes.

While conducting the focus group interviews, we followed the guidance provided by Dahlin Ivanoff and Hultberg (2006). We also consulted the book by Krueger and Casey (2015) to learn about aspects to consider in terms of group dynamics, the way questions are asked and the subsequent implementation of the suggestions in the focus groups. We started each focus group with an introduction explaining the background of the research project and the rules meant to guide the group's discussion. Following that, the participants introduced themselves. To set the scene and to stimulate their interaction with each other, we introduced a scenario about an inclusive playground that was to be built. This scenario was further illustrated with a site plan from a playground in an urban context. Based on this scenario, focus group participants engaged in a discussion in relation to questions about the understanding and purpose of inclusion and inclusive playgrounds, the consideration of social aspects in inclusive playground design and the needs of children with and without disabilities. Participants were asked for feedback at the end of each focus group session, and previous focus group outcomes informed subsequent focus groups' discussions. The feedback from the participants and the contents of the discussions showed that the participants appreciated that we brought them together and gave them the opportunity to share and discuss experiences on this topic.

For data analysis the focus groups were audio recorded, transcribed verbatim and pseudonymised.

Study IV: Experts in Universal Design

Study IV was designed to learn from experts in UD about their experiences and strategies for applying UD in inclusive playgrounds. As knowledge on the application of UD in inclusive playgrounds is very limited, we were interested in

the perspectives of people who were experienced in the UD design process, either as a playground provider or as a playground user. In total, six experts participated in the study (3 females, 3 males, mean age 41.4 years, SD ±12.5 years) (see Table 1). Participants either gained their expertise in UD through work or because they were involved in consultation processes as users with personal experiences of living with a disability.

Inclusion criteria

Participants were included in the study if they had at least five years' experience in the field of UD and outdoor playground provision. They also had to have been previously involved in projects with children with and without disabilities, be able to communicate in English and consent to participate in the study.

Recruitment

Recruitment of the participants was facilitated via the Centre for Excellence in Universal Design (my secondment partner in the P4Play project) which assumed the role of a gatekeeper. The gatekeeper established contact to potential participants with expertise in UD and inclusive playground provision. Subsequently, I could follow up by contacting the participants via email and by sending them the information about the study, including the study consent form and a short demographic survey.

Data collection

The primary means of data collection was expert interviews (Bogner et al., 2018). As expert interviews are specifically intended to interview people with specific knowledge in a field, often related to their work (Bogner et al., 2018), we found it an appropriate method for collecting knowledge from the perspective of experts in UD. As our primary interest was to learn more about how participants applied UD on the playground and as at least part of the application of UD manifests in the built physical environment, we found it important that participants could show us around in the playground and explain where and how they applied UD. Therefore, we chose to combine expert interviews with the go-along method and conduct the interviews directly on the selected playgrounds while taking a walk through the playground. The go-along method is an interview technique in which the interview is conducted while moving, e.g. on a walk (Kusenbach, 2003). Interview questions related to topics about UD, including the seven principles of UD, natural elements, participants'

understanding of UD, design processes and maintenance. As the questions were related to the physical objects on the playgrounds and informed by suggestions of other studies that have used the go-along method for data collection (cf. Carpiano, 2009), we additionally used photographs to document the elements on the playgrounds that the participants mentioned. From the piloting of the interviews, it became clear that the pictures should be taken by the interviewer as participants might forget to take a picture when they were involved in the discussion. Participants either participated alone or in small groups of two in the interviews. Data was collected at the end of February and beginning of March 2023.

In preparation for data analysis, the interviews were audio recorded and transcribed using an automated online transcription service. The generated transcripts were then checked for accuracy and pseudonymized. The pictures taken during the interview were stored safely on a university computer.

Data analysis

Qualitative content analysis

The data of Studies I and IV were both analysed using qualitative content analysis following the approach described by Graneheim and Lundman (2004). In both studies, I worked with a software programme to conduct the data analysis and felt that it supported the analysis process in terms of data organisation and visualisation. ATLAS.ti was used in Study I and NVivo was used in Study IV. In using two different software programmes, I saw a learning opportunity to become familiar with two commonly used programmes for qualitative data analysis, which could be useful skills for the future.

The process of data analysis started with repeated reading of the transcripts. As the next phase, "meaning units" were identified in the transcripts. Meaning units are described as text, for example a phrase or parts of a phrase related to each other (Graneheim & Lundman, 2004). This was done in an iterative process that involved going back and forth between transcripts. In a next phase, the meaning units were condensed to so-called "condensed meaning units", also described as codes, with the aim to reduce the meaning units to their essence. This was followed by a process of grouping the condensed meaning units into code groups according to commonalities or contrasts. In the next and final phase, the groups were further analysed and code groups with a common meaning were grouped

into themes. Although the phases have been described here in chronological order, in practice the process involved moving back and forth between the phases and conducting regular discussions involving the whole research team.

In Study I, I received guidance and support from one of the supervisors (CS), who assisted me by independently conducting the different phases of the data analysis for select transcripts. We engaged in discussion to clarify points and reconcile differences as needed. In Study IV, I had become noticeably more independent and proficient in conducting data analysis.

In Study I, both the interview data and the observation data were analysed according to the phases described above, but independently of each other. The findings were then synthesised, particularly in terms of how the findings from the observations supported or further illustrated the findings from the interviews. In Study IV, additional data from the pictures were added to the analysis after code groups had been formed to support further analysis and, most importantly, to illustrate the findings (e.g., to provide examples, as concrete illustration of how UD was applied in playgrounds; the uncovering of which was one of the main intentions of the study). In doing so, I realised that the approach of conducting the interviews with the experts on a walk through the playground and taking pictures of the different elements they mentioned was important for the analysis process and for illustrating the findings in order to gain insights into the application of UD to playgrounds.

Thematic analysis

The data of Study II was analysed using thematic analysis according to the phases described by Braun and Clarke (2006). Also, for this study, the software programme ATLAS.ti was used to perform the analysis.

Much like the above-described content analysis, Braun and Clarke also delineated distinct phases to guide the process of analysis when using thematic analysis. The process also starts with a process of familiarising oneself with the data. According to Braun and Clarke, this step already starts during data collection, and it continues while transcribing the data and also involves repeated reading of the transcripts. A second phase includes identification of extracts of data that have meaning and coding them inductively. A third phase includes to organise the identified codes into themes and sub-themes and to work out the relations between a theme and its sub-themes, and relations across themes. Phase

four focuses on revising the content of the themes so that they are consistent and clearly delineated within themselves and throughout the dataset. Phase five is concerned with elaboration of the content of the themes so that their main aspects are clearly recognisable. Finally, in phase six, the themes and sub-themes are written up in the form of the report which is underpinned by quotations. Ideally, the description goes beyond a purely descriptive description and answers different aspects of the research question.

All supervisors supported the process of analysis, reflecting about the meaning of the coded extracts of the focus group interviews and how they could be organised into themes up to the final description of the themes for the manuscript.

When thinking about the method of thematic analysis compared to qualitative content analysis, I found both approaches to be quite similar, with qualitative content analysis offering more support to stay close to the data when coding. Inversely, thematic analysis seemed to be less organised and more open, which maybe allowed me to be more interpretative. This method was therefore useful for analysing discussions, like the focus group interviews.

Meta-ethnographic approach

The meta-ethnographic approach is a form of qualitative evidence synthesis that expands from determining the need for a synthesis (phase one) to expressing the synthesis (phase seven). Data analysis is mainly done in phases three to six; however, Noblit and Hare (1988, p. 27) emphasize that the phases "overlap and repeat as the synthesis proceeds". Through the analysis, the individual studies are translated into each other, thus producing a synthesis that assembles and interprets the individual studies into a new whole (Noblit & Hare, 1988).

We imported the published studies of the included studies into ATLAS.ti to perform the data analysis. To start, we read the studies repeatedly and identified key concepts or themes within the studies, also referred to as "metaphors" by Noblit and Hare (1988, p. 29; Toye et al., 2013). In terms of practicality, we conducted a two-step process where the processes mutually complemented each other. We first coded the studies in the data analysis software ATLAS.ti to identify key concepts. In a second step, we documented the identified key concepts in the before-mentioned Word spreadsheet and extracted first- and second-order constructs from the studies. In phase four, the relationships

between the studies were worked out, which would later determine the nature of the synthesis (see below). For this phase, we worked with power point slides to map potential relationships of how the studies were related and we further explored these relationships. In phase five, the studies were translated into each other, which meant that the key concepts of one study were compared against the key concepts or themes of all the other studies. In this phase, we started with the study whose year of publication was furthest back and proceeded in chronological order. During the analysis, we moved back and forth between the studies in ATLAS.ti, the Word document and the PowerPoint slides to further explore the relationships between the studies and to refine the mapping. In phase six, the synthesis was developed across all the studies by integrating the key concepts with each other. The synthesis was determined by the relationship between the individual studies in terms of whether the key concepts or themes of the studies were similar (which would result in a synthesis of reciprocal translations), contradictory (refutational synthesis) or could be brought together to form a new whole (line-of-argument synthesis). In our case, the studies were largely complementary, but revealed different aspects. We were therefore able to integrate the studies into a new whole. Accordingly, we developed a reciprocal synthesis that resulted in a line of argument synthesis.

Ethical considerations

As an overriding ethical principle, dignity and beneficence should be assured to all research participants in a research project (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research [NCPHS], 1979; Act Concerning the Ethical Review of Research Involving Humans, 2004; World Medical Association, 2001). This includes treating participants with respect and beneficence, and to ensure justice throughout the research process (Ethical Research Involving Children, 2019; NCPHS, 1979; World Medical Association, 2001). It is the researcher's responsibility to ensure good research practice which is regulated by Swedish law (Act on Responsibility for Good Research Practice and the Examination of Research Misconduct, 2020) and the beneficence of a research project should clearly outweigh its potential harm (NCPHS, 1979).

When involving human participants in research, the above principles of respect for persons, beneficence and justice should be respected. Moreover,

special attention should be paid to issues of informed consent, assessment of risk and benefits and the selection of subjects (NCPHS, 1979).

Ethical approval was obtained for all studies in this thesis that used human participants for data collection (Studies I, II and IV). Ethical approval was not required for Study III as it used previously published studies as data. Studies I and II were conducted in a project that was based at ZHAW. Therefore, ethical approval for these studies was searched in Switzerland, and a declaration of no objection was issued by the ethical commission of the canton of Zurich in Switzerland with the number 2018-00551. A declaration of no objection meant that the study did not collect any health-related data from the participants and therefore did not fall under the Swiss federal act on research involving human beings (Humanforschungsgesetz [Federal Act on Research Involving Human Beings], 2014). At the time the study was conducted, it was common procedure to obtain ethics committee approval in Switzerland. Study IV was conducted when I was affiliated to the LTU in Sweden and the UCC in Ireland. Therefore, the ethics review boards of these countries' universities were responsible for the ethical review of the study. An ethics application was submitted to the Swedish Ethics Committee for Study IV, as the research project was based at the LTU. Under project number 2021-04545, the Swedish Ethics Committee has confirmed that the project does not involve sensitive personal data and is therefore not covered by the Swedish Act concerning ethical review of research involving humans (2003). This confirmation has also been accepted by the social research ethics committee of the UCC in Ireland.

Participants in a research project have the right to be informed about the research project, and informed consent needs to be gained before starting the research with the participants as described in the Declaration of Helsinki (World Medical Association, 2001). In accordance with these standards, participants in all studies received information about the study prior to data collection. Moreover, they were informed that they could withdraw from the study at any time without consequence. If participants agreed to take part in the study, adult participants and children's parents signed the informed consent form, and children gave their consent using a child-adapted form. However, when conducting research with children, certain additional aspects related to informed consent should be considered. Therefore, specific ethical considerations were taken into account for Study I, as outlined below.

Ethical considerations in research with children

The involvement of vulnerable groups, such as children, in research requires special care (NCPHS, 1979; World Medical Association, 2001). The CODEX rules and guidelines for research with children from Uppsala University (Eriksson, 2021) underline this by stating that children should be involved in research only if it is not possible to do the research with another population. Similarly, the Belmont Report (NCPHS, 1979) highlights that there should be a clear need for the involvement of vulnerable groups if they are to be involved in research. For Study I, the need to involve children was driven by the recognition of the importance of collecting the unique perspectives of children with and without disabilities to gain an understanding of their perceptions and experiences of playing on an inclusive playground. The importance of making the voices of children heard is also underpinned by the UNCRC (1989), which states that children should have the opportunity to communicate their opinions, especially on topics relevant for them.

When involving children in research, the procedure for how to best and most adequately inform children about the study and how to search for informed consent needs special attention and careful consideration as children may not yet be able to assess the full extent of potential risks of participating in a research project (Eriksson, 2021). Furthermore, children often need to obey adults. This potentially exacerbates an existing power imbalance when adults are seeking informed consent from children (Eriksson, 2021; Kirk, 2007). To address these challenges, it is advisable to obtain informed consent from both the children and their carers. In doing so, it is essential that the way information is presented to the children aligns with their abilities to understand the information (Eriksson, 2021; NCPHS, 1979; World Medical Association, 2001). The importance of obtaining informed consent on a voluntary basis and the option to withdraw at any moment of the research project are central (Ethical Research Involving Children, 2019). However, the fact that a child can participate in a research project only if the carer also consents could also be seen critically from an ethical perspective. Another challenge arises when involving children with intellectual disabilities in research. How can the researcher make sure that they fully understand the information about the research project and can express if they would like to participate? Would it be ethically correct to exclude them from research projects just because there could be potential harm as they might not fully understand the consequences of their participation? Other issues that need

to be considered in connection with informed consent are power relations and confidentiality. It is particularly crucial to acknowledge that children have different language skills and often are in an inherently unequal power relation compared to adults (Kirk, 2007). Additionally, appropriate consent forms must be developed for children, taking into account their developmental age and language skills. The fact that the research often does not result in immediate benefits for the child should also be discussed when giving the child information about the research project (Kirk, 2007). In Study I, we took these considerations into account by developing child-adapted consent forms that informed the children in a child-friendly language about the purpose of the study, how data collection would take place, what we would do with the data afterwards, and their rights to withdraw from the study at any moment.

Addressing confidentiality, it is essential to carefully consider the advantages and disadvantages regarding the place of an interview and the persons present during the interview. For example, the researcher may not be able to fully understand what a child with communication difficulties is saying and may need the help of the carer to understand the child correctly. This raises the issue of reliability or trustworthiness as addressed by Whyte (2006, p. 20) who emphasises that "responses should be typical of what the person believes". This concern becomes particularly critical for children with language or communication difficulties. In Study I, this situation was also encountered. For some children who had milder impairments in pronunciation, I was able to understand the children due to my experience from working as an occupational therapist with children with similar impairments. In addition, I ensured that I followed up with clarifying questions when I was uncertain to confirm that I had understood the child correctly. However, at some interviews carers were also present, which may have led to children to withhold some information. Additionally, the researcher needs to strive for authenticity by checking "that the views expressed are fair and representative; responses should be checked across contexts and strategies" (Whyte, 2006, p. 20). This was done during the data analysis by comparing the children's statements with each other. Other relevant aspects included creating a comfortable atmosphere, scheduling enough time for the interview, introducing the child to the audio recorder and informing the child that I was taking notes for my own support to remember what has been said earlier in the interview (Horstman et al., 2008).

Findings

This chapter presents the studies and describes their findings in the order in which they were conducted. It also describes how results from previous study(s) influenced subsequent studies.

Study I

The aim of Study I was to explore the experience of children with and without disabilities of playing on inclusive playgrounds. An underlying question of this study was to investigate to which extent the design of inclusive playgrounds contributes to inclusion.

On the one hand, the findings showed that children with and without disabilities had similar play preferences and experiences on the inclusive playgrounds; however, the way in which they performed the play occupations differed. This suggests that the design of the inclusive playground played an important role in enabling these play experiences. Children pointed out that especially the many different ways in which the playground equipment could be used provided play occupations for all children. On the other hand, the findings also showed that there may still exist "invisible barriers" to inclusion on inclusive playgrounds. The interviews and observations revealed the presence of social barriers. These barriers were also manifested in physical barriers in terms of who belonged to which physical space. Social barriers were also found in relation to social interactions between children with and without disabilities. These barriers were manifested in children not wanting to play with children who were more capable at performing a play occupation or children with and without disabilities lacking strategies for social interactions with each other.

One possible approach to tackling these barriers was suggested by the children themselves, particularly those with disabilities. They shared reflections about how the playground equipment could be improved. These reflections were often related to small adaptations or use of different materials but informed by their lived experiences of playing on the playground. Thus, children with disabilities were found to be important informants for the design of inclusive playgrounds.

Upon analysing the data and reflecting on the findings, I realised that it was probably only through the combination of interview and observation data that I was able to understand the differences in experiences between children with and without disabilities and how these experiences were interpreted from my adult perspective as an observer. Furthermore, for me, the findings also highlighted the importance of listening to those with lived experiences of doing or experiencing an occupation. Looking back, I realized how much the experiences and insights

into children's play occupation that I gained through Study I contributed to my understanding of play occupation of children with and without disabilities.

Study II

Building on Study I, which illuminated the barriers to social inclusion on inclusive playgrounds from children's perspective, Study II aimed to capture playground providers' perspectives on what they did to make playgrounds inclusive. Thus, Study II aimed to explore the design and use of inclusive playgrounds with a particular focus on how design supports or hinders inclusion from the perspective of people involved in designing or advocating for children with disabilities.

The findings of Study II provided insight into the playground providers and advocates' various ways of understanding an inclusive playground. Some understood it as a playground that was specifically built for children with disabilities and containing special equipment for children with disabilities. Others shared the understanding that an inclusive playground was for people of all abilities, including carers with a disability. Others said that a playground was inclusive if it instilled in everyone a sense of belonging. One characteristic of such an atmosphere was the presence of other children with disabilities and their parents.

Similar to Study I, Study II identified barriers to the provision of inclusive playgrounds. This time, the barriers were identified mainly at a societal level. One barrier was the lack of policies focusing on inclusion in Switzerland, which participants felt often made designing for inclusion unattractive and relegated it to the background. Furthermore, they described how existing anti-discrimination policies often focused on accessibility but not on inclusion. Another barrier identified was the limited knowledge of inclusion among playground providers. This shortcoming was linked to a lack of guidance and understanding of playground users' needs and of inclusive playgrounds themselves. A third barrier was related to negative community attitudes towards children with disabilities. According to the participants, these negative attitudes were shaped by the school system in Switzerland, which still often segregates children with and without disabilities. Negative attitudes also encompassed negative attitudes towards children with disabilities and their parents in the community.

Participants also discussed suggestions for how to address these barriers. This included provision of knowledge on how to design for inclusion to playground planners and municipalities and including different perspectives, encompassing also those of children with disabilities and their parents. This idea was further

developed by the participants who suggested creation of a community network that brought together people with different backgrounds, experiences and knowledge. This network could, for example, be a national specialist body that could serve as a contact point for inclusive playgrounds. Such a network should also facilitate co-design between playground providers and users. Participants furthermore agreed that the provision of inclusive playgrounds should go beyond the construction of the playground; indeed, it was necessary to continue collaboration, for example by having professionals facilitate play on the playground.

We were slightly surprised by the differences in the participants' understandings about what an inclusive playground is. However, we assumed that bringing people with different backgrounds together would stimulate the discussions and create opportunities to learn from each other. In some ways it worked, but it also highlighted possible challenges as to why the voices of children with disabilities are often absent from playground planning.

Study III

Study III aimed to increase knowledge, from a child-centred perspective, of how environmental characteristics influence play value and inclusion for all children in outdoor playgrounds. The impetus for this study was informed by the findings of Study I and Study II. On the one hand, it aimed to deepen the findings of Study I through a systematic literature review exploring how children experience play on playgrounds (play value). On the other hand, it also sought to fortify the emphasis on obtaining children's voices to inform the understanding of inclusion on playgrounds. The latter aspect was also informed by the findings of Study II, which showed the complexity of designing for inclusion from the perspective of playground providers and advocates for children with disabilities.

The findings of Study III resulted in two themes. Theme one describes characteristics of play value from the children's perspectives. Play value was found to arise from a transaction between the play occupations children did in playgrounds, the meaning they found in these occupations and the affordances of the playground environment. The findings suggest that play value was characterized by four aspects. One aspect was the experience and mastery of challenges, which contributed to children's self-esteem. The analysis showed that for children challenges could arise from both the physical and the social environmental elements in playgrounds. Another aspect was an environment that allowed children to be creative and be shaped by them, either through creating

their own worlds through imagination or by integrating the physical environment (e.g. playground equipment) into their own games. This experience contributed to children forming attachment to a place and establishing a sense of belonging. Another aspect was identified as playing with or alongside other children. This was evident in the children's perception of the play area as a place for social interaction. The significance of this aspect was illustrated by the effort that children with disabilities undertook to become part of social interactions. A fourth aspect related to a welcoming atmosphere and contributed both to play value and inclusion. This aspect also reinforced the centrality of consulting with children when designing inclusive playgrounds, as children's needs went beyond the need for playground equipment. It also included having (independent) access, having well-maintained playgrounds, strategies to minimise hazards and rules to support inclusion.

Theme two was related to how the availability of a variety of spaces and places and a variability of designed and non-designed elements contributed to play value and inclusion. Variety of spaces and places was sought to ensure a variety of open and in-between places that could contribute to play value and inclusion in the sense that they enabled play opportunities for children of different ages, abilities and gender while accommodating larger or smaller groups of children. Variability in terms of designed and non-designed element related primarily to constructed playground equipment, but also loose parts that enabled a variety of experiences because they afforded children with the possibility to do play occupations in different ways. Furthermore, variability also referred to playground equipment that could be used by a group of children together. Finally, variability related to a variety of material such as loose parts, natural elements and environments, having enough equipment for play and the kind of material.

To summarize, the findings show that the things children would like to do and experience when playing (play value) were the same for children with and without disabilities. Furthermore, social experiences were inherent to play value.

Reflecting on Study III, I realized that the systematic review of qualitative evidence provided a deep insight into how the physical and social environmental elements were interrelated and transacted with each other, the children and their occupations. The study also reinforced my understanding about the valuable contributions of consulting with children when designing inclusive playgrounds.

Study IV

Study IV aimed to advance the understanding and use of UD in inclusive playground provision from the perspective of experts in UD. The need for this study arose from the fact that the use of UD for the provision of inclusive playgrounds was required by policy documents such as GC No. 17 or the UNCRPD, but evidence of how this might be implemented was lacking. So, the intention was to learn what the application of UD in playgrounds might be like from the perspective of people who were experts in UD and playgrounds.

The findings of Study IV revealed a common understanding and mindset of applying UD to playgrounds based on three core values. These values were that a playground designed according to UD should accommodate everyone, bring people together and be informed by the lived experiences of the playground users. The experts described the results of a playground design based on these three core values as better for the children and their carers, and more rewarding for the designer.

Each of the three core values informed a study theme that identified specific strategies and examples of good practice for applying UD to playgrounds. Theme one related to the core value that UD should accommodate persons of all abilities, ethnicities, cultures, age or gender while providing play value for every child. Experts described their strategy to adapt the environment to children's diverse needs so that all children could experience play value. The theme identified several good practice examples describing how the implementation of this strategy could look like on playgrounds, for example in relation to playground equipment, including natural materials, creating places for play, use of communication measures and accessible routes, and how these examples related to the principles of UD.

Theme two described strategies and good practice examples related to the core value of bringing people together and being together while being mapped against the UD principles. This included the strategy of designing for teamwork through selecting specific play equipment and materials. Another strategy identified was the provision of a nice atmosphere, for the children and their carers. This strategy was related to examples of integrating nature, the place itself and the historical context in the playground as well as amenities, such as toilets, parking places or different places to sit.

Theme three included strategies rooted in the core value that UD in playgrounds should be informed by the users' lived experiences to provide play value. One of the strategies was identified as co-design processes that included diverse users. Another strategy was to guide the maintenance staff to understand

why the playground should be inclusive and to maintain it in that way. The third strategy in this theme was related to environmental sustainability and included the benefits of using natural materials for creating play value and connecting children with nature. The use of local and/or recyclable materials was not only considered environmentally beneficial but also preferred over man-made materials for reasons of safety and play value. Experts also described good practice examples to increase biodiversity.

Reflecting on Study IV, also from the point of view of Study IV being the final element in this thesis, I finally got insights and a deeper understanding of what applying UD on playgrounds could look like. Furthermore, in the findings of Study IV, I was able to recognise many elements identified from the children's perspective in Study III, which may indicate that the UD experts had a good understanding of the children's perspectives on playgrounds, or that UD as a design approach was well suited for designing inclusive playgrounds that met children's needs.

Discussion

The overall aim of the thesis was to gain a deeper understanding of play and inclusion on inclusive playgrounds from the perspectives of children with and without disabilities, advocates of children with disabilities, playground providers and experts in UD. Three key findings can be summarised. One key finding offers insights into how children experience participation in play occupation and play value on inclusive playgrounds. Another key finding is that play value emerges from transactions of the social and physical environmental elements, and the sociocultural and geopolitical elements. A third key finding is related to what UD adds to playground design in the sense of creating a welcoming atmosphere and making the playground inclusive.

Based on the TMO, the main findings are discussed and how they transact with the situational elements, play occupation and people on the playground. In analysing the findings, I experienced the TMO to be useful particularly for recognising and mapping how the different situational elements were related to each other and to children's play occupation. One of the primary objectives driving the development of the TMO was to illustrate the complex transactions between the occupations and the situational elements and translate them into a model (Fisher & Marterella, 2019). Therefore, applying the TMO to describe transactions on inclusive playground could be helpful not only for communicating the findings to occupational therapists but also to other

professionals, such as playground planers or policymakers. For that reason, I chose the TMO in order to be able to discuss the key findings of the thesis. In the following sections, the two key findings relating to children's experience of participation in play occupation and play value and how these experiences emerge from transactions with situational elements will be described first. This will be followed by a description of the key finding in relation to UD.

Children's experience of participation in play occupation and play value

The findings of Studies I and III provided insights into how children experience their participation in play occupation on playgrounds. Findings from Studies I and III revealed that adults (e.g. playground providers, designer, or carers) may perceive children's observable play occupations differently from how the children themselves experience their participation in play occupations. One example is the use of playground equipment. For example, children described how they used the equipment in their own way or how they played traditional games with their own rules. This added play value, for example because they changed the physical environment using their imagination and because they experienced challenges. These differences in perception between the children and outsiders were particularly evident in Study I where children with disabilities described their participation in play occupations. An illustrative example of this was observed in the context of the play occupation of climbing, where children with disabilities described their participation by either observing other children climb or by pulling themselves up on climbing equipment with their arms. Other studies have also described differences between outsiders' interpretation of the occupational performance and that of children participating in play occupations (Burke, 2012; Fahy et al., 2021; Graham et al., 2018; Rasmussen, 2004). A possible explanation of these difference is that participation is a subjective experience for these children. This has been identified as a core feature in the TMO (Fisher & Marterella, 2019) and aligns with how participation is understood from an occupational perspective (Hemmingsson & Jonsson, 2005). Furthermore, the findings of Studies I and III suggest that children can also experience active participation in play occupation simply by watching or observing. Hence, that children's experiences of participation in the play occupation may not necessarily be captured by observation alone, wherefore it is advisable to ask children directly about their experiences.

Furthermore, the findings of Studies I and III revealed that children with and without disabilities had similar preferences for play occupations on playgrounds. Moreover, the meanings they experienced from these play occupations were similar, for example their wish to be challenged; and mastering these challenges contributed to their feeling of self-efficacy. These preferences and meanings can be perceived as play value, as also suggested by the findings of Study III. Play value expresses children's occupational experience when engaging in play occupation. In Study III, the following four characteristics of play value were identified: "experiencing and mastering challenges", "creating and shaping the physical environment", "playing with or alongside other children" and "a welcoming atmosphere for play and belonging".

For the characteristic of experiencing and mastering challenges, it was found that physical environmental elements afforded challenges by combining natural environments, playground equipment and landscape forms with how children used them. Sometimes children also described ways of use that playground providers had not envisaged. Also the social environmental elements afforded challenges through the presence and engagement of other persons, for example children making fun of adults or measuring their own skills against those of other children. Thus, the play value characteristics of experiencing and mastering challenges were found to emerge from transactions of the physical and social environmental elements. From the literature about children's play, the experience and mastering of challenges could also be associated with the terminology of risky play coined by Sandseter (2009). However, by adopting a child-centred perspective, which requires active listening to children's experience of play occupations, we found that they associated the characteristics of experiencing and mastering challenges more with feelings such as excitement or the mastering of challenges, and not with risk. Such an understanding was summarised by Morgenthaler et al. (2023, p. 8) as "intense play experiences" and might align better with our findings than risky play.

The characteristics associated with creating and shaping the physical environment revealed that children's engagement with the place, for example through physically manipulating the place or changing it through imagination, played a significant role in shaping their occupational experiences. These interactions were identified as key factors contributing to children forming a meaningful bond with the place. This meaningful bond was found to result in attachment to the place. One particular form of play occupations that relates to

the experience of creating and shaping the physical environment was that of creating secret hiding places. This form of play occupation was identified from a secondary analysis of the findings of Studies I and III (Wenger et al., 2023). The secondary analysis illustrates how children form attachments to places and how attachment emerges as a result of an iterative process of changing the physical environment and engaging in the occupation of making (secret hiding) places, often together with other children. In that sense, the play value characteristic of creating and shaping the physical environment was found to emerge from transactions of physical and social environmental elements. The importance of places that enable and support children in developing a meaningful connection, leading to a sense of belonging and attachment to a place, is cited as a characteristic of a child-friendly environment (Chatterjee, 2005; Jansson et al., 2022). Furthermore, these studies confirm our findings that the physical elements of places are inherently linked to the social environmental elements of those places (Chatterjee, 2005; Jansson et al., 2022). This finding aligns with the findings of the present thesis as it resonates with the characteristics of playing with or alongside other children and the characteristics of fostering a welcoming atmosphere for play and a sense of belonging, which are described further below. Therefore, the possibilities to manipulate and change the environment also contribute to a sense of belonging.

The characteristic of playing with or alongside other children inherently referred to the transaction of the children, the play occupation and the social environmental element. The experience of playing with other children, or playing near other children, and thus being part of the community in the playground was described by the children as contributing to a sense of belonging and inclusion. The significance of this play value characteristic in relation to the physical environmental element was especially pronounced when viewed from the perspectives of children with disabilities. They were observed to make determined efforts to be present in the specific physical place, for example the swing area, where children came together and social interactions took place.

The characteristics of a welcoming atmosphere for play and belonging included to have access to the playground; provision of a safe place for children to play, which was related to good maintenance; provision of playground equipment and material that eliminates hazards (e.g. no hard surfaces or slides that heat up from the sun); and rules that support social interactions and play value. Thus, a welcoming atmosphere for play and belonging resulted from

transactions of physical and social environmental elements, as well as sociocultural and geopolitical elements.

In addition, the feelings and experiences that the children associated with the play value characteristics contributed to a sense of belonging. This sense of belonging emerged from transactions between children's play occupation and both the physical and the social environmental and the sociocultural and geopolitical elements of a playground. Play value encompassed several key components, including the experience of feeling part of a group through playing with or next to other children; the experience of self-efficacy, which could, for example, result from mastering challenges or creating and shaping the physical environment; and the opportunity for children to exercise autonomy by choosing and controlling their engagement in various play occupations, facilitated by a playground that provides play opportunities for all children. As outlined in the introduction, these experiences correspond with the experiences that children associate with inclusion. Therefore, I suggest that play value is closely linked to the experience of inclusion.

In summary, these key findings of the thesis could be seen as contributing to an understanding of what makes a playground inclusive from children's perspectives. Furthermore, the key findings highlight the importance of including children's perspectives in playground design and policy development for (inclusive) playgrounds. In this sense, the key findings could also have implications for knowledge translation between children and playground providers and policy makers. The key findings may also have implications for occupational therapy as they highlight the importance of developing an understanding of play-centred practice and understanding play occupation and inclusion, specifically in relation to playgrounds, from children's perspectives.

Barriers to inclusion and belonging in inclusive playgrounds

The key findings presented in the previous section give an insight into what makes a playground inclusive from the children's perspective, which in turn is related to play value and sense of belonging. However, studies I and II also showed that even in inclusive playgrounds there are still some barriers to inclusion, belonging and play value. These barriers are described in more detail in this section because they suggest that transactions of sociocultural and geopolitical elements also contribute to inclusion in inclusive playgrounds.

The barriers to belonging and inclusion were mainly identified from the perspectives of children (Study I) and advocates of children with disabilities and playground providers (Study II). Study II identified barriers related to playground provision due to different understandings of what an inclusive playground is. Some of these understandings do not coincide with the understanding of an inclusive playground as it is described in the literature (see Introduction). For example, one understanding was that an inclusive playground is a place for children with disabilities containing special equipment. Also, barriers relating to a lack of policies for inclusion or policies that focus on accessibility but not inclusion were identified. Other identified barriers related to negative community attitudes towards children with disabilities. In relation to this, playground providers and advocates of children with disabilities described to encounter active resistance towards inclusive playgrounds and children with disabilities from people living in the community. The findings reported above are consistent with those of other studies reporting other playground users' negative attitudes towards children with disabilities (Horton, 2017; Stanton-Chapman & Schmidt, 2017a; Sterman et al., 2016) and playground providers' negative attitudes towards children with disabilities and their families (Moore & Lynch, 2015; Sterman et al., 2019). Assuming that there are, indeed, negative attitudes in society towards children or people with disabilities, this may also possibly explain the invisible attitudinal barriers between children with and without disabilities identified in Study I. Furthermore, Study II revealed that the segregating school system in Switzerland often prevents children with and without disabilities from getting to know each other during and after school hours. This could be one of the reasons why children with and without disabilities described that they barely knew each other and did not have "successful" strategies for social interactions with each other (Study I).

In summary, while the children in Study I did not report barriers related to the accessibility and usability of the inclusive playgrounds, barriers in Studies I and II were found to relate to sociocultural elements, such as negative attitudes towards children with disabilities, and geopolitical elements, such as a school system that segregates children with and without disabilities and lacking political support and policies for inclusion. These barriers affected the sense of belonging of children, especially those with disabilities, and their families. The results of this thesis are similar to those of other studies and suggest that the provision of inclusive playgrounds does not sufficiently take into account the social and

political dimensions and fail to create a sense of belonging (Sterman et al., 2019; van Melik & Althuizen, 2020).

The next section presents the key finding of the thesis in relation to UD and how UD could contribute to creating a sense of belonging and inclusion in inclusive playgrounds.

Universal Design: a possible way to create socially welcoming and inclusive playgrounds

The findings of Study IV gave insight into how experts in UD apply UD in playground provision. The findings showed that the UD experts considered the social environmental elements and the sociocultural and geopolitical elements at the beginning of the design and used these elements to guide the design of the physical environmental elements accordingly. Bringing together the findings of the studies in this thesis also showed that this approach is consistent with what makes a playground inclusive from the perspective of children (Studies I and III), and with some of the aspects identified in Study II from the perspective of playground providers and advocates for children with disabilities, as described above. However, it has to be acknowledged that Study IV is based on a very small sample of respondents with specific knowledge about UD and that their knowledge is confined to a specific context. Based on previous studies that found limited knowledge of UD among playground providers (Lynch et al., 2020; Moore, Lynch, et al., 2022a), it is suggested that knowledge of UD cannot be considered common among playground providers. This was also shown in Study II, where UD was not a topic in the focus group discussions with playground providers. However, the participants who had a background in playground provision were all involved in the provision of inclusive playgrounds in Switzerland. In addition to this difference, the understanding of what constitutes an inclusive playground was also different between Study IV and Study II. In Study II, some participants were the opinion that an inclusive playground is a place with special equipment for people with disabilities. Inversely, in Study IV, all participants shared the understanding that inclusive playgrounds designed with UD should accommodate everyone, bring people together and be informed by the users' lived experiences. Yet, it has to be acknowledged that some of the participants of Study II also shared this understanding. However, the approach to designing inclusive playgrounds that was presented by the experts in UD stood out in terms of their mindset and knowledge of how to design for inclusion and

create play value for children with and without disabilities. Studies that investigated how municipalities provide for inclusion on playgrounds found that playground providers usually lacked knowledge on how to design for inclusion and children's play needs, especially those with disabilities (Lynch et al., 2020; Sterman et al., 2019). The findings of Study IV showed that for the UD experts, the social experiences of doing and being together and belonging to the community, and the playground as a place, were at the forefront of their design endeavours. Similar notions of UD were found when designing public spaces for older adults (Verma, 2022) and promoting inclusion and creating a sense of belonging in inclusive education for learning (Katz, 2013; Mendoza & Venables, 2023).

Below is a summary of the strategies derived from the UD experts for designing for doing, being and belonging in the playground and the community, complemented by findings from the other studies in the thesis.

- Creating a welcoming atmosphere for both children and carers. A welcoming atmosphere was also identified as one of the characteristics of play value from the children's perspective in Study III, and as one of the most important factors determining whether a playground was inclusive or not from the perspective of advocates for children with disabilities in Study II. The findings of Studies III and IV show that a welcoming atmosphere was related to several factors. These factors included ensuring access for all; creating an inviting environment that incorporated nature; avoiding unnecessary rules that restricted play value, implementing rules that supported social interactions and inclusion; and ensuring that the playground was well maintained so that it was a clean and safe place. These strategies illustrate how play value and a welcoming atmosphere are created through transactions of the physical environmental elements facilitating access and including nature; social environmental elements enabling social interactions with others; sociocultural elements enabling play value and social interactions; and geopolitical elements ensuring maintenance and an overall design approach. These transactions and strategies were also described in a literature review by Jansson et al. (2022) as factors contributing to a child-friendly environment, as well as for supporting older adults' participation in social interactions and enhancing their sense of belonging to the community (Verma, 2022). Thus, creating a welcoming atmosphere on playgrounds may not only have implications

for the sense of belonging of children but also for other community members.

- **Promoting children to play together** through thoughtful playground design and environmental adjustments tailored to their needs generated play value for every child. For example, this involved selecting inclusive playground equipment, like trampolines or various kind of swings. Other examples were also reflected in the findings of Studies III, where the provision of a variety of spaces and places was found to contribute to play value and a sense of belonging. A mix of open spaces and smaller more secluded spots was found to offer opportunities to play for larger groups to play together but offering retreat options for children who preferred to be in smaller groups or for themselves and who experience the open space as too noisy and crowded. Furthermore, Study III also identified the need for a variety of designed and non-designed elements that enable variability in play experiences. This included play equipment and natural elements that could be used in many ways, were changeable and provided different play experiences, like for example boulders or logs. Furthermore, the study highlighted the need for provision of enough equipment or places to play.
- **The inclusion of natural elements** in the playground was found to be a preference of both children (Study III) and UD experts (Study IV). From the perspective of both groups, natural elements were found to contribute to play value and a sense of belonging, because they could be used in a variety of ways and were changeable. Natural elements in the studies included, but were not limited to, trees, logs, branches, leaves, boulders, pebbles, sand, water, grass, or plants. The benefit of nature to play value and children's health and well-being was also confirmed by other research (Chawla, 2015; Gill, 2014; McCormick, 2017). These elements were also appealing to carers, with broader societal implications because they are also advantageous for biodiversity and mitigate climate change (Shin et al., 2022).
- **Combining different perspectives** to inform inclusive playground design was a recurring topic in all four studies. This approach aimed to foster an awareness of the various lived experiences involved. Specifically, in Study IV, co-design processes involving playground users representing the diversity of community members were described as a way to design for belonging and inclusion and also as a way to change attitudes in society. In Study II, a community network of playground users and providers was

described by playground providers and advocates for children with disabilities as a potential solution to some of the barriers to provision described above and also as a means for improving mutual understanding among playground users and providers. This finding was confirmed by two literature reviews that investigated children's participation in playground design. One literature review showed that by bringing children and adults together in the design process, adults' attitudes towards children's play changed and positively impacted the outcomes in terms of play value (Schoeppich et al., 2021). The other review emphasized the importance of including the whole community into co-design processes (Jansens et al., 2023). In addition, Studies I and III showed that it is important to consider the children's views in playground design as they can provide valuable suggestions, have a kind of "inclusive thinking" of children with disabilities (Study I) and are experts in the use of play and what is needed for play value and inclusion (Study III).

The four strategies described above were also found to be consistent with research investigating children's preferences and suggestions for (inclusive) playgrounds (Hill & Chawla, 2019; Schoeppich et al., 2021).

To conclude the discussion, I would like to offer my thoughts on how the findings of the thesis could be considered from the perspective of communal or collective occupations.

Are communal or collective occupations a means to explore play occupation and broaden the understanding of inclusion on inclusive playgrounds?

As shown by the findings of this thesis, for children play value contributed to a sense of belonging. Furthermore, UD experts emphasised the importance of designing with the intention of fostering a sense of collective engagement and belonging within the community. In interpreting the findings, for me the question arose who or what should be in focus when designing inclusive playgrounds. Should it be to think about how an individual child with a disability can play on an inclusive playground? Or is it maybe to think about how children can play together? Or could it even be to think about how children with their carers can all do and be together as a community in the playground? These reflections led me to the concepts of communal occupation

and collective occupation. Lavalley (2017, p. 458) suggested to explore "communal occupation[s]", a way of looking at occupations from the consolidated occupational experiences of individuals to unifying them into a community perspective. Similar to communal occupation is the concept of collective occupations that describes a group of people engaging in occupations together (Kantartzis & Molineux, 2014; Ramugondo & Kronenberg, 2015). Both community and collective occupations were theoretically grounded in a transactional perspective on occupation (Kantartzis & Molineux, 2014; Lavalley, 2017) and therefore appear to be consistent with the TMO.

The findings showed that from the children's perspective and the perspectives of advocates of children with disabilities and UD experts, the experience of a sense of belonging contributed to the feeling of inclusion on the playgrounds for two reasons; firstly, it enriched the play value (from the children's perspective); secondly, the other people in the playground made one feel accepted and socially welcome (from the perspective of advocates for children with disabilities). From these findings, I draw the conclusion that social experiences contribute to inclusion on inclusive playgrounds. Also, the findings showed how a sense of inclusion emerged from transactions of the physical (e.g., natural materials, physical access), social environmental elements (e.g., playing with other children), sociocultural (e.g., attitudes, rules) and geopolitical elements (e.g., maintenance of the playground) and play occupation, the children and their carers. These findings suggest that a sense of belonging is often intertwined with the presence of other people in the playground, whether through engaging in play occupations together or simply sharing the same physical space. I suggest that adopting a perspective that views this doing and being together as a communal or collective occupation could be a productive approach; one that should focus more on elements and aspects that facilitate these social experiences than on mere physical presence in the playground. This would be so because, according to Lavalley (2017, p. 466), a communal or collective perspective offers a way to look at "how the group is doing together" and how this might affect social relations and inclusion. Going back to the questions raised at the beginning of this section, this could mean that the focus should shift from thinking about how an individual child can engage in play occupation, for example by providing a wheelchair swing, to thinking about how children can engage in play occupation together, for example, by providing a variety of different types of swings in the same place; and how people in the playground (e.g. children and their carers) can become a community. This may be achieved, for example, by

providing nice places to stay while the children are on the swings that are designed to accommodate carers with different needs. These considerations could have implications for playground providers, policy makers and occupational therapists, which will be further illustrated in the next section.

Implications for occupational therapy and playground provision

Occupational therapy

For occupational therapists, the findings of the thesis could have implications for advancing our understanding of play occupation on playgrounds. Specifically, they can contribute to a deeper understanding of play value and participation from the perspective of children with and without disabilities. In this sense, the findings could also contribute to inform a play-centred practice. Furthermore, the findings of the thesis could also be useful for occupational therapists who work with the community; for example, by helping children participate in play occupation in community playgrounds; or for occupational therapists who become involved in projects to renovate or build playgrounds. In this way, occupational therapists can contribute knowledge about play occupation on playgrounds gained in this thesis and also advocate for and facilitate the direct involvement of children with different needs in co-design processes. Furthermore, also the use of the TMO could be useful for occupational therapists for analysing the various transactions on playgrounds between play occupation and situational elements and informing a play-centred practice that focuses the adaptation of the situational elements.

Playground provision and policy

The implications of the findings of this thesis for playground providers and politicians encompass the need to include children's expertise regarding their play occupation and inclusion when planning playgrounds and formulating policies related to playgrounds and inclusion. Furthermore, the importance of integrating diverse perspectives has notable implications for playground providers and policy makers. It is therefore recommended that playground providers and policy makers work together with community members of all ages and abilities to inform policy on playgrounds and inclusion, to address barriers to inclusion in built playgrounds and to inform the design of new playgrounds that are inclusive for communities. Another significant implication lies in the realm of UD for playground provision to enhance play value and inclusion, as the findings of the

thesis showed indications that UD could contribute to play value and inclusion in playground design. Furthermore, the use of the TMO could provide a useful perspective for playground provider and policy makers to examine play occupation and the various transactions that emerge in inclusive playgrounds. Perhaps, the use of the TMO could also be a way to focus more on what people do in the built environment, and how the doings and the situational elements co-constitute each other, a focus that is rarely embraced in UD in the built environment more generally (Watchorn et al., 2021). Such an approach would be particularly productive for playgrounds (Moore, Lynch, et al., 2022b).

Yet, the findings of the thesis also have to be considered taking into account the methodological considerations described below.

Methodological considerations

From my view point, the use of qualitative methods in this thesis was valuable for gaining insights into the various experiences and perspectives of playground users and providers, allowing for an exploration of the experiences of play and inclusion on inclusive playgrounds from different perspectives. However, it has to be acknowledged that each of the studies had several limitations which I will address below. In addition, I will also describe my reflections on how the use of different methods could have strengthened the trustworthiness of the studies.

Trustworthiness

In this section, I use the criteria proposed by Lincoln and Guba (1985) to assess the trustworthiness and rigor in qualitative research. Although formulated some decades ago, these criteria still seem relevant for evaluating qualitative studies nowadays (cf. Bradshaw et al., 2017 for qualitative descriptive designs; cf. Graneheim et al., 2017 for qualitative content analysis). They will be used to discuss limitations and some of the strengths of Studies I, II, III, and IV. According to Lincoln and Guba (1985), the purpose of these criteria is to ensure and assess the trustworthiness of the findings of a research project, whether it is an individual study or a thesis, with respect to the specific context in which it was conducted, and to gauge how accurately and carefully the research project was conducted.

The criteria suggested by Lincoln and Guba (1985, p. 328) were "credibility", "transferability", "dependability" and "confirmability". Each of the criteria is

briefly described below, followed by a description of how the criteria were or were not addressed in the studies that comprise the present thesis. In addition, Lincoln and Guba (1985) suggested that personal and methodological reflections in relation on the above-mentioned criteria should be noted in a reflexive journal. The constant process of reflecting about my own positionality as a researcher, my (pre-) knowledge in relation to the research topic and how this can influence my research, combined with reflections about methodological decisions taken while conducting the studies is nowadays also referred to as reflexivity in the literature (Finlay, 2002; Stige et al., 2009). My understanding of reflexivity, gained from the literature and a workshop on reflexivity, is that it should be part of the research process and reflexivity is therefore intertwined with the criteria of trustworthiness. I have therefore integrated my reflections into the description of the criteria of trustworthiness below.

Credibility describes ways of ensuring that the findings represent the participants' experiences. Some of the strategies proposed by Lincoln and Guba (1985), that were found to be most applicable for the studies conducted within the thesis, were collection of data and engagement with participants over a longer period of time, triangulation through using different methods for data collection, applying strategies of member checking and involving several researchers in the data analysis process.

Regarding the *collection of data and engagement with participants over a longer period of time,* I have to acknowledge that the studies in the thesis, with their respective data collection methods, took a cross-sectional rather than a longitudinal approach to data collection. The studies therefore provide a snapshot of different perspectives on inclusive playgrounds, which has limitations for the thesis as a whole and for individual studies, which I will describe below. In relation to the thesis, the discussion of viewing play as a communal occupation and how this relates to the sense of belonging needs to be critically considered because I draw my conclusions from studies that examined playgrounds over a shorter period of time and at a theoretical level. However, I believe that the emergence of a sense of belonging in inclusive playgrounds should be studied through empirical studies conducted over a longer period of time and from more diverse perspectives, such as those of parents, older and younger adults living in the community.

With regard to the individual studies in this thesis, limitations arise from the study designs and the sampling methods used. A limitation of Study I was the recruitment of the children without disabilities directly on the inclusive playgrounds without collecting their contact details. Because we chose this approach, we could not go back to the children after the interviews. This meant that we were in contact with the children only for a short period of time. An exchange in the form of data collection over a longer period of time would have had the advantage, for example, of allowing us to learn more about the children's relationship with the playground and their social interactions and relationships with other children on the playground. In addition, repeated contact with the same children would have allowed me to check that I had understood and interpreted what they had told us correctly and, if necessary, to ask more in-depth questions. This approach aligns with the strategies of *triangulation* and *member-checking*. Another way of triangulation and member checking would have been to use different child-friendly methods for data collection, for example using art and craft materials, photo voice or walk-and-talk interviews as described in the Mosaic Approach by Clark (2001). The use of such methods would also have been a way of giving the children more opportunities to express themselves than just through language, and might, for example, also have been beneficial for children with intellectual disabilities. Another option would have been to collaborate with a children's advisory group (Horgan & Martin, 2021) for selecting and developing data collection methods to ensure that the questions and methods were appropriate for the children.

Even though we did not do *member-checking* in Studies I and III, which is clearly a limitation of those studies, my understanding of the importance of collaborating with the participants in terms of understanding their experiences and perspectives has evolved during the course of the thesis. So, in Study II, we asked the participants, once we had finalised the analysis, if they agreed with the findings. As I became more aware of participatory research methods and their importance after Study II, I realised that if participants are only consulted at the end of the data analysis, they have limited ability to influence the findings if they do not correspond to their experience. This is why we used member reflections in Study IV. Member reflections give participants the opportunity to share their reflections on the data analysis and even to participate in the analysis in collaboration with the researcher and take it further if they wish (Tracy, 2010). I presented the preliminary findings of Study IV to the participants, giving them the opportunity to add their interpretations, which I then incorporated in the

further data analysis. I found the collaboration with the participants through the use of member reflections to be very valuable, both in making me aware of aspects I had overlooked in the preliminary analysis and which I could incorporate into the data analysis, and in confirming that my data analysis was in line with the participants' understanding of their experiences. For a meta-ethnography (Study III), Doyle (2003) suggests the strategy of contacting the original authors of the included studies and providing them with the translation of the studies to get feedback on whether the interpretation is consistent with the results of the original studies or the second-order constructs as a way of member-checking. It has to be addressed as a limitation of Study III that we did not do member-checking. Yet another way of member-checking could also have been through collaboration with a children's advisory group with the purpose of ensuring that our translation of the studies as adults reflect the children's perspectives.

Regarding *triangulation,* I assess it as a strength of the thesis that it examined and brought together different perspectives regarding play and inclusion on inclusive playgrounds. The perspectives included people of different ages and gender (children and adults), with different experiences (e.g. regarding living with a disability, being a family member of a child with a disability) but also in relation to playground provision (involved in playground provision, experts in UD for designing inclusive playgrounds). However, at the same time, the main focus of the thesis on mainly children's and playground providers' perspectives also forms a limitation. As the findings showed, it is also important to consider the perspectives of other community member, such as parents, grandparents and maybe even other members of communities, such as teenagers, younger adults, etc. in relation to their experience of coming and being on the playground. Furthermore, even though I see it as a strength of the thesis that we have brought participants with different experiences together for each study, it could also be seen as a limitation, because it made it more difficult to clearly understand the different perspectives. However, by understanding inclusive playgrounds as places where people with different experiences come together, I found it more important to also explore these different experiences in the studies and think bringing people with different experiences together in the studies also revealed important insights. Nevertheless, it was not without challenges; for example in Study I, we needed to actively search the perspectives of children with disabilities; and in Study II, we needed to moderate the discussion well to intercept possible power imbalances between experienced playground providers

and advocates of children with disabilities. A further limitation of Study II is that we were not able to include playground providers with experiences of living with a disability themselves, or being engaged in politics, even though we contacted several persons with such a profile. In retrospective, I probably should have invested more effort to make sure these perspectives were included.

Another strength of the studies of the thesis in relation to triangulation is that they all included more than one source of data. In study I, II and IV primary means of data collection were combined with either observations, the use of a scenario, and pictures. And in study III several studies were translated into each other.

Regarding *peer-debriefing*, I have not explicitly applied strategies to do that, like for example to present preliminary findings of the studies to senior researchers in the P4Play consortium and their partners. However, in all of the studies, my supervisors, who are experienced in the area of play, playgrounds, and inclusion, were also involved in the data analysis process. Furthermore, I have presented the different studies at various conferences and Studies I, II and III have been published in peer-reviewed journals, which I think could also be ways of receiving and integrating feedback from peers.

However, a limitation of the different studies in this thesis is that direct contact with playground users and providers took place mainly in the data collection phase but not during data analysis (with the exception of Study IV) and dissemination phases. The following are some thoughts on how playground users and providers could have been more involved in the data analysis and dissemination phases if I had adopted participatory methods or co-design strategies to ensure that the interpretation of the data reflects their experience. In terms of dissemination of findings, greater collaboration with participants can be a way of ensuring that the study findings reach and are understood by the relevant target group(s) or different target groups (e.g. children and playground providers). Furthermore, it can also be a way of addressing ethical questions regarding power balances in research between children and adults. Issues related to power imbalances are, for example, how I as a researcher can make sure that the children fully understand the information about the research project and can give assent if they would like to participate. Kirk (2007) suggests the use of child-centred methods and reflexivity throughout the research process to address these issues. Collaboration with a child advisory group could be another way to

establish consent forms in a child-friendly language. Furthermore, collaboration with children in disseminating research about their experiences on inclusive playgrounds in child-friendly ways could also be a way to empower and give agency to children. For future studies, I would like to take a more participatory or co-researching approach by including participants from very early in the research process, for example already when developing the research question. From the findings of my thesis, especially the important contributions that children have, I have learned the importance of such an approach. Due to the context of my PhD project, I was not able to fully adopt such an approach during the ongoing project.

Transferability refers to providing sufficient information regarding the study context, information about sampling and data analysis procedures, and a rich or "thick description" of the findings (Lincoln & Guba, 1985, p. 316). The description of all this information should enable the reader to assess whether, or under what circumstances, the findings are transferable to a particular context.

In terms of the geographical context of the studies and the applicability of their findings, the specific context of the studies needs to be considered. In relation to playgrounds, the geopolitical elements related to local or national policies for playground provision and the way in which playground provision is implemented can vary considerably depending on the context. Even though Study III included studies from different geographical and cultural locations, the findings of the thesis also need to be considered in terms of the cultural and geographical context in which the studies were conducted, Switzerland (for Studies I and II) and Ireland (Study IV). Furthermore, as Study III only included peer-reviewed studies in English, studies from non-English speaking countries may be underrepresented. Also, through being involved in P4Play and collaborating with a secondment partner in Ireland, I realised that the provision of playgrounds can vary greatly according to country, culture and weather conditions. Finally, differences between urban and rural sites have to be considered. More information about my own (pre-)understanding of inclusive playgrounds and how it has been shaped during the course of my PhD can be found in the preface.

As a way to address transferability in the studies, we have sought to describe the sampling methods and the process of recruiting participants in an understandable way. We have also tried to describe the results as

comprehensively as possible. However, all the studies have limitations in this respect. One limitation is that the findings in the studies could certainly have been supported by more quotations. In terms of the data analysis methods used (qualitative content analysis and thematic analysis), I found the two methods to be quite similar. However, I found qualitative content analysis as described by Graneheim and Lundman (2004), with the approach of coding meaning units first and then condensing meaning units, to be a good way of "forcing" me to stay close to the data while coding. I think that this approach was particularly useful for me as a novice researcher in general and for qualitative research in particular. The usefulness of this approach lies in the fact that the different phases guided me to engage with the data in different ways and over a longer period of time, which may have supported the analysis and data interpretation. When using thematic analysis in Study II, I had the impression that the method allows the researcher a bit more freedom in coding. However, at the same time, thematic analysis also requires more discipline to stay close to the data in the beginning, avoiding to proceed to the stage of interpretation too fast. But I also think that the study design influenced the richness of the findings. For example, the findings in Studies I, II and IV are closer to the participants' original interview data, which, according to Sandelowski (2000), is also consistent with a qualitative descriptive study design and a recommended design for novice researchers. In contrast, the analysis in Study III involved a more in-depth examination of the interpretation of qualitative data and thus resulted in more synthesised findings. However, a limitation of Study III is that we did not include a discussion of how the quality of the studies included in the meta-ethnographic analysis might affect the findings; however, we did assess the quality of the individual studies and also showed their potential impact on the overall findings of Study III, using the GRADE-CERQual approach.

Dependability relates to providing enough information for readers to allow them to understand and reconstruct the conduction of the study and interpretation of its findings. Lincoln and Guba (1985) describe that the criteria of dependability are interrelated to those of credibility in terms of strategies for triangulation and confirmability in terms of strategies for an audit trail. A discussion of triangulation can be found above, and the strategies of an audit trial will be addressed under confirmability.

Confirmability refers to providing enough detail about the various steps that have been taken in a study, including conceptualisation, sampling strategies, data

collection and data analysis methods, so that it can be understood by third parties. The strategy suggested by Lincoln and Guba (1985) is the use of an audit trail.

For the entire thesis, I also consider the Data Management Plan that I created when I joined P4Play to be a kind of audit trail. The Data Management Plan records for each study what data are collected, in what form, in what format and to what extent, how data are stored (also with regard to sensitive data), what long-term storage looks like, whether and how data may be passed on and who is responsible for the individual steps. Throughout the processing period of the thesis, the Data Management Plan was a living document that I consulted again and again, especially when it came to completing or starting a new study.

Specifically for each study, I have documented the key decisions in an audit trail. It is certainly a limitation that I only documented the most important decisions and did not more rigorously document the individual steps from conceptualisation, through recruitment and data collection, to data analysis. Another limitation is that I did not prepare the audit trails in such a way that I could make them available to third parties. For Study III, the registration of the study protocol in PROSPERO (Wenger et al., 2021) can also be seen as a kind of audit trail that outlines the planned review for others. One limitation, however, is that I did not regularly update the protocol in PROSPERO once the meta-ethnography was completed.

In the context of reflexivity, the use of reflexive notes has been suggested (Finlay, 2002; Lincoln & Guba, 1985). This could also be seen as a kind of audit trail, a reflexive audit trail. I did this for each study, but I could certainly have done it more systematically. I have also found that I am a person who needs some time to reflect on my experiences, and sometimes the reflections come to me long after a particular experience. Often, they come from connecting them with other insights I have gained.

Directions for future research

As a starting point for future research, building on the findings of this thesis, it is recommended to further explore how inclusion on inclusive playgrounds could be enhanced. This endeavour could include further exploration of aspects related to playground users' experiences of belonging, how playground providers design to create a sense of belonging and what aspects they consider beyond design.

Also, future research should consider to look at inclusive playgrounds in different cultural and geographical contexts as the thesis mainly investigated inclusive playgrounds in a European context, with two studies focusing on Switzerland and one study focusing on Ireland. Further areas warranting future research include factors such as participants' socio-economic backgrounds; developments in inclusive playgrounds over a longer period of time or in different climates; and how the ongoing climate changes affect the use of playgrounds. However, it also has to be considered that the resources available for playgrounds may vary across countries, and in some regions, playgrounds may be scarce, with play happening mainly in community places. Nevertheless, against the background of the growing urban population, playgrounds are likely to continue to be important places for children to play outdoors.

Specifically in relation to UD, future studies should look at the implementation of UD among larger samples of experts in UD across more diverse cultural contexts. Furthermore, there is a need to further develop knowledge about UD and playgrounds. Also, it should be investigated how this knowledge can be translated for playground providers, for example landscape architects and playground users. Specifically for playground users, a translation of the knowledge for different age groups, like children, but also carers would be needed in order to enable playground users to take actively part in decision-making processes around playgrounds.

Another area for future research is to examine play occupation as communal or collective occupations. Such a perspective could possibly broaden our understanding of play and inclusion in inclusive playgrounds. Further valuable avenues for future research could include exploring play occupation and inclusion on inclusive playgrounds from the perspectives of other groups than those included in this thesis, for example the perspective of parents, grandparents or teenagers. As indicated by the findings of this thesis, it could also be valuable for future research to include children, especially children with disabilities, as co-researchers as children have a unique understanding of play and inclusion from their perspective. Co-researching strategies or the use of participatory research methods has also been suggested by Lavalley (2017) for investigating communal occupation. Thus, for future research, it could also be interesting to explore if an inclusive playground could be a place for social transformation through occupation.

Conclusion

The findings of the thesis contributed to knowledge on play occupation and inclusion on inclusive playgrounds. The findings also contributed knowledge on the understanding of children's experience of participation in play occupation and experiences of play value. Play value was found to emerge from transactions of children's play occupation with elements of the physical and social environment, and the sociocultural and geopolitical elements, which together form a co-constituting process. Findings suggest that listening to the perspective of children with and without disabilities is important for understanding inclusion on inclusive playgrounds. Furthermore, the findings revealed that UD could be a design approach for playgrounds to foster inclusion. It was found that experts in UD focused on creating a sense of belonging for the community in playground provision. Strategies identified how to design for a sense of belonging were informed by all studies and included to create a welcoming atmosphere, the inclusion of natural elements, and designing for children to play together. The strategies also emphasised the importance of including perspectives from diverse community members through co-design processes. The perspective of communal or collective occupations is suggested as a possible way to further explore the co-constituting process of play occupation and situational elements with a focus towards how social aspects contribute to a sense of belonging in an inclusive playground.

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My contributions to this project

The broad outlines of the studies were designed by my supervisors, some of whom were principal investigators on the funded projects in which the studies were embedded.

Below, I describe my contribution to each of the studies in more detail. The description is based on the authorship principles at LTU (2022) and the criteria for authorship outlined by Taylor & Francis authorship services (2023), who are the joint publisher of Studies I, II, and III.

Study I

Design of the research

- Actively involved in refining the aim of the study.
- Actively involved in developing the overall design of the study.
- Actively involved in the preparation of documents for the Ethics Committee, including providing information about the study and consent forms for the children and parents.

Data collection

- Actively involved in the development of the interview guide and its pilot test.
- Organisation and management of participant recruitment.
- Assisting in interviews during the first half of the data collection period, and conducting interviews on my own in the second half of the data collection period.
- Responsible for execution and documentation of the observations.

Analysis or interpretation of the finding

- Transcription of all interviews.
- Joint coding with one of my supervisors at the beginning. After we had coordinated the coding, I coded the rest of the interviews on my own.
- Analysis of data with close guidance and regular discussions with my supervisors.

- Main responsibility for writing and revising drafts of the manuscript, based on discussions with my supervisors.

Study II

Design of the research

- Actively involved in developing the aim of the study.
- Actively involved in determining the design of the study.
- Actively involved in preparing the documents for the Ethics Committee, including providing study information and consent forms for the participants.

Data collection

- Responsible for coordination of participant recruitment.
- Responsible for organisation of focus groups.
- Actively involved in designing the focus groups with the support of my supervisors.
- Prepared a first draft of the interview questions, to be used for the focus groups.

Analysis or interpretation of the finding

- Transcription of one focus group interview.
- Joint coding with one of my supervisors at the beginning. After we had coordinated the coding, I coded the rest of the interviews on my own.
- Analysis of data under supervision.
- Main responsibility for writing and revising drafts of the manuscript, based on discussions with my supervisors.

Study III

Design of the research

- Development of the aim of the study through discussion with my supervisors.
- Deciding on the type of literature review suitable for the study aim in consultation with one of my supervisors.

Data collection

- Development of search strategy through discussion with my supervisors and university librarians.
- Organisation and execution of database searches.

Analysis or interpretation of the findings

- Responsible for acquiring knowledge about the implementation of the meta-ethnography method, in particular through discussions with one of my supervisors.
- Responsible for coding the studies.
- Key role in data analysis, which I regularly discussed with supervisors.
- Main responsibility for writing and revising drafts of the manuscript, based on discussions with my supervisors.

Study IV

Design of the research

- Development of the aim of the study through discussion with my supervisors.
- Development and refinement of study design following discussions with my supervisors and the project secondment partner.
- Preparation of the documents for the Ethics Committee, including providing study information and consent forms for the participants.

Data collection

- Development of interview questions and pilot test.
- Conduction of all interviews.
- Transcription of interviews with automated online transcription service.

Analysis or interpretation of the findings

- Responsible for coding the interviews.
- Main responsibility for data analysis.

- Main responsibility for writing and revising drafts of the manuscript, based on discussions with my supervisors.

Publishing process

To publish open access in journals was required by the funder of the P4Play project. When selecting journals, I usually made a suggestion, which I then discussed with my supervisors. I was the corresponding author for the published Studies I, II and III.

Dissertations in Occupational Therapy at Luleå University of Technology

Doctoral theses

Gunilla Isaksson. Det sociala nätverkets betydelse för delaktighet i dagliga aktiviteter: erfarenheter från kvinnor med ryggmärgsskada och deras män. (Health Science and Human Services) 2007.

Anneli Nyman. Togetherness in Everyday Occupations. How Participation in On-Going Life with Others Enables Change. (Occupational therapy) 2013.

Cecilia Björklund. Temporal patterns of daily occupations and personal projects relevant for older persons' subjective health: a health promotive perspective. (Occupational therapy) 2015.

Ann-Charlotte Kassberg. Förmåga att använda vardagsteknik efter förvärvad hjärnskada: med fokus mot arbete. (Occupational therapy) 2015.

Ulrica Lundström. Everday life while aging with a traumatic spinal cord injury. (Occupational therapy) 2015.

Marianne Sirkka. Hållbart förbättringsarbete med fokus på arbetsterapi och team Möjligheter och utmaningar. (Occupational therapy) 2016.

Jennifer L. Womack. The Occupation of Caregiving: Moving Beyond Individualistic Perspectives. (Occupational Therapy) 2018.

Alexandra Olofsson, Possibilities for activity and participitation outside home for persons with acquired brain injury. (Occupational Therapy) 2019.

Jenni Riekkola, Older Couples participation in everyday life – when living in changing and shifting contexts. (Occupational Therapy) 2019.

Licentiate theses

Anita Lindén. Vardagsteknik. Hinder och möjligheter efter förvärvad hjärnskada. (Health Science) 2009.

Ann-Louise Lövgren Engström. Användning av vardagsteknik i dagliga aktiviteter - svårigheter och strategier hos personer med förvärvad hjärnskada. (Health Science) 2010.

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