The Impact of Shared Pedagogical Leadership on Physical Activity in Early Childhood Education: An Interpretive Analysis

By

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Dedicated to our baby girl Gracie Eloise. You have graced me with your presence during the whole journey of this thesis. You have been with me the whole way. I acknowledge your contribution to this thesis too my love. This thesis is my gift to you.

Abstract

The original contribution of this thesis is to add to the minimal amount of literature regarding the impact of shared pedagogical leadership on physical activity in early childhood education. Developing a lifelong love of physical activity can start in the early years. These years are critical for developing behavioural habits and subconscious belief systems about what one can achieve. The aim of this study was to research the impact of leadership within the realm of physical activity in early childhood education. The aim arose with the hope of contributing to the wellbeing of children in their early years of development; and the need to improve my knowledge of shared leadership to enhance my own practice and thus impact positively on others in my field. Also, there is a desire to help others struggling with leadership conceptualisation in early childhood education.

Oliver (2008) asserts that physical activity is beneficial to bone weight and weight status. Conversely, inactivity has been linked to obesity. In both childhood and adult years obesity has been linked to cardiovascular disease and diabetes (Oliver, 2008). Besides disease prevention measures, physical activity is related to essential motor skills development and improved cognition (Brownlee, 2015; Oliver, 2008). Participation in physical activity coincides with increased skills and mental abilities and is yet another reason why leaders in early childhood education must confidently focus greater attention on physical activity implementation.

Finally, with the nature of community of early childhood education in mind, this research seeks to identify which forms of leadership are the most suitable for physical activity enhancement. Interpretive data from this qualitative study was synthesised with the wider field of literature in shared leadership. This data demonstrated that shared leadership forms best enhance children's participation in physical activity. When pedagogical leaders share their goals and invite family to participate in the decision making and role-modelling, the results are maximised.

Throughout the data collection process both the researcher and the participants gained new understanding of the nature of shared leadership and other leadership styles, while participants reflected on what forms of physical activity worked best in their experience. Methods for increasing educators' confidence also became a recurring theme that lead to new insights for all participants.

The findings concurred that shared leadership forms are the most beneficial for the early childhood sector. However, it was also asserted throughout the investigation that having one leader to make the final decision was sometimes necessary. Shared leadership was not considered to be a form of formally distributed leadership but instead occurred best when members on the team were given space for their own personal leadership abilities to emerge. Both structured and unstructured forms of physical activity were explored and it was found that using both methods in the early childhood sector are important. However, this hybrid approach will not always result in an even mix. A conceptual framework for leadership and physical activity has been developed and is presented in chapter six. This model can be applied within early childhood centres.

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Declaration Statement

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material to a substantial extent has been submitted for the award of any other degree of a diploma of a university or other institution of higher learning.

Acknowledgements

1 Chapter One: Introduction

Aotearoa, New Zealand is unique in that the country provides playcentres, home-based care, kindergartens, kohanga reo (family *language nests* grounded in Maori cultural principles and language), and early childhood care and education services (Thornton, 2010a). Playcentres and kohanga reo are exclusive to New Zealand. Kohanga reo are built around the concept of tino rangatiratanga (self determination). The centres were created in the effort to rejuvenate the Maori language after the effects of the British coloinisation of New Zealand in the 1830's (May, 2015). *Te Whāriki*, the Early Childhood Curriculum Framework, creates the intricate holistic learning achievements for our tamariki (children) (Ministry of Education, 1996). This curriculum states all children in early childhood education settings should have the opportunity to be healthy in body, mind and spirit. These are not mutually exclusive but development in one area often leads to development in another. This curriculum is essentially the early childhood educators' bible and is linked through the key strands of belonging, relationships, communication, family and community, and empowerment (Ministry of Education, 1996). Throughout the curriculum there are recommendations for the implementation of education which includes physical activity. However, the curriculum is largely malleable and can be somewhat molded to fit the philosophy of various centres. This allows the centres to run within the boundaries of their own belief systems according to what is essential learning for their own tamariki. Parents can then choose a centre that fits with their personal philosophy regarding raising competent and confident children. The official curriculum was published in 1996. Prior to 1996, there was no official unified curriculum for this sector. The following section of this thesis will examine the preceding years before *Te Whāriki* and consequently outline the historical setting leading up to the creation of our first national early childhood curriculum.

The aim of this chapter is to provide a map for the reader. It is divided in to four parts:

- The historical background
- A contemporary lens
- A rationale for this study
- The research aims

- The outline of this thesis

1.1   The Historical to Current Backdrop

The historical lens

The first infant schools in New Zealand were established in the 1830's. By 1840 Froebel and others were challenging the traditional Lutheran orthodoxy, arguing for an early childhood education system based on play and unstructured activity (May, 2015). The post war years brought an emphasis on learning through play. This was in line with the dominant theorist of the time (Piaget) and the dominant philosopher (Dewey). The last few decades have offered another period of transition for early childhood education within the New Zealand context. Globally there is a wide spectrum of philosophy regarding the education and care of children in the naught to five-year age range. Within the Aotearoa, New Zealand context there has been a shift in perspective, through a 1980s Labour government, from being a sector that specialises in care to a sector that specialises in education *(*Alcock, 2013). Early childhood centres are now accountable to the Ministry of Education, whereas prior to the 1980s they had functioned under the Department of Social Welfare. This massive shift in governance has extended the government's bureaucratic grasp into the realm of physical activity in early childhood education. Early childhood centres are now accountable to the Ministry of Education for the academic learning outcomes of their students. These centres are also now dependent on funding from the Ministry of Education. According to McLachlan (2011) reforms in government policy sought to provide long-term benefits for children and their families and to ensure the government's long-term economic goals were realised. The policy changes in the 1980s ensured increasing accountability and government control over the early childhood sector.

At this point in time the early childhood sector was established clearly from a policy mandated governmental perspective, but not necessarily from a "commonality of philosophy or practice" (McLachlan, 2011, p. 38). The establishment of *Te Whāriki*, the early childhood curriculum (Ministry of Education, 1996) provided a common philosophical framework for educators to work with in Aotearoa, although this curriculum was not fail proof (Jenkin, 2010). Contributions to this curriculum by Margaret Carr and Helen May were made in conjunction with the opinions and ideas of

practitioners in Aotearoa-New Zealand (Carr & May, 1993). The project team included co-ordinatore of Maori Immersion, Curricula for Pacific Island Children, Including Children with Special Needs, and Home Based Programme groups. An advisory group also gave feedback throughout the process (Carr & May, 1993). Currently, passionate leaders within this sector are also adding to the unification of philosophical practice within this sector. These leaders are inspiring a national philosophy of care, child led activity, respect and collaboration with family.

The contemporary lens

Recently, a shift in governmental influence from a supportive state (Labour-led government) to a minimal state (National-led government) has placed more accountability on families and early childhood communities to manage their own responsibilities (Mitchell, 2015). Both seminal and recent literature leads to the understanding that education and learning in the early years have a significant impact on our learning and abilities in our later life (McLachlan, 2011; Nutkins, McDonald, & Stephen, 2013). However, there has been a paucity of research and recognition of the language of the body in the early childhood sector of New Zealand (Dalli, White, Rockel & Duhn, 2011, as cited in Rockel & Sansom, 2015). This is a gap that must be addressed, particularly with statistics regarding childhood obesity as a predictor of obesity in adolescence and adulthood. According to the National Institute of Health in America childhood obesity rates more than doubled over the last 30 years for children aged between two and five years (Temple & Robinson, 2014). In New Zealand some headway has been made over the last few years, but obesity in childhood is still a major concern for health professionals who understand the many life threatening obesity related diseases that can occur in adulthood.

Throughout the years of change in early childhood education there has been a longstanding belief that physical education in early childhood is essential for greater health, cognition and wellbeing outcomes and that children can enhance their physical skills and confidence through physical activity (Chow, McKenzie, & Louie, 2015; Costa, Abelairas-Gomez, Arufe-Giraldez, & Barcala-Furelos, 2015; Dyment & Coleman, 2012; Gehris, Gooze, & Whitaker, 2014; Ministry of Education, 1996; Oliver, 2008; Temple & Robinson, 2014). According to researchers in the United States, "movement prepares

children for school and for life building children's confidence and social skills" (Gehris et al., 2014, p. 122). However, there is still some debate over the type of physical learning that should be implemented in the early childhood sector.

Much of the debate is centred around the concept of implementation of structured or unstructured physical activity. The New Zealand Early Childhood Curriculum Framework, *Te Whāriki (1996)* is the practitioner's guide to implementing programmes within every centre throughout New Zealand. This curriculum has an integrated learning approach with many open interpretations for pedagogical practice. This curriculum was developed to support Tiriti (Treaty) based pedagogy (the implementation of our founding document The Treaty of Waitangi). The principles and strands within this curriculum are derived from the Maori world view (Jenkin, 2010). Essentially *Te Whāriki* means 'the woven mat.' It is symbolic of the strands and principles being woven together. This is fairly different from the primary and secondary curriculum, where learning outcomes are generally taught within a learning area.

Some teachers face difficulty when implementing *Te Whāriki*. Jenkin (2010) states "…[a] difficulty that teachers encounter where implementation of *Te Whāriki* is concerned is not a matter of one size fits all. Instead, it can be best thought of as a continuum of understanding and/or attitudes" (p. 22). Furthermore, whilst the non-prescriptive nature of the curriculum allows pedagogical leaders to develop their own approaches it can also leave them struggling in their attempts to implement the early childhood education curriculum (Jenkin, 2010). Therefore, some may find this curriculum is flexible, but not explicit enough in its approach.

All children learn at different stages. This is why there is still some debate regarding the type of physical learning that should be implemented in the early childhood sector. Both seminal and recent literature from around the globe and within New Zealand has shown links to greater learning outcomes through free and unstructured physical activity (Alcock, 2013; Fatai O, Faqih, & Bustan, 2014; Pirard, 2013; Rockel & Sansom, 2015; Shoval, Zaretzky, Sharir, & Shulruf, 2015; Vamos, 2015). However, the literature also leads us to data that indicates greater learning outcomes for children who are guided through structured physical activity (Costa et al., 2015; Dyment & Coleman, 2012; Iivonen, Sääkslahti, & Nissinen, 2011; Temple & Robinson, 2014; Wright & Stork,

2013). Furthermore, there is a growing body of literature that leads us to themes that cover the amalgamation of structured and unstructured physical activity (Chow et al., 2015; Dyment & Coleman, 2012; Dyment & O'Connell, 2013; Ernst, 2012; Gehris et al., 2014; Taylor, 2015). This literature is largely themed around resourcing, risk-taking and environmental decisions by leaders and teachers.

Finally, the leaders within this sector are integral to enhanced learning outcomes for young children. Their influence, decision making and consultation practices can have a huge impact on the philosophy of the centre and consequently on the way physical activity aspects of the curriculum are implemented. Current literature leads us to believe that contextual forms of shared leadership are integral to enhanced student learning outcomes in this sector (Grarock & Morrissey, 2013; Hallet, 2013; Heikka, Waniganayake, & Hujala, 2012; Manning, Woodhams, & Howsan, 2011; Tamati, 2011; Waniganayake, Cheeseman, Fenech, Hadley, & Shepherd, 2012). However, this is a complex ideology with contextual implications. Physical activity is synonymous with health benefits including disease prevention for both children and adults. Adversely, obese children are more likely to develop risk issues for heart disease and diabetes (Oliver, 2008). Leaders and leadership can be a potential source of great inspiration and role modelling. It may be ascertained therefore, that leadership has the potential to inspire healthy physical activity behaviours in young children. This study defines physical activity as an inclusive term that incorporates both fine (e.g. messy play) and gross motor activity (e.g. running, riding, jumping), but concentrates on the latter.

1.2   A Rationale for this Study

Experts in the field assert minimal information is available regarding leaders and teachers' views of what types of indoor and outdoor settings would be most beneficial to children's physical movement and consequential learning (Gehris et al., 2014). Furthermore, limited research has been carried out regarding leadership for early childhood centres in Aotearoa, New Zealand and within the international arena as well (McLeod, 2003; Thornton, 2010a; Weisz-Koves, 2011). There is a lack of recognition of the importance of leadership within the early childhood setting (Thornton, 2010a). Moreover, there are very few studies of teacher decision making in early childhood centres (Burgess, Robertson, & Patterson, 2010). In addition to this, conceptualisations of shared leadership are still being developed (Youngs, 2009). What is more, there is a

significant gap in the literature on shared leadership specific to early childhood education. Within the literature review discussed in chapter two some information regarding shared leadership forms within this field was found, but much more research is needed to support development of the theory. Others are in accord, stating that shared leadership is a term so fresh in the general sense that further empirical work is needed to inform theory development (Pearce, Conger, & Locke, 2008). This is an area that will benefit through further research.

One expert in the leadership field states that the broader leadership arena could be on the edge of a major paradigm shift that moves from the prevailing leader-centric/leader-follower construct into a new way of thinking (Youngs, 2009). It is essential that we study these conceptually related leadership topics through critical investigationin this research practice. The rationale for the use of the word 'activity' rather than 'play' has been employed in response to the national curriculum framework and advice from an expert in the early childhood education field, Dr Sue Stover. *Te Whāriki* does not use the word 'play' when referring to learning outcomes for physical activity. However, the blending of these words by participants will be discussed later within this thesis.

1.3   The Research Aims

It is essential that greater emphasis is placed on the development of physical activity in the early years. Research is needed to improve understanding of physical activity in these years, and is considered an area essential for researchers worldwide (Oliver, 2008). It is an aim of this thesis to improve some understanding of physical activity in the early years. It is my hope that this understanding will be disseminated and made available for pedagogical leaders in the field of early childhood education. The following aims of this research are to:

- Define and critically discuss various forms of physical activity in the early childhood education sector;
- Define and critically discuss the impact of leadership on the implementation of physical activity in the early years; and,
- Investigate the interpretations of the experiences of leaders of physical activity in the early childhood education sector.

1.4 The Research Questions

The overarching research question for this project was: How does shared pedagogical leadership impact on children's physical activity in early childhood education?

The sub questions were:

- What do teachers understand as being children's physical activity?
- How do teachers give an account of their confidence within structured and unstructured physical activity implementation?
- How are decisions made within the teaching team, regarding children's physical activity and where is pedagogical leadership evident?

The research involved eight participants from the early childhood sector. Four of the participants led or taught in an early childhood team within a gym environment. The other four participants had a vast array of experience leading and teaching within early childhood education environments outside of a gym. Ethics approval was sought before the participants were invited to contribute to this project (see Appendix A). All participants were given an information sheet (see Appendix B). Six of the participants were interviewed one-on-one. For a list of interview questions please see Appendix C. These participants were also invited to participate via an interpretive written reflective statement. The four participants from the gym environment participated in a focus group. See Appendix D for the semi-structured focus group questions.

1.5 The Outline of the Thesis

This thesis is divided into six chapters. Leading on from this chapter, chapter two is a literature review of data relevant to this particular study. A section on historical context section has been given to set the context of leadership in early childhood today. Literature related to forms of physical activity and the impact of leadership on physical activity in early childhood education are reviewed. The chapter concludes with a section that blends shared leadership, teacher confidence and physical activity.

Chapter three provides a rationale for the qualitative, interpretive methodology employed for this project. Following on from this is a section on the relevance of the data collection tools used in this research. This section concludes with a justification of the validity of this research and a discussion of ethical issues. Chapter four provides the data findings

from the investigation. There are few conclusions drawn at this point, as the purpose of this chapter is to portray the participants' voices. This chapter is the largest one in this manuscript as it provides a large amount of interpretive and experiential data from participants.

The findings from the data presented in chapter four are subsequently discussed in chapter five and themes that emerged throughout the data synthesis process are discussed. Differences between the two types of early childhood settings are also discussed. These differences are between the espoused views of leaders of nature-based early childhood education settings, and the espoused views of leaders of physical activity for young children in a gym setting. The chapter then discusses how the findings impact on the implementation of physical activity in the education settings of the early years, and how leadership can potentially impact on successful learning outcomes for young children. This discussion is informed by the literature review presented in chapter two of this thesis. By way of conclusion, chapter six provides an overview of the main findings and offers recommendations for future leadership of physical activity in early childhood education settings. Suggestions for future research are also offered within this chapter.

2 Chapter Two: Literature Review

2.1 Introduction

Within New Zealand there is a wide variety of educational settings, including kohanga reo, playcentres, kindergartens and early childhood education and care services. These settings all vary in the services they offer. All centres operate under the guidance of the New Zealand Early Childhood Curriculum: *Te Whāriki*. This curriculum takes a holistic and open approach. Consultation during the development of *Te Whāriki* indicated that play and the natural environment, are a vital part of the curriculum (Carr & May, 1993). Guidance for the early years learning outcomes are broad and integrated like a woven mat. According to the developers of *Te Whāriki*, each centre must be able to weave their own curriculum mat, and create the pattern that is unique to them, their students and the local community (Carr & May, 1993). Therefore, the way programmes are implemented, including physical activity, may vary widely from one centre to another. One of the differences includes the implementation of unstructured or structured physical activity. The early childhood sector provides settings that are smaller than the school environment. Within the primary and secondary school settings, most are established as large organisations, whereas the early childhood sector operates within a team environment. This may ideally shape the sector for shared leadership theory, as small teams generally lend themselves to shared operations. This chapter is structured into three parts. The first part will discuss forms of physical activity and wellbeing. The second part will discuss shared leadership perspectives. Finally, the third section will bring these two parts together.

2.2 Forms of Physical Activity and Wellbeing

In addition to movement skill development, physical activities may be the key to reducing childhood obesity levels. Consequently, diseases in later adulthood may be prevented through well prepared and resourced programmes (Chow et al., 2015; Dyment & Coleman, 2012; Oliver, 2008; Temple & Robinson, 2014). These programmes when soundly implemented, may provide a lifelong love of engagement in physical activity. A New Zealand researcher in the field of early childhood education asserts the growing obesity problem represents a health burden throughout the world. She asserts furthermore that inactivity is associated with obesity in the early years. Therefore, physical activity is one of the factors essential for obesity prevention, physical and psychological health (Oliver, 2008). The New Zealand early childhood curriculum, *Te Whāriki*, also asserts

holistic development as one of the four core principles of implementation of this curriculum. Furthermore, it advises a focus on wellbeing is the first of the five key strands that must be upheld (Ministry of Education, 1996). The curriculum asserts "children experience an environment where their health is promoted, their emotional wellbeing is nurtured and they are kept safe from harm" (Ministry of Education, 1996, p. 46). Tinana is the dimension of *Te Whāriki* that is concerned with physical power and health of the body. It is asserted that the daily maintenance of the body is upheld through play, sport and learning (Reedy, as cited in Nuttall, 2003). There are many ways to implement physical activity in centres. Many early learning centres around the world take an unstructured, free-play approach to physical activity. Others plan structured physical activity programmes in the early years education sector.

Unstructured physical activity in early childhood education

Unstructured physical activity has been referred to as fun, chosen, spontaneous and freedom (Nutkins et al., 2013). This style of learning is representative of the Reggio Emilia Approach. This approach asserts the importance of raising free-thinking children who can think and act for themselves. The experience of facism during World War Two had taught the founders of Reggio that those who simply conformed and obeyed were dangerous (Nutkins et al., 2013). The concept of 'freedom of movement' and consequently 'unstructured physical movement' has roots in Budapest, Hungary. Emmi Pikler (1902-1984) was a pediatrician who, after surviving World War Two, opened a nursery for the orphans of the war. Pikler was passionate about two key ideas; partnership with the child, and child initiated motor development. To illustrate Pikler's ideology of physical development, Vamos (2015) writes "[the baby] is accompanied in the process of primary socialisation without the adults' exceeding demands which do not correspond to her (or his) level of maturity" (p. 7). Furthermore, some believe infants already know what they need and don't require adults' routine interferences to succeed in their physical development (Gerber, 2002; Rockel & Sansom, 2015). Professional development leader Brownlee (2015) asserts babies' play unfolds around moving and sensorimotor activity. "The more these babies are able to move according to the impulses coming through their being, the better the development of body, balance and brain" (p. 10).

Emmi Pikler had a strongly held philosophy regarding the subject of respect for the child. Pikler was also passionate about physical autonomy occurring at the child's own pace

through child initiated experiences. According to literature the baby's true autonomy was reached when he or she was free to self-initiate motor development. This is true freedom of movement (Gerber, 2002; Pirard, 2013; Rockel & Sansom, 2015; Vamos, 2015). Attention is also given to adult intervention (given when not required) which one writer states can actually be a form of pushing which stems from mistrust (Vamos, 2015). In Belgium the concept of freedom of movement has become the backbone of quality in childcare (Pirard, 2013). Pikler's research also extended to restrictive products also. These may include resources designed to increase mobility yet which often do the opposite of what companies espouse they will do.

Other literature correspondingly asserts that the baby should not be confined to a chair, pram or walker. Instead the baby should be free to take risks, encounter some frustrations, have all the time he/she needs, learn to learn through his/her own experiences and feel unhindered to discover his/her own world (Vamos, 2015). Brownlee concurs stating that movement sequences make physical connections in the brain. Thus, when restricted, immobilised babies cannot build their brains (Brownlee, 2015). Oliver (2008) states physiological changes occur in the brain due to the response from physical activity. Experiential accounts in Stover's (2011) research is in accord, stating that due to hygiene concerns babies were often left in their car seats, thus limiting the physical activity that would occur on the floor in an unrestricted state. Other reasons for use of these devices may include the efforts of the infant being seen as 'not up to par.' This in turn can ironically lead to the use of apparatuses such as 'walkers' to improve the infant's physical movements (Rockel & Sansom, 2015). There are numerous devices that have been created for safety or for reasons of convenience. However, these devices often restrict unstructured and free physical movement. This must be considered a potential restriction to an infant's autonomous physical development. Manufactured playground equipment will also be discussed further in this chapter.

It has been suggested that pedagogical leaders are becoming cognisant of the universe of the body becoming the curriculum rather than soley focusing on developmental goals (Rockel & Sansom, 2015). *Te Whāriki*, the national early childhood curriculum embodies this philosophy as it is concerned with the holistic approach to learning rather than a compartmentalised method (Ministry of Education, 1996). This approach to leading programmes empowers the curriculum to arise out of experience. However, *Te Whāriki*

may be limited as there is a lack of information on how to lead programmes in this curriculum (Stover, 2011). Jenkin (2010) also states teachers may face challenges when implementing this curriculum due to its ambiguity (Jenkin, 2010).

Within the concept of unstructured physical activity lies not only the recognition of motor competency but also a contribution to children's feelings of self-confidence (Fatai O et al., 2014; Nutkins et al., 2013; Rockel & Sansom, 2015; Vamos, 2015). Researchers in Malaysia found that through amorphous or unstructured physical activity children were able to "enhance their cooperative skills, build knowledge through imitation, and gain insights through trial and error" (Fatai O et al., 2014, p. 259). Other researchers have found similar outcomes with unstructured physical activity giving more opportunity for learning through social interaction, social influence and role modeling by peers (Shoval et al., 2015). Further support is evidenced through the belief that toddlers learn boundaries, confidence and competence through the borders of their own actions (Taylor, 2015). However, children also learn through their own efforts whilst under the caring supervision of teachers.

Unstructured activity has also been determined as child initiated or child directed play. However, it is emphasised that unstructured activity is not unsupervised activity (Ernst, 2012). Pedagogical leaders will watch over children engaging in unstructured activity but will not invade their imaginative space. Within a qualitative research project undertaken for an older age range (three to five-year-olds) determinations were made concerning the impact of freedom of movement. Fatai O et al. (2014) presented the following data after thorough observation of 30 children at play. Freedom of choice of unstructured physical activity enables children to learn through cooperation. Additionally, children gain knowledge and experience through imitation of their peers with unstructured play benefiting children by providing insight through trial and error. It was asserted that it is significant to learn through the above methods of observation and the imitation of peers.

Another study carried out in Australia aimed to discover which types of free-choice motor activity had the most impact on improved balance control in the kindergarten setting. The most significant finding in this research was the impact of the outdoor and indoor settings on unstructured physical activity. After observing 150 children for 32 weeks the researchers came to the conclusion that a blend of free-choice outdoor and indoor

activities was most beneficial for children's balance control (Shoval et al., 2015). The impact of outdoor and indoor physical activity settings will be explored further in this thesis within the learning environment section of this chapter.

The above research asserts physical activity and play that is unstructured by adults, is significant for children's learning. However, some do not see child-initiated physical play as a valuable learning path. There is a view by some that play is a frivolous activity that children engage in simply to pass the time (Fatai O et al, 2014). Furthermore, Pirard's (2013) case study in Belgium showed 'freedom of movement' for babies and young children is a concept that is not easy to understand, especially in a world where importance is placed on quick learning. It is also essential to consider that the practitioner must inform herself/himself regarding both educational and medical knowledge, as 'freedom of movement' could mean something different in early childhood education to what it may mean in the medical realm (Gerber, 2002; Pirard, 2013). Language ambiguities for learning and leadership will be discussed further within the language for leadership and learning section of this chapter.

Some studies show direct structured instruction can yield larger harvests in achievement over the first couple of years but these gains dwindle over time. Furthermore, direct instructional models have actually been found to create worse social and emotional outcomes for children than learner centred models of implementation (McLachlan, 2011). This has important implications for the way physical activities are led, be it through a structured instructional model, an unstructured learner centred model, or a blend of both.

According to some studies children do not engage in adequate physical activity in early childhood education settings (Costa et al., 2015; Dyment & Coleman, 2012). The Dyment and Coleman study from Australia, undertaken over a 30-day period in 2012 revealed that children in the early childhood sector were not getting adequate physical activity throughout the day, however, leaders and teachers in the centres interviewed generally assumed otherwise. Results revealed that almost half of the 16 children observed were engaged in sedentary activities. Interestingly, 85.5% of these activities were based on unstructured physical activities, child-initiated and child-directed activities (Dyment & Coleman, 2012). It can be surmised in this study, children who were involved in unstructured physical activities were not gaining sufficient levels of moderate to vigorous

physical play. It appears as though children may use the time given to them for adult-unstructured physical activity experiences in other activities instead (Dyment & Coleman, 2012; Shoval et al., 2015). This could be due to the weaving of other activities with physical activity. Some suggest the cause is likely to be children's need to move for short periods of time and to also take breathers throughout the day (Shoval et al., 2015). Consequently, recommendations to increase physical activity opportunities for preschoolers have been suggested by researchers (Chow et al., 2015; Costa et al., 2015; Dyment & Coleman, 2012; Oliver, 2008). Reasons for this gap in physical activity, including safety and supervision restrictions, will be discussed further in this literature review.

Structured physical activity in early childhood education

Through movement, not only physical skills are developed, but also cognitive and social skills (Chow et al., 2015; Costa et al., 2015; Gehris et al., 2014). Another type of physical movement comes under the umbrella of structured physical activity. Structured physical activity can be defined in this section as planned and adult facilitated games, dance and sport (Dyment & Coleman, 2012). This approach involves pre-service training and regular upkeep of activity repertoire. There are limited studies relating to the implementation of structured physical activity within the early childhood sector (Iivonen et al., 2011; Temple & Robinson, 2014). However, movement in early childhood education is critical. It is possible that outsourced physical activity programmes can be employed for the implementation of structured physical activity in early childhood education. In one study, a lack of community role models was identified as a barrier to participation in physical activity (Oliver, 2008). Outsourced coaches may be one way of inviting more male role models into this sector too. Unfortunately, it is rare to find male role models in this sector.

Professionals in pedagogical leadership positions may lead through a routine approach where set education occurs at specified times and will often include equipment and materials prepared in advance. This type of physical education may be seen as structured and linear (Rockel & Sansom, 2015). In some studies, the enhancement of motor development was limited to only the children who were in the structured physical activity group, where no or minimal benefits were observed for children in the unstructured free-play group (Costa et al., 2015; Iivonen et al., 2011). Therefore, in some circumstances structured physical activity may trump unstructured forms.

A recent study of 95 three-year-olds in Portugal demonstrated that regular structured physical activity develops children's motor skills and cognitive abilities during early childhood (Costa et al., 2015). The aforementioned research project sought to exemplify the ways in which psychomotor development occurs through high quality, structured physical activities. In this study, the researchers concluded that movement skills were learned when opportunities for structured physical activity were presented. This explicitly advocates that the role of the pedagogical leader must be to create learning opportunities for children through structured physical activity. This view is in contrast to advocates of unstructured physical movement. Another complementary study of fundamental motor skills in four to five-year-olds concluded that pedagogical leaders must provide skill-specific programme implementation to ensure activities, materials and environments synergise to promote motor development in preschool aged children (Iivonen et al., 2011). It is recommended by the aforementioned writer that leaders must become aware of the abilities of each child in conjunction with materials and activities to provide physical activity programmes beneficial to young children.

A literature review was conducted to evaluate the effectiveness of physical activity interventions implemented in preschools around the world (see Temple & Robinson, 2014). From 14 studies of interventions within this literature review, six were considered successful. Four of the successful interventions were based on thoughtful environmental manipulation. The other two successful interventions were based on cognition/awareness programmes (Temple & Robinson, 2014). Obesity makes participating in physical activity more difficult so it can be assumed that the key to active participation is in gaining children's engagement as soon as possible to make the journey more enjoyable. There is also a link between gender and ethnicity. This thesis does not focus on these links, however it would certainly be worthwhile investigating these individual factors in relation to levels of physical activity participation.

Another argument for implementing structured physical activity is that although many leaders and teachers believe their students are engaging in adequate amounts of vigorous physical activity, the reality may be the opposite of this (Oliver, 2008). A study carried out in Australia regarding unstructured activity showed children were actually sedentary in almost half of the observations recorded (Dyment & Coleman, 2012). Another study stated that children spent 76% of classroom time sitting, 13% standing and 11% engaged

in low to moderate physical activity (Chow et al., 2015). This may ironically be compounded by the determination to increase the academic merits of children by limiting their physical activity time in centres (Gehris et al., 2014). In agreement Alcock (2013) asserts the current positioning of assessment in the early childhood education sector focusses solely on preparation for school, and adds that this is a worrying realisation (Alcock, 2013). Awareness of the merits of physical activity may be reached through consistent communication with parents and families.

When pedagogical leaders facilitate plans for structured physical activities the implications have been largely favourable. Enhanced motor and locomotion skills have been documented from leader directed activity programmes (Dyment & Coleman, 2012). Additionally, leaders and teachers in early childhood education want more training in physical activity implementation. In a study undertaken in the United States 37 teachers were questioned within six focus groups. Teachers identified the desire to develop skills in teaching spatial awareness and academic concepts through movement experiences (Gehris et al., 2014). These training opportunities increase teacher awareness and consequently enhance the communication of the importance of these activities in the early years.

The structured curriculum that can align children's developmental needs alongside the right measurement of direct instruction is considered to be the optimum programme for physical activity (Iivonen et al., 2011). Conversely, when leaders are unsuccessful in implementing a stimulating physical environment, children may search for physical challenges in other areas. This may lead to a greater amount of adult intervention due to greater risk taking (Taylor, 2015). Observing educator presence in structured physical activity is contextual. Some state: "While some studies show a positive relationship between educator/adult presence and physical activity, others show a negative relationship" (Dyment & Coleman, 2012, p. 91). This literature continues to assert that some studies have found children may become less active when adults are present.

Finally, recommendations from a qualitative study of 16 preschoolers in Australia suggest that leaders must engage children in more physical activity opportunities (Dyment & Coleman, 2012). However, in directly interrupting the child's plan, the child's initiatives and interests may be ignored (Taylor, 2015). Essentially, pedagogical leaders must find

the balance. The next section will review and synthesise literature that blends unstructured and structured physical activity in the early childhood education sector. This approach aims to find this balance.

The blending of unstructured and structured physical activity

The literature asserts the importance of resourcing for effective environments. This literature states improved facilities in learning environments can assist children to develop both physically and mentally. These facilities and resources may include the layout of spaces and the provision of objects and materials for manipulation by children (Dyment & O'Connell, 2013; Fatai O et al., 2014; Gehris et al., 2014; Pirard, 2013; Taylor, 2015). Therefore, teachers create the structured conditions for enabling unstructured physical activity to emerge (Alcock, 2013). In New Zealand, increased concerns about safety have consequently created stricter regulations within centres. As a result, some unstructured physical activities such as climbing trees have been replaced with structured adult directed physical activities (Stover, 2011; Taylor, 2015). These traditional, natural, unstructured activities need not be eliminated. According to literature, including more natural features in the layout of outdoor play areas could have a greatly positive impact on children's learning and movement (Gehris et al., 2014). Therefore, the design of the outdoor space may act as the catalyst for physical activity involvement.

A study undertaken in Australia in 2013 took observations of playground design. This study scanned paths, grass areas, softfall, manufactured facilities, paved expanses and natural and constructed materials in four preschool settings. The main findings of this study illustrated the relationship between the design of outdoor play space, children's choice of unstructured physical activity and their play behaviours (Dyment & O'Connell, 2013). Essentially, leaders can support unstructured physical activities with structured resourcing approaches. The provision of space, materials, time and an encouraging atmosphere contribute greatly to children's activity (Alcock, 2013). Leaders and teachers design the outdoor and indoor spaces for a blended approach. Consideration of furniture, light, sound and colour is shown for indoor spaces. According to researchers such thoughtful considerations were given to indoor spaces because traditional teaching and learning was more likely to be implemented in the indoor space (Dyment & O'Connell, 2013). However, attention must be given to the barren and uncreative outdoor areas that exist in some centres. According to the aforementioned researchers a blended approach

in the playground may be present in many centres. This may include leaders setting up the environment with games equipment and playground markings, and also introducing some structured, instructional physical activity programmes (Dyment & O'Connell, 2013; Temple & Robinson, 2014). Giving children space to choose autonomously may also be beneficial.

Presenting young children with choices in physical activities can be very encouraging. Unstructured activities like riding bikes or pulling wagons may be chosen over structured and supervised games. To have both options available may be an advantage in terms of variety. Furthermore, Dyment and O'Connell (2013) state that there may be a novelty factor when measuring outcomes in the long term. Children may enjoy structured activities like BrainGym (Dennison, n.d.) for a certain amount of time, but then may be led into unstructured jungle gym bar activities by eager and playful peers. Allowing a blended approach of structured and unstructured physical activity is recommended by the United States physical activity guidelines (Chow et al., 2015). One potential method to increase this blend may be to increase the frequency and intensity of physical education lessons and increase the unstructured physical activity environmental resourcing or 'break time' during the day (Chow et al., 2015). Blended physical activity approaches have additional merits.

Empirical evidence leaves little doubt that relationships are enhanced through blended physical activity participation. According to research conducted with 37 educators in the United States, moving together, in unstructured or structured physical activity, promotes the child-teacher relationship and encourages children in their physical activity (Gehris et al., 2014). Suggestions for a blended approach included teachers planning classroom activities to meet the innate desire of children to move; and engaging with children in movement activity during unstructured play times (Gehris et al., 2014). Whilst implementing these approaches leaders must overcome barriers to their practice.

Restrictions in implementing strategies for physical activity

Regardless of the pedagogical leader's perception about restrictive factors, these factors do exist. In early childhood settings, the policies and philosophies, structured indoor and outdoor activities, teachers' belief systems and prior experience, provision of equipment and modification of structures and markings can all create challenges.

One of the themes to appear consistently in the literature in early childhood education is the restriction of time (Burgess et al., 2010; Cardno & Reynolds, 2009; Ernst, 2012; Grarock & Morrissey, 2013; Oliver, 2008; Sims, Forrest, Semann, & Slattery, 2015). "Many of the conditions of work conspire against teachers doing that in the environments of busy early childhood centres" (Rockel & Sansom, 2015, p. 14). Even though it may seem ironic, the opportunity lies within the pedagogical leader's ability to step back and take time to observe and reflect.

Another barrier to effective pedagogical leadership concerns limited budgets in the early childhood sector (Colmer, Waniganayake, & Field, 2014; Fleet, Soper, Semann, & Madden, 2015; Oliver, 2008; Temple & Robinson, 2014). However, these barriers can be partially overcome with creative resourcing. Playground markings, recycled materials, parent and teacher donations and gathering of natural resources are often solutions employed within this sector. In addition, the gathering of inexpensive natural resources maintains the healthy development of young children (Ernst, 2012). In relation to budgets, leaders in recent research conducted in Australia have stated that the remuneration of early childhood teachers is not high enough to sustain the quality of all practice, or ensure the recognition of their professionalism by those outside the early childhood sector (Fleet et al., 2015; Sims et al., 2015). Statements like these indicate that if the salary of early childhood educators was improved, perceptions of professionalism may also accordingly improve.

Additionally, restrictions may be constructed from the policies within the early childhood centres (Oliver, 2008). With recent changes to the Health and Safety procedures in all sectors of New Zealand it is evident these pressures may be exemplified further. In a qualitative Australian study researchers found "educators felt a need to prioritise supervision and safety over the provision of physical activity opportunities" (Dyment & Coleman, 2012, p. 90). Liability and safety concerns have also been raised within a study on nature play restrictions (Ernst, 2012). Participants in Oliver's (2008) study of physical activity in the early years also stated that they feared neighbourhood safety, road safety and stranger-danger in certain activities. Although these precautions may present barriers, the safety of the child must be paramount.

Being risk aware is essential and being risk aware is sound practice (Gerber, 2002; Taylor, 2015). However, in interviews conducted through the Auckland University of Technology 20th century leaders within New Zealand articulated apprehensions about very young children being kept too safe (Stover, 2011). This culture of wrapping children in cotton wool may stem from the concept of children being "too precious" (Stover, 2011, p. 7). This in turn, may stem from parents' belief that they are exceedingly answerable for their children's accomplishments and failures (Stover, 2011). This has implications for raising a child in our culture.

Health and Safety policies may vary within education settings. Chow et al. (2015) states that other policies regarding physical activity also varies widely within centres. However, many policies in centres could be reviewed to allow opportunities for improvement. Policies related to weather conditions and appropriate clothing may be a beneficial place to start these revisions (Dyment & Coleman, 2012; Ernst, 2012). Another area that could be tackled is the creation or modification of the unstructured physical activity policy. According to Alcock (2013) acknowledging in policies that physical play is a complex, creative and opportunity laden process for all humans may be hugely beneficial for the early childhood sector. There are other barriers to physical activity in the early years.

Some studies proclaimed educators saw ratios as a restriction to implementing structured physical activities (Dyment & Coleman, 2012; Ernst, 2012). Another study by Dyment and O'Connell (2013) stated that children and pedagogical leaders are influenced by the surfaces of the outdoor areas. Softfall and grass are much safer for children than hard pavement - the former producing less injuries. This study suggested that activities in these areas are usually held at a slower pace than paved areas due to wagons, trollies and other resources with wheels being ridden at faster speeds. Furthermore, leaders may also be influenced by their own interests regarding physical activities (Ernst, 2012). Dyment and O'Connell (2013) also assert that centre philosophies may play a significant role in promoting physical activity or in placing precedence on other curriculum activities (Dyment & O'Connell, 2013). For the pedagogical leader of physical activity, a suitable centre may incorporate a focus on health and fitness. On the other hand, a change agent looking to model a new way of implementing the fitness programme may choose a centre whose philosophy needs strengthening in this area. These philosophical outlooks can extend to physical messy play activities too. According to Brownlee (2015) some adults

have their own views around clay being too messy or too much work. Brownlee argues that clay has been found to strengthen the interdependence of physical hand and brain function (2015). Encouraging children to participate in these physical activities will also assist them in skill development.

Opportunities for potential enhancement of physical activity

There is a belief that the potential of the infant's physical development lies within the pedagogical leader's ability to abstain from directing infants in their capabilities. This is done by giving attention to the child rather than the child's scheduled milestones (Gerber, 2002; Rockel & Sansom, 2015). The opportunity to be inspired by infants may present itself to the pedagogical leader who is willing to become humble and human, rejecting hegemonic adult-centric language and simply attune oneself to the infant (Rockel & Sansom, 2015). For the leader who can 'be in the moment' with the infants in her or his care, the potential of the infant can be astoundingly clear: "...by allowing [infants] to do what they are capable of, by restraining ourselves from rescuing them too often… by giving minimal help when they really need it, we allow our infants to learn and grow" (Gerber, 2002, p. 21).

An opportunity presents itself through really knowing the child (Costa et al., 2015; Pirard, 2013; Taylor, 2015; Vamos, 2015). The researchers of the psychomotor development project, Costa et al. (2015) assert that a variety of structured physical activities with specialised equipment may be most beneficial when pedagogical leaders "know and consider the children's individual characteristics and needs" (pp. 68-69). In regard to safety and risk taking in physical activity Taylor's (2015) review asserts that leaders and teachers must understand the child's capabilities, as what is dangerous for one child may be the challenge that elevates competence and confidence for another (Taylor, 2015). Therefore, knowing the capabilities of each child may give opportunity for the implementation of physical activities.

Alongside specific understanding of each child comes the necessity to have some skills and knowledge also. Having confident and knowledgeable leaders implementing physical activity can bring about substantial results for young children (Iivonen et al., 2011). This may involve either outsourcing specialised educators or offering significant training to those in pedagogical leadership positions in their centres. This necessary component of

training will be elaborated on later within this chapter. The recommended level of physical activity for preschoolers varies around the globe. Australia, Canada and the United Kingdom recommend at least three hours of physical activity daily for preschoolers (Chow et al., 2015). In the United States a minimum of one hour of moderate to vigorous physical activity is recommended (Chow et al., 2015). Each country has a different requirement and these requirements change when new data emerges. However, pedagogical leaders must become aware of daily physical activity requirements and take the proverbial wool away from their eyes with beliefs that children are adequately active and busy (Dyment & Coleman, 2012). New Zealand currently recommends up to three hours per day of physical activity for preschoolers, including some vigorous activity (Ministry of Health, 2015). But as society changes so education changes also (Stover, 2011). Therefore, it is essential that knowledge in this area is kept up-to-date and easily accessible to practitioners.

Another inspiring measure taken to encourage physical activity has often rotated around some form of music and movement activity. The *Move and Groove* programmes in Auckland dedicated to uniting rest homes with early childcare centres have provided some great opportunities for 'Nanas and Grandads' to participate with young children in fine and gross motor movements. These structured adult led programmes encourage community participation with regular excursions to local retirement villages where the body of the lessons are taught to music. The *Les Mills Born to Move* programmes are another example of structured physical activity that is routinely taught by a trained coach with music to match the movements (Les Mills, n.d.). Alternatively, unstructured free movement to children's favourite songs can create an atmosphere of sashaying, laughing and actively engaged dancers too. According to research undertaken in Hong Kong the most frequent participation of physical activity occurred within a musical context (Chow et al., 2015). With the joy and inspiration that music can bring it's not difficult to understand why this may often be the case. Offering free choice to enter the playground at children's own will can also provide opportunities for desire to engage in both structured and unstructured physical activities. This open access system is present in many early learning centres in New Zealand, although some centres operate on a rotating system where children do not have free access to outdoor areas.

From a wider lens a collaborative systems networking arrangement could potentially bring great gains into the early childhood sector from other professionals in the community such as nurses, health care providers and primary schools. Sharing resources and knowledge may be time consuming but could potentially result in great remunerations to childhood health and wellbeing. A suggested strategy employed in this situation could be nurses educating pedagogical leaders and children regarding health policies and giving advice for their implementation (Temple & Robinson, 2014). Other opportunities to enhance physical activity participation in the early years have been documented.

An opportunity identified within one Australian study comprised of the potentiality to reduce ratios of young children under teachers' care. The premise being that although ratios may meet licensing regulations they do not always meet the high quality expectations of early childhood centres (Dyment & Coleman, 2012). Others agree stating that in order to support physical play beneficial staff ratios must exist (Oliver, 2008). This would potentially enhance opportunities for educators to spend time setting up various structured physical activities throughout the day. However, this is certainly not without its own monetary restrictions and challenges.

In Aotearoa, New Zealand there is more likelihood to have space to implement opportunities for physical activity. In densely populated cities around the world with limited physical activity space, young children may experience 'six of one and half a dozen of the other' as they and their families may live in high rise towers and learn in confined spaces during preschool hours also. Lack of space in early learning centres, especially outdoor areas, impacts on the level of engagement in both structured and unstructured physical activity (Chow et al., 2015; Oliver, 2008). Having the space and nature does not mean all are aware of the importance of this environmental learning. According to literature, although the importance of outdoor play is becoming common knowledge, professionals may not always be aware of the necessity of outdoor nature play (Ernst, 2012). Unbounded space during excursions may present the greatest opportunities for participation.

Another opportunity for physical activity improvement may lie within the leader's ability to practice reflective thought processes (Grey, 2011; Hallet, 2013; McDowall Clark & Murray, 2012; Thornton, 2010a, 2010b; Thornton & Wansbrough, 2012). Reflective

inquiry is considered a key asset of all quality pedagogical leadership. Examining values and beliefs regarding children's physical activity may be one way forward. Moreover, this thought process may result in greater self-awareness. Enhanced self-awareness may lead to increased authenticity in leadership practice (Thornton, 2010a). Finally, according to Oliver (2008), young children develop their beliefs, values and behaviours based on family role modelling. She states "preschool children have almost complete reliance on older children and adults (e.g., siblings, parents) for physical activity opportunities" (p. 4). Opportunities therein lie with inviting family into the centre to role model physical activity. Alternatively, giving families regular information and inspiration regarding the importance of physical activity would be advantageous.

The learning environment

An aspect of pedagogical leadership practice comprises of ensuring the indoor environment is suitable for children's physical activity, whether this is structured or unstructured. It is worth discussing here the impact of noise within crowded settings and the consequence this may have on verbal communications. One group of researchers concluded that children are influenced negatively from excessive noise levels when they are practicing their balance control within indoor settings (Shoval et al., 2015). The aforementioned researchers also observed that due to space constraints within the indoor environment, much balancing equipment may be typically based on individual activities such as small balance panels. This could arguably limit the social development connected with larger group physical activities that are more likely to be observed in outdoor environments.

There is growing support for outdoor and nature-based physical activity implementation. However, there are many reasons that physical activity must continue to be available indoors also. In music related activities a space that provides a good sound system may be warmly welcomed. Many cities now lack the outdoor space for their centres they would like, so indoor space must suffice (Chow et al., 2015). Furthermore, some children prefer to play inside in less vigorous activities (Ernst, 2012; Oliver, 2008). In some situations, parents prefer their children to stay indoors, due to medical, safety or other reasons during their time in early childhood education (Ernst, 2012; Oliver, 2008). For whatever reasons these may be it is vital that pedagogical leaders are receptive to families' desires for their

children. Communication and education is a two-way street and over time desires for learners may change.

Literature recommends pedagogical leaders work to ensure outdoor environments are beneficial for children's play. Having favourable outdoor environments enables children to explore their natural environments freely. In doing so they are in a better position to develop their fine and gross motor skills (Dyment & O'Connell, 2013; Fatai O et al., 2014; Iivonen et al., 2011). Outdoor environments may consist of the setting's own playground or outdoor area. Outdoor environments can also be local parks, beaches or nature walks as experienced via excursions from the learning centre. Some early childhood centres in New Zealand are looking to *forest kindergarten* models from Scandinavian geographies. According to researchers engaging in physical activity outdoors encourages learning by appealing to the children's senses. It also provides a way for children to interact with their community outside of the preschool walls (Ernst, 2012; Gehris et al., 2014; Stover, 2011). Studies of children's physical development and obesity suggest that there is a connection between the environment, a child's motor ability and health outcomes too (Dyment & Coleman, 2012; Iivonen et al., 2011; Oliver, 2008; Shoval et al., 2015; Temple & Robinson, 2014). This connection is markedly improved when motor activities are offered in both indoor and outdoor environments. The difference between the activities offered outdoors is comprised mainly of space allocation. Areas within outdoor environments often allow for a great number of children to play all together (Shoval et al., 2015). Facilities within this area may include climbing apparatuses, large tyres, bridges, running tracks and mud pits.

On the structured side of the coin, a study concluded that interventions aimed at preventing and reducing childhood obesity were likely to be more successful when the outdoor playground, equipment and playground markings were modified to suit the learners. Thirty minutes of additional structured physical activity daily also produced positive increases in physical activity and self-efficacy in young children (Temple & Robinson, 2014). Regarding variety, one study carried out in Australia found that there was a disparity between the outdoor areas of early childhood centres. This study asserts some centres may have large natural areas whilst others contain mostly hard paved surfaces (Dyment & O'Connell, 2013). Furthermore, some preschools have a lack of access to natural areas or may even be located in neighbourhoods considered unsafe for

outdoor excursions (Ernst, 2012; Oliver, 2008). The resources within outdoor areas varies greatly too. Centres may have sandpits, water features, gardens and gardening tools, climbing walls, swings, hammocks, cubby holes, balancing equipment, slides, construction resources, planks, forts, bamboo poles, tyres and/or other climbing apparatuses. This equipment provides an incredible array of choice and opportunity for children's physical activity. However, whilst generally considered safe, the risk related to using manufactured equipment has been necessarily examined (Dyment & O'Connell, 2013). Although a risk avoidance culture in our centres should be avoided, it is also necessary to keep the learners well cared for. *Te Whāriki* asserts that children must be kept safe from harm (Ministry of Education, 1996). Risks and safety have been discussed in the restrictions and opportunities sections of this chapter and will also be discussed in the following section.

2.3   Shared Leadership

Essentially, sharing something involves release. Shared leadership may exist within a holistic philosophical environment. Perhaps it has a tendency toward feminine leadership. It is certainly less hierarchical than some other leadership models. According to Youngs (2009) shared leadership is a group construct. Early childhood education structures essentially already exist in team forms. It may therefore be the ideal setting for shared leadership practices. This team environment often stems from an open plan setting where the values of *Te Whāriki* encourage sharing of knowledge, integration of learning and the community, and 'ako' (reciprocal learning) (Ministry of Education, 1996). Nuttall (2003) argues that teaching in early childhood is deeply collaborative, and teachers will teach each other through this interpretive task of working with young children. Therefore, this sector is predisposed to a shared leadership model.

There is a growing recognition of the importance of leadership in the early childhood education sector. However, research regarding leadership in this sector is still not reaching such a level of recognition of this concept (Krieg, Davis, & Smith, 2014; Waniganayake et al., 2012). These authors assert that developing a theoretical base to understand and implement leadership in this sector is an ongoing process. It is useful to draw on seminal research under the wider umbrella of shared leadership in the general field of leadership as evident in Pearce, Conger and their associates' writings. According to these experts, shared leadership processes support responsible leadership practice

through the natural balance of social responsibility (Pearce et al., 2008; Pearce, Wassenaar, & Manz, 2014). Although drawn from the wider field of shared leadership literature, these writings have relevance in the early childhood education sector too.

There are many conceptually related forms of leadership including: co-leadership, collective leadership, distributed leadership, pluralistic leadership and shared leadership. Shared leadership is similar but also unique. According to some, all forms of leadership are shared. However, there is a very long continuum for the broad spectrum of leadership that exists (Pearce et al., 2014). Top-down, hierarchical leaders who dominate and delegate sit at one end of the scale. At the other end, all those involved in the group are engaged at leading each other towards conducive goals. Pearce et al. (2014) assert that even when leadership is not shared, leadership models of solely top-down leaders do not achieve their goals alone. Shared leadership promotes ethical practice through a balanced consideration of the needs of various stakeholders. Furthermore, this model "provides a potential source of leadership checks and balances" (Pearce et al., 2014, p. 276). This model also elicits a greater transparency and gains access to a wider variety of cognitive ability through team input also promoting the emergence of leadership from those in official and unofficial leadership roles. Essentially, it involves give-and-take relationships (Pearce et al., 2008; Pearce et al., 2014). The shared leadership model asserts all involved can share the burden and responsibility of leading to some degree. Others agree, asserting that parents and children can take on the responsibility of shared decision-making, contribution and leadership (Tamati, 2011; Taylor, 2015).

Shared leadership is essential in early childhood education. Oliver (2008) asserts that if teachers or health care workers are to implement successful physical activity promotion then parents and caregivers must be on board too. However, this model only works effectively when hierarchical leaders take action to encourage the ongoing development of shared responsible leadership. Pearce et al. (2014) assert that:

> …responsible leadership… starts at the top... guided by the actions of [others]. Shared responsible leadership is unlikely to exist in a vacuum. It is through the purposeful… maintenance of shared leadership processes that cascade from the [top] to the rest of the organisation, and through remodeling… that shared leadership enables the robust potential for responsible leadership (p. 276).

Others agree this shared leadership model will work best within the cogs of some formal leadership role allocation. Centre supervisors may allocate responsibilities for teachers (MacArthur et al., in Nuttall, 2003). Alternatively, leadership may emerge through professional development opportunities such as the Educational Leadership Project (Carr et al., in Nuttall, 2003). This programme also provides a systems networking vehicle for emerging leaders in early childhood education.

Due to the fluid nature of leadership in the early childhood context it is essential that professional growth is available for leaders (Waniganayake et al., 2012). Moreover, the responsibility of leadership lies with educators in this setting. Therefore, collaboration with colleagues is essential (Cooper, 2014; Hallet, 2013; Waniganayake et al., 2012; Weisz-Koves, 2011). Youngs (2007) asserts that a secure leader recognises the need for interdependent relationships, trusting communities and transparent communication. The secure leader will engage in professional learning and collaborate with others.

According to some, sharing responsibilities minimises the possibility of mistakes being made through centric leader models. In the shared model, leadership seeks to allow space for all parties to collaborate as a community. Responsibilities are shared and emergent leadership surfaces. Responsibilities may be delegated, not necessarily by a heroic leader but by suitable members of the leadership community who are willing to accept the task at hand (Rodd, 2013). This includes democratic and dispersed leadership techniques (Heikka et al., 2012). Grarock and Morrissey (2013) argue that 'shared' leadership may be flat lined and shared by all, where 'distributive' leadership may exist within the traditional hierarchical structure. However, according to Pearce et al. (2014) shared leadership actually works best within a hierarchical structure. This is where tension may lie.

Shared leadership and conceptually related concepts such as distributive leadership can't be simply taken as band aids for organisations that need new models of the give-and-take theory. Youngs (2009) argues that the popularisation of distributed leadership could in fact be a delegation of workload under the pretense of authentic distributive leadership. He goes on to state this could be due to the work intensification from policy reforms and economic pressures. This could therefore be seen as a consequence of education modernisation (Youngs, 2007, 2009, 2014). He also asserts distributive leadership is in

danger of locking itself into an uncritical position, silent about power issues. We could potentially be on the edge of a paradigm that takes us further than the leader-centric or leader-follower construct to a truly distributed form. However, the popularisation of this distributed form could simply be due to work intensification in the education sector due to policy reforms and modernisation. According to Youngs (2009), there is a lack of in-depth research around distributed leadership. He also states that the lens should turn away from the 'how' or 'why' of distributed leadership, to a more holistic lens. This lens views leadership as already inherently distributed across social settings. This lens turns now to focus on how it can emerge, be stifled or nullified through policy, reforms or official leadership. Distributed leadership can therefore be seen as official distributed leadership that is given out, or, emergent distributed leadership where space is given for human agency to emerge as influence despite official role or formal title (Youngs, 2009). Formal titles may be explicit in early childhood education. Alternatively, leaders may emerge from an informal space.

Research states that there is often a hesitance of referring to oneself as a leader in early childhood education (Cooper, 2014; Krieg et al., 2014; Rodd, 2013; Weisz-Koves, 2011). This reluctance may exist due to the perceived associations with hierarchical, centralised, top-down leadership. This form of leadership does not sit well with the community and shared philosophy of the early childhood sector (Krieg et al., 2014). Moreover, leadership is a contextual construct and emerges within a societies' belief system. This is why leadership appears so vastly different within different cities and countries around the world (Waniganayake et al., 2012). The Pikler institute was based on letting go of the concept of holding power over children (Vamos, 2015). This concept is also central to the development of excellent team contribution within the shared leadership model of the early childhood education sector. In supporting a shared leadership model a culture of tolerating mistakes may be beneficial as emergent leaders burgeon (Manning et al., 2011). The hand that pulls parents, whanau and emergent pedagogical leaders onto the pedestal of shared leadership is not limited to an adult-centric model. In fact, looking at leadership through a Kaupapa Maori perspective enlightens us toward the open door of whanau and children's leadership (Tamati, 2011; Taylor, 2015). According to the shared leadership model, everyone has the opportunity to be seen as a leader (Manning et al., 2011; Tamati, 2011). The roles and responsibilities taken on by individuals may be accepted by those in both informal and in formal roles (Colmer et al., 2014; Tamati, 2011). According to

Tamati, the cultural and spiritual basis the child's roles and responsibilities are informed by the shared whanau context. This form of leadership focusses on contribution, relationships and responsibility (Tamati, 2011). These honest and collaborative relationships are a possible teaching tool for promoting self-efficacy, confidence and leadership with children.

According to experts in the field, the only way that pedagogical leaders in early childhood education settings can understand and respond in meaningful ways to young children's learning is through engagement in shared meaning, decision making and relationships with colleagues, whanau and children (Nutkins et al., 2013; Taylor, 2015). The Kaupapa Maori perspective agrees, acknowledging that whanau and tamariki (children's) leadership contributions are essential to the successful holistic development of young children (Tamati, 2011). One analogy of the family has been given as the outer leaves of the seed. These leaves provide protection, sustenance and nurturing for the child (Reedy in Nuttall, 2003). Furthermore, leaders participating in a study conducted in New South Wales stated that promoting shared language with family engaged parents in their children's learning (Marsh, Waniganayake, & De Nobile, 2013). Therefore, whanau members and tamariki must be involved in the shared decision-making process.

A cooperative education service in Aotearoa, New Zealand has its roots in shared emergent leadership. This sector runs under the ideology that all members can share taking the responsibility of leading the centre. Developing potential in every member of the centre is crucial and decision-making is based on a shared model where all members can accept leadership responsibility (Manning et al., 2011). This form of leadership often involves mentoring and giving of space for new leaders to grow. There is a growing body of literature that asserts the need to include parents, family and children in the shared leadership group (Heikka et al., 2012; Tamati, 2011; Waniganayake et al., 2012). The capacity of this input is not largely defined in literature and may be another worthwhile avenue to investigate in the future.

Leadership role modeling can promote successful future leadership. A leader's own form of leadership will often be based on leadership role-modeled by whanau, coaches and teachers during childhood (Jackson & Parry, 2011). Consequently, when leading in the classroom we must be aware of the subconscious ideas and rules we may be role modeling

to children. This may include the way the leadership model presents itself at the meso level too. Coordinators will often take on the role of educational leader themselves. In doing so, they will model their own philosophies of leadership to staff, children and families.

The shared leadership model may also be concerned with appraisal. Research asserts that effective appraisal directly involves educators in the self-review of the appraisal policy (Fitzgerald, Youngs, & Grootenboer, 2003). The shared decision making in this process allows more often for positive appraisal systems and structures. In fact, if the appraisal systems stand any chance of surviving in the long run, educators must be involved in the development and review of the process (Fitzgerald et al., 2003). Australasian literature tends to agree stating that staff appraisals are seen by some kindergarten leaders as dilemmas to overcome (Cardno & Reynolds, 2009). A shared decision-making process is also therefore beneficial in teacher appraisal.

Teamwork is essential in early childhood settings. The great demands of education and care in this sector require a team to work together to meet these needs (Marsh et al., 2013). Consultation through a shared language within the team structure is essential, especially during times of change (Marsh et al., 2013; Rodd, 2013). Leadership also stands for collective change through the support and encouragement of others (McDowall Clark & Murray, 2012). There are educators in the early childhood field who believe in collaborative leadership. However, this specific phrase may not be on the tip of their tongues. Some of the participants involved in a professional learning programme in Victoria, Australia indicated that their understanding of leadership came from a centralised perspective. Language that relied on individual personal traits was emphasised within these participants' responses (Krieg et al., 2014). Other studies have also shown educators still use language relating to hierarchical and formal leadership models (Colmer et al., 2014; Marsh et al., 2013; Sims et al., 2015). We need a new language for the contextual uniqueness of early childhood; a terminology for shared leadership explicitly linked to the early childhood context in contemporary times. According to Krieg et al. (2014), without this shared vocabulary we are in danger of assuming that if we do not have certain personal traits, we cannot contribute or take the responsibility of leadership. The characteristics of shared leadership in early childhood are:

- **Building relationships:** According to literature the role of the pedagogical leader is important. However, this role is to uphold a relationship that consists of respect, observation, empathy and reflection (Vamos, 2015). Moreover, personal experience is the core of increasing knowledge and skills. Therefore, pedagogical leaders and children must work together as the curriculum becomes a living embodied experience (Rockel & Sansom, 2015). Furthermore, the concept of 'ako' describes a teaching and learning relationship. It is grounded in reciprocity and recognises that the relationship between the learner and whanau cannot be separated.

- **Engagement and passion:** Research asserts that teachers and leaders' personal backgrounds and philosophies predetermine the type of physical activity implemented in their centres. This leads to the conclusion that leaders who are physically active themselves in structured activities may place a higher importance on implementing structured physical activity for their learners (Dyment & Coleman, 2012; Ernst, 2012). Moreover, a study based on curriculum initiative introduction in early childhood settings in Sydney is in harmony. This study showed pedagogical leaders were most effective when engaged with a curriculum initiative from its onset. These leaders were unlikely to engage further down the track. These initial decisions to be onboard can lead to full engagement or outright rejection (Burgess et al., 2010).

- **Belief in our learners:** Leaders who are encouraging and believe in their learners' capabilities lift the learning outcomes for these children. If leaders discourage young children from taking risks in the playground, children may be less likely to persist with challenging activities (Taylor, 2015). The disposition of perseverance is one that we want to encourage in our children. One social psychologist, states that our positive beliefs in children can help to project their future success too (Halvorson, 2011).

- **Reflection:** Effective leaders are reflective and actively practice integrating reflections into the learning programmes (Krieg et al., 2014). The leader's practice is engrained with deliberate, reflective practice (Ministry of Education, 2013). Leadership requires courage and the disposition to persist in learning. It is underpinned by ethical practice (Waniganayake et al., 2012). Being reflective assists one to pursue further learning and uphold ethical practice.

- **Professional learning:** A qualitative case study undertaken in New Zealand found that leaders had a great impact on the organisational culture of the centre. The research recommended that qualifications beyond initial teacher education are essential for leaders. Furthermore, extensive experience and ongoing professional learning should be pre-requisites for future leaders in this sector (McLeod, 2003).

Women facilitated leadership

Early childhood education and care develops with mostly women providing care and leadership. Unfortunately, there are few males to nurture the pedagogical leadership in this sector. Regrettably the lack of male leadership in this sector can leave a gap in the research literature too (Fleet et al., 2015). The workforce is dominated by women (Grarock & Morrissey, 2013; Nutkins et al., 2013). This could however explain the shared nature of early childhood. It is asserted that women are great listeners and are passionate about empowering the people in their communities, striving to nurture and care for others (Jackson & Parry, 2011). Female leaders are also more likely to inspire members to a higher level of collaboration. Female leaders embody models of leadership based on relationships and collaboration (Grarock & Morrissey, 2013). Another study highlights the importance of emotionally literate women in the field of early childhood education (Hallet, 2013). Female leadership may therefore assist in the continuous growth of the shared leadership model within early childhood education.

Language for learning

According to the literature freedom of movement for children is not so easy to understand and to practice in a world where efficiency and quick education are too often considered as quality standards (Gerber, 2002; Nutkins et al., 2013; Pirard, 2013). In fact, freedom of movement could mean something very different within various disciplines such as education, medicine or sporting contexts. When collaborating with families and the wider community we must use appropriate language to converse about outdoor play and reasonable risk-taking (Taylor, 2015). The role of the sound pedagogical leader is to raise awareness of the benefits of reasonable risk taking in physical activity. In fact, the idea of negative risk is assumed according to cultural and individual expectation (Taylor, 2015). Defining language for learning is essential, as is defining language for the leadership framework in early childhood education.

Language for leadership

A study reporting the leadership understanding of 351 Victorian early childhood leaders was recently conducted. This study showed leaders play a significant role in developing the sector's own understanding of leadership concepts (Sims et al., 2015). This implies pedagogical leaders can develop their own ideas of quality leadership and disseminate these ideas through a shared language. In terms of leadership itself it is said that there are almost as many definitions of leadership as there are people who have aimed to define it (Jackson & Parry, 2011). The multiplicity of formal titles of leaders in early childhood settings may add to the ambiguity in this sector. Manager, supervisor, director, pedagogical leader and educational leader may be used interchangeably for leaders (Fleet et al., 2015). Terms such as shared leadership or distributive leadership may be used interchangeably where clear definition would be beneficial to provide a sound interpretation. The literature also states that definition clarity has long been an issue in leadership theory (Pearce et al., 2008). One suggested solution is for academics within the leadership field to collaborate for the universal understanding of key terms (Heikka et al., 2012). Pearce et al. (2008) did exactly this with their practitioner letters to each other and it was beneficial for the clarity of key terms. Marsh et al. (2013) agrees that in the general leadership field this has begun, but has not yet spread into the actual early childhood settings. However, it is essential to understand the complex nature of each centre. Just as there are certain words in te reo Maori that cannot be explained in English, there may be concepts within one centre that lie at the heart of that individual centre only. Experts in the field theorise that finalising appropriate definitions of the word 'leadership' within the early childhood education sector has been difficult (Marsh et al., 2013; Waniganayake et al., 2012). However, shared leadership discourse is essential for growth.

According to McLeod (2003), discourse is a tool for modeling the organisational culture of a centre and the values discussed can create a team culture. Language is also a method that helps to create and maintain relationships and shared goals (McDowall Clark & Murray, 2012). Therefore, it is recommended that pedagogical leaders are intentional regarding the discourse used for learning and leadership (Colmer et al., 2014). Furthermore, it's not just about the words that are used but the way in which they are used. Terminology may be spoken with empathy and care and when reinforced can influence the perceptions and actions of nations (Jackson & Parry, 2011). Therefore, communication in both the verbal and non-verbal form must be considered.

Leadership reconceptualisation

Sims et al. (2015) state that lack of a shared language can hinder communication. To compound this, a lack of time can create restrictions for the reconceptualisation of leadership within the sector. Moreover, it is not enough to create a shared language for leadership. Challenging top-down leadership concepts is critical in the process of reconceptualisation. According to literature, new types of leadership need a new language (Cooper, 2014; Krieg et al., 2014; Weisz-Koves, 2011). Language solidifies our understandings of roles and concepts. The language of centralised leadership will sound quite different to the language of shared leadership. In fact, the aforementioned study carried out by Krieg et al. (2014) aimed to understand the way educators perceived leadership. The study also hoped to break some new barriers in changing some of these perceptions. Essentially the paradoxical concepts of controlling leadership and values based leadership were discussed. New language was given to the participants by the researchers. This provided educators symbols to understand leadership through a new lens. Leadership could be seen as a collaborative, contributive facility. By challenging the status quo, educators were able to quall stereotypes of centralised leadership. Educators could now view leadership in terms of community, commitment and collaborative change agency (Krieg et al., 2014). This had consequences for their desire to use leadership concepts to identify themselves with.

In conclusion, educators should share their experiences and regularly discuss the benefits of leadership with all stakeholders (Cooper, 2014; Weisz-Koves, 2011). Professional learning communities have been found to be an effective vehicle for sharing (Thornton & Cherrington, 2014). These communities have been shown to boost confidence and leadership ability (Thornton & Cherrington, 2014). Thoughtful practice and trust must envelop the process of invitation and participation within these communities. Professionals must continue to update their knowledge and understanding of shared leadership language and concepts and disseminate this knowledge to a wider audience.

Catalytic change agency

Catalytic agency is a commitment to self-awareness (Cooper, 2014). This heralds the importance of authentic role modeling for quality change. Self-discipline, self-awareness and self-consciousness are essential dispositions in leadership (Jackson & Parry, 2011), as is a confident belief in individual capabilities, humble confidence and perseverance

through challenges. This form of self-leading involves moving aspiration into action (McDowall Clark & Murray, 2012). Having belief in our ability to lead and make change can have great impact on our abilities. Early childhood settings are instilled with social care responsibilities. If leadership is considered to be the accepting and sharing of responsibilities (Tamati, 2011), then educators are already in the realm of leadership positions. These realms are filled with opportunities for advocacy and activism (Waniganayake et al., 2012). Essentially leaders and teachers can be catalysts for positive change. However, catalysts may come in the form of people or events. The new Health and Safety regulations have become a catalyst for change in Health and Safety practices in the early childhood sector. Events, dilemmas or disasters can instigate change within a centre or at a national level. Therefore, leadership studies would benefit in the future with more in-depth investigation of artifacts and environments that may act as catalysts for change in the form and function of leadership.

Organisational culture and decision-making within the team structure

Culture forms when a group becomes established with its practices. Within this group shared meanings are created, values and attitudes are constructed and these ways of being become the norm for the group (Jones & Pound, 2008). McLeod (2003) argues that organisational culture is largely formed by the organisational discourse that is disseminated as the team's culture emerges. Leaders within the team may be powerful role models of discourse that influence the teams' response to leadership and physical activity (McLeod, 2003). Within the early childhood sector pedagogical leaders are effective when working together towards a common goal. These leaders understand that they are accountable to stakeholders within the community and therefore it is important that all members contribute to this common goal. Furthermore, good relationships must be maintained to hold this team together. These relationships are built on trust, empathy and reciprocal listening (Jones & Pound, 2008). The team culture can influence the manner in which decision-making is made. If the culture of the organisation is collaborative then shared decision-making will often ensue. It is vital to share vivid imagery of the collaborated goal with every team member (Jones & Pound, 2008). One of the theories of team development is the team building process (Rodd, 2013). The key stages of this model are: connecting, confronting conflict, co-operating, collaborating and closure (Rodd, 2013). Many teams work their way through a similar process with decision making.

Decision-making plays a large role in the team structure. The role of the educator in supervision can be a debated position in early childhood literature. This can be illustrated from one study where educators and leaders gave an eclectic and varying account of the importance of: giving children space, monitoring and eliminating hazards, participating in the activities with children and helping excluded children to find ways to participate (Dyment & Coleman, 2012). All of these variations of perceptions of supervision in just one study. Therefore, there may be multiple and conflicting opinions within the team. Leaders in formal positions working within a team culture may drive initiatives, model sound practice and act as coaches to extend the team (Jones & Pound, 2008). Research suggests teachers in leadership roles may not all have a robust steel suit of confidence built in. To illustrate this observation, in one study carried out in Victorian early childhood settings teachers agreed that when working towards change they felt confident to make decisions and implement changes within their own classrooms. However, the same teachers found it hard to articulate how they had implemented changes centre wide (Grarock & Morrissey, 2013). Decisions they felt inspired to make related to routines and structural change within their own rooms. The following section will investigate this confidence and lack of confidence in pedagogical leaders for the early childhood context.

2.4   Teacher Confidence within Shared Leadership and Physical Activity

The concerns of some are that the early childhood education sector may lack status and professional strength (McDowall Clark & Murray, 2012; Stover, 2011; Weisz-Koves, 2011). According to Nutkins et al. (2013): "Most people believe that working with very young children is a simple and natural task that any normal person can undertake" (p. 262). This reputation can erode the confidence of teachers in the field. But early childhood education leaders must take some responsibility for the reputation of this role. Some question if this erroneous reputation is partially due to the struggle to interpret and implement the dominant discourse of top-down pressure rather than contest it (Sims et al., 2015). This type of reputation puts leaders on the back foot regarding confidence to begin with. According to literature, leadership capacity development plays a significant role here (Weisz-Koves, 2011). It is essential that leaders and educators fight back to educate the unaware and reclaim the professional status that is already evident in practice by caring, knowledgeable and experienced professionals in this sector.

Qualifications, whilst excellent in their own right, may not prepare these leaders with appropriate leadership skills and attributes. Leaders may be appointed to management and leadership roles simply by academic qualifications alone (Heikka et al., 2012). One study carried out in Victoria asserted that degree-trained early childhood teachers may struggle in their roles as educational leaders (Sims et al., 2015). Furthermore, educators may feel that qualifications do not equate with authority (Grarock & Morrissey, 2013). It may be useful for leaders to participate in professional knowledge sharing of effective leadership to facilitate catalytic change in their own practice, and also inspire change in their colleagues' leadership contributions (Cooper, 2014). There are other reasons members of the team may not hold ultimate confidence in their ability to lead physical activity.

Literature shows explicitly that some leaders may lack the confidence to take children outdoors for nature play. Reasons for this may include safety concerns (such as Lyme disease, animals or inadequate amount of supervision), or lack of knowledge of how to implement experiences for physical activities in nature (Ernst, 2012). However, pedagogical leaders are responsible for overseeing these activities. Another reason for overlooking the implementation of physical activity may exist. Arguably many pedagogical leaders may not consider the motor competencies of young children as paramount in the rhythms of the daily journey. Chow et al. (2015) asserts that in Hong Kong preservice education related to the importance of physical activity in the early childhood sector is necessary. Additionally, a lack of preservice education regarding leadership may inhibit confidence (Oliver, 2008). Preservice education is not however, a magic elixir.

It is alleged that planned physical activities can be advantageous compared to free choice activities. Confidence may improve with specialised training in this area. However, some researchers have found that these methods can have their limitations. Firstly, long term programmes require specialised teacher training. Most pedagogical leaders have not had this type of specialised training. Secondly, the lessons implemented usually only occur once or twice a week and therefore cannot compare to unstructured daily physical activities (Hannon & Brown, 2008 in Shoval et al., 2015). Other researchers agree, stating that structured physical activities are not taught frequently enough in this sector and may not be modified for each child's individual characteristics and needs (Costa et al., 2015).

Although one research project did conclude that two weekly lessons were indeed enough to improve children's locomotor skills (Iivonen et al., 2011). Therefore, specialised training for structured physical activity implementation may boost team confidence.

Some write that pedagogical leaders within this sector often lack the knowledge and skills to implement high quality structured physical activity lessons (Costa et al., 2015; Iivonen et al., 2011; Oliver, 2008; Wright & Stork, 2013). Few early childhood educators can state that they have received specialised physical activity training over the length of their careers. In one study only five of 16 pedagogical leaders had participated in any form of physical activity training (Dyment & Coleman, 2012). This may be a barrier for confidence when implementing structured physical activities.

Providing training to increase teacher confidence is not limited to specialised physical activity learning. Having professional confidence and belief in oneself are integral to all leadership contributions, but are often underplayed in this sector (McDowall Clark & Murray, 2012; Weisz-Koves, 2011). Opportunities for professional learning must be considered as a possible solution to raise teacher confidence (Rodd, 2013). However, learning should include several members of the team to ensure that everyone is 'on the same page'. One study suggests professional learning must be lengthy in order to make an authentic impact on pedagogical practice and confidence. The study asserts that low cost short term training will not be an effective professional learning strategy (Burgess et al., 2010). In contrast, lengthy professional learning of higher education may be considered as a vehicle for authentic impact.

According to one study, higher education combined with extensive experience contributed to sound pedagogy of early years knowledge and implementation of the curriculum (Hallet, 2013). Moreover, another study also concurred that superficial learning is pointless and must be embedded at a deep level to make an impact (Colmer et al., 2014). Participants involved in leadership development programmes in the United Kingdom agreed that there were indeed key benefits of quality leadership programmes. These benefits related to self-awareness, confidence, building of community relationships and finding ways to improve provision for children (Thornton, 2010b). A study based on surveys of 206 leaders and teachers in Australia resulted in the following findings: Ninety percent of participants stated that an educational leader needed at least a minimum

qualification (Fleet et al., 2015). In regard to implementing new initiatives, leaders and teachers are all responsible for sourcing new knowledge.

However, despite these studies and others, strategic goals for all staff to be qualified by 2012 lowered to 80% in 2009. This has created the need for leaders to find more funding, or resort to employing less qualified employees (Mitchell, 2015). The Education Review Office (2015) reported that staff qualifications did not contribute significantly to the variability of quality across centres. According to Rockel et al. (2015) "this contradicts research which since the late 1970s has consistently demonstrated that…teacher qualifications are integrally connected to the quality of children's experiences" (p. 6). Criticism by experts in the academic field also state that by dividing and examining the strands of *Te Whāriki* individually, in this report, ERO do a grave injustice to teachers (Rockel et al., 2015). This error of injustice extends also to children as holistic beings. Although teachers may not all have formal qualifications, the quality of teaching should rise with teacher training that leads to qualifications in this sector.

Another factor that may influence teacher confidence in the implementation of physical activities pertains to risk awareness. Risk awareness is necessary and essential but children must also learn through their own calculated risk taking. Throughout the decades and within various cultures children have engaged in activities with knives, bows and arrows, tools and machinery in order to gain the experience needed to participate actively within their culture (Nutkins et al., 2013; Stover, 2011; Taylor, 2015). Furthermore, the frustrations and learning experiences that occur from infants and young children's persistence and calculated risk-taking can enhance their developmental skills at the pace that is right for them (Gerber, 2002; Pirard, 2013; Rockel & Sansom, 2015; Taylor, 2015; Vamos, 2015). Working within a shared leadership environment may bring challenges and benefits to the philosophy of risk-taking within the centre.

Furthermore, risk-taking in the playground is not limited to physical risk. The informed pedagogical leader is aware of the emotional risks that exist as thorns in the garden of physical competency. Teasing and daring may place a child at risk of exclusion or dominance even at this young age (Nutkins et al., 2013; Taylor, 2015). A blended approach of structured and unstructured support is recommended. Leaders may offer physical support in conjunction with supporting children's social competencies also. A

more structured approach to managing risk-taking may be observed when the leader exists in a role of a 'play tutor' and takes control until the child is confident to persist without adult assistance (Nutkins et al., 2013; Taylor, 2015). However, personal social and physical risk taking are always present at some level. They can be the catalyst that also increases confidence when conquered.

Other researchers have concluded that teachers in early childhood settings are often restricted in their own pedagogical leadership by their title within the setting (Grarock & Morrissey, 2013; Weisz-Koves, 2011). This could potentially have implications for shared leadership practices. Considerations may be given to the allocation or omission of formal titles. In one study undertaken in early childhood settings in Victoria, only leaders with a formal title conveyed confidence in their abilities to lead. Teachers in this study also agreed that lack of time or authority restricted them from implementing centre-wide change (Grarock & Morrissey, 2013). The implication here is that if teachers don't feel they have authority to implement positive changes for physical activity they may hold themselves back from stepping on other's toes. Paradoxically, this may not help other professionals in the long run. This also has implications for the egalitarian shared nature of shared leadership where teachers may be advised to avoid placing themselves above one another (Grarock & Morrissey, 2013). Contrary to these beliefs, experts in the field assert that educators have potential to lead regardless of their formal title within the centre (Cooper, 2014; Thornton, 2010a). Even so, teachers who are contributing to shared educational leadership in their centres may not see themselves as pedagogical leaders. Grarock and Morrissey (2013) assert that these capable, qualified, skillful and knowledgeable professionals are more likely to see themselves as simply someone who is "always willing to help out" (p. 10). Although admirable in many ways, this humility may not always benefit the sector.

Finally, prior to the development of unified philosophies within this sector many pedagogical leaders have to find for themselves the most effective ways to think, speak and act within their own contexts, drawing only from personal experience and knowledge. Jones and Pound (2008) assert that leaders still receive limited training and support in leading a team. Therefore, leaders may need to draw on courage and develop confidence in leading the physical activity curriculum with the team. Furthermore, if early childhood leaders lack confidence in leading change initiatives they may move into an autocratic

style of leadership adversely instigating instant resistance from the team (Rodd, 2013). However, resistance is less likely to ensue when change is seen as an opportunity for improvement (Jones & Pound, 2008). It is essential that emergent and formal leaders build their confidence in this shared environment.

2.5   Summary

Some advocate strongly for unstructured physical activity, especially for infants and toddlers. Whilst others disagree, stating that structured physical activity is without a doubt necessary to raise the engagement of young children in healthy, physical activity. Many believe that a hybrid approach is the most valuable. This approach includes the implementation of both unstructured and structured physical activity. This approach often frames itself around the provision of resources and equipment as provocation for participation in physical activity. Whichever style is implemented in early childhood education; leadership plays a key role in role modelling.

There is still insufficient literature in New Zealand, and worldwide regarding leadership in early childhood. Theory is emerging regarding distributed leadership, catalytic practice and reconceptualisation of leadership. However, as shared leadership seems to be functioning more in this sector it unnerves me that I had to turn to general shared leadership literature to add to this discussion. This demonstrates the need for further education and research regarding leadership, and especially shared leadership, in the field of early childhood education. As helpful as general shared leadership literature is, research specific to early childhood education is necessary to cater to the intricacies and complexities within this sector.

A blended approach to leadership that is both focused and shared is the key to promoting best outcomes. However, there is no measurement for the combination of these two parts. In fact, Locke sums this up well when he concludes in his letters to Pearce and Conger, in Pearce et al. (2008):

> Leadership is an art, a good [leader] knows when he, or she, needs full or partial consensus and when a firm, final decision has to be made. I don't think you can make specific rules about consensus. I view it as a contextual issue (p. 14).

A reconceptualisation of leadership is called for. A shared model that invites teachers, family and children to participate actively in the implementation of physical activity programmes.

3 Chapter Three: Methodology and Methods

3.1 Introduction

Within this chapter the relevance of the chosen qualitative methodology will be explained and verified. The methods employed within this qualitative framework will be outlined and the practices undertaken whilst collecting data will be shown. Ethical issues within the data collection process will also be addressed. Finally, ways to strengthen and ensure validity of the data are demonstrated.

3.2 Methodology and Data Analysis

The purpose of this study was to shed light on how leadership in the early childhood education sector influences the implementation of physical activity. Through thorough investigation of the existing literature, it was clear that although there is much data on physical activity, there is not as much pertaining to early childhood educational leadership. The currency in the literature bank is growing, but finding data that combines both physical activity and leadership in early childhood education is like dipping into an overdrawn account. The purpose of research is to navigate through new insights and knowledge. According to O'Toole and Beckett (2013) it is through research that we can reach new conclusions. The paucity of research in this area was the inspirational catalyst for this research.

Research must be purposeful. Researchers gather data in order to shed light on a situation, to solve a sense of disquiet or to add to our shared knowledge base. According to Mutch (2005) research questions are related to the context of the research. It is also asserted that the researcher's interests and world view shape the consequential research decisions (Mutch, 2005). It is hoped this research will contribute benefits that reach far wider than the completion of this thesis. The research has included the collation of data that supports pedagogical leaders in the implementation of a successful physical education curriculum. It is hoped that other leaders in this field will find inspiring interpretations of experiential implementation methods and techniques.

Research is important because it gives us strategies, knowledge and understanding of how to better our communities. Morrell and Carroll (2010) state that educational research is specifically important because it helps us to propose and test theories, increase our understanding and knowledge, and consequently improve teaching and learning.

Research can also inform pedagogical leaders how to better understand the best methods to employ in their practice. All research is undertaken through an epistemological framework. Epistemology is a form of philosophy that considers the methods, limits and origin of mankind's knowledge. The research design within this project sits within a qualitative framework whereby depth, rather than breadth of data was sought. The methodology is one of an interpretive paradigm. Within this paradigm the experience of the personal and subjective were not discouraged, but rather sought after. Writers surmise that this methodology is interested in the beliefs and opinions of people (Merriam, 2009; Morrell & Carroll, 2010). Potential settings and participants were chosen thoughtfully to generate qualitative rigour.

Within this research the data has been presented as interpretive experiences of leaders and teachers in three early childhood education settings. Throughout this research project the interpretive experiences of pedagogical leaders became the focus of the data collection. Consequently, nine specifically chosen potential participants were invited to contribute to this research. Eight of the nine participants confirmed their willingness to be part of this study. Participating leaders could have a formal or informal role. For the purpose of validity, they were required to have experience in leading structured and/or unstructured physical activity programmes. Three of the eight participants had formal management positions also. Leaders were sought who were able and willing to contribute to the project through sharing their knowledge and wisdom, stories and experiences, interpretations of these experiences, tips and skills. I was humbled by the rich and honest contributions these participants gave.

A purposive sampling method was used to choose the early childhood centres that would be involved in the research. I wanted to interview participants from three centres. Two of the centres were early childhood education settings. The other centre was based within a gym. I was curious about how this context may differ in terms of leader confidence for physical activity. I was also curious about the types of physical activities that leaders would value within the different centres. The centres were thoughtfully chosen in accordance with their philosophies being deeply embedded in the holistic wellbeing of the child. Participants from each centre included at least one pedagogical leader who was referred to by other members of the team as the director, manager, or pedagogical leader. All other members of the centres had leadership responsibilities and had led, or were

currently leading, structured or unstructured physical activity programmes in their centres.

Due to the depth of sharing that emerged within this data collection process, participation of the research partners is protected accordingly. All names used in this research are kept confidential. Participants are referred to as Participant A, B, C, D, E, F, G or H. Participants were all sent manuscripts of their interview transcripts and were asked to change any details if they wished to do so. Participants were also given the right to leave the research project. These precautionary steps were addressed due to the deep nature of this qualitative research design.

This research sought to understand the themes that emerged through the sharing of these stories, and the interpreting of these real life events. Through the use of this qualitative design, the research was focused on discovery and on understanding the perspectives of others. According to Merriam (2009) this methodology may offer the greatest promise of making a difference in people's lives. It was not the aim of the research to gather large quantities of data. Rather it sought to delve deeply into experiential interpretations of participants. Through the application of this qualitative methodology I was able to gather data that enabled me to view these phenomena through the participants' point of view. Literature asserts that this is the aim of the qualitative framework. That is, to see the world through the sharing of real life experiences (Kvale & Brinkmann, 2009; Merriam, 2009).

The phenomena studied elicited the methodology and consequential methods and tools used for data collection. As stated, this project aimed to understand the role that leadership plays in the implementation of physical activity. The data gathering looked specifically at shared leadership and shared decision-making within a team. Stories and real life experiences of pedagogical leaders were needed to understand the importance of leadership in regards to restrictions and opportunities within this field. Due to the nature of the inquiry it was decided that the methodology would come from a qualitative/interpretive paradigm. Once this was uniformly decided, the methods for data collection were ascertained. Triangulation unfolded in three stages. Initially interpretive interviews would be implemented, and validity would be achieved through reflective written documents. Then in the third phase a focus group would be facilitated to confirm or challenge any findings within the process.

The research design was somewhat flexible as questions were semi-structured. According to some, qualitative research methodology flexibility and change of design may actually be considered a valuable disposition in data collection - this is in opposition to quantitative research where consistency is the valued norm (Davidson & Tolich, 1993, in Robertson, 2012). According to Newby (2010), research is a creative process where the researcher brings together a plan of how to proceed and what to achieve. This design aimed to be somewhat flexible and creative whilst having a foundational goal of what outcomes were to be achieved. The flexibility of semi-structured interview questions was an invaluable method employed to enter the worlds of the experts within this sector. In this way I was able to gain knowledge myself to contribute through this thesis.

According to the literature, a variety of methods are considered relevant and beneficial for qualitative research methodology. Interviews, focus groups, case study, reflective statements and ethnography are a few examples (Mutch, 2005; Newby, 2010). Qualitative research design often includes a combination of multiple methods. This form of triangulation acts as a way to use multiple data sources as a way to create understanding. It produces validity in the data that emerges from the study. For this reason, this study is integrated through a woven approach to methods of data collection.

The main data gathered throughout this research project initially arose from individual semi-structured interviews. This data was verified by participants' reflective written contributions at a later stage. Finally, members of the interviewed group joined as a focus group to solidify and challenge the original concepts that had emerged in the earlier data gathering processes. It was my goal to establish trustful communication with participants prior to the process. O'Toole and Beckett (2013) advise that when working effectively within a qualitative methodology trust is essential. I gave potential participants information about the research topic and processes, then I explained why I was researching leadership within this context. Staff from each centre were also provided with a written information sheet about this study (see Appendix B). Potential participants were then invited to give their consent if they wished to participate. After contributing in the interview process, participants had the opportunity to volunteer for a reflective writing task. All of the participants interviewed also contributed through this written reflective tool. Finally, at the conclusion of data analysis, participants were invited to attend a focus

group (see Appendix D for a list of semi-structured questions from this data collection method).

In regard to the recording and collection of data, I used two recording devises to ensure that I had back up data should anything falter with one. Each interview lasted between thirty to forty minutes. Whilst collecting the data I listened intently and recorded thoughts as the interview progressed. However, my thoughts on the data collection resonate with Merriam's (2009) in that I didn't see myself as gathering the data as though it was 'out there' but rather selected data that was suitable for my research through attentive questioning, watching and reviewing. O'Toole and Beckett (2013) agree that data is not simply given to researchers but must be sought out, hunted for, and gathered. After the gathering stage I began to analyse the data.

In analysis of interpretive data, the most common form is thematic analysis (Mutch, 2005). Initially I immersed myself in the data that I had collected. I listened to my participants' recordings over and over. Then I typed the transcripts of our detailed conversations. Raw data from the interview transcripts was read multiple times until I felt like I was saturated in the data. After this I began notetaking and highlighting on the landscaped versions of the transcripts. The transcripts from the interviews were colour-coded multiple times to establish recurring themes that emerged from these conversations. A thematic chart was then compiled. This chart enabled me to observe the themes that had emerged within the individual interviews. It also provided a way to analyse the differences and similarities between each interview. In this way I could see the themes that had emerged across multiple interviews (see Appendix E). When a section of transcript did not fit into a particular category I kept it as raw data. Some of the raw data was synthesised into later created categories whilst some stayed strong in their stand-alone experience.

After analysing these interview data, I moved forward into the analysis stage as I compared the themes within the reflective statements. The reflective statements gave less data than the interview transcripts. However, the themes that had emerged in the interviews were validated confidently by participants. In thematic analysis of data from the reflective statements colour coding was also applied to recurring themes. The colour-coding corresponded with the codes that had been previously used for the interview

analysis (see Appendix F). This way the comparisons between participants could be seen. Furthermore, this coding method allowed for comparisons between the themes within the interview process and the written reflection process.

During the final phase of the analysis the themes within the focus group were drawn upon. These themes were then compared to the themes that emerged within the initial data gathering phase. During the final phase of my analysis I used a reflexivity method to reflect on and consider the themes that I understood to be emerging from the data. During this phase I had my recorder beside my bed every night. Sometimes I would wake up at 2am with a 'light bulb' moment and would record this before falling back to sleep. Throughout the whole analysis process, I was hunting for themes but I was also searching for dissonance and irregularity in the data.

The analysis showed reoccurring patterns of interpretation emerging from the data that will be discussed in chapter five of this thesis. Literature surmises that this is the usual journey a qualitative researcher will navigate "Findings are these recurring patterns or themes supported by the data from which they were derived" (Merriam, 2009, p. 23). When analysing these data, I became aware that the immediately identifiable themes of research are merely the parts that we can see. Conclusions may come from the field of connections that is not always visible to the eye. One of the less identifiable themes of this research emerged in the later stages of gathering data, that of baby mobility resources and contraptions. Another theme that was less identifiable was the need for a shared language relating to physical activity and leadership. Interpretive research methodology has been likened to a rhizome. A rhizome is a type of plant that does not have a single root but flourishes and survives through the connection of hundreds of apparently separate plants (O'Toole & Beckett, 2013). These roots are unidentifiable to the observer unless he or she digs deeper into the soil. This metaphor also helps me to remember that the findings of this thesis are partial and fit together like a piece of rhizome root within the larger field of leadership literature and physical activity literature pertaining to the early childhood education sector.

Presenting the work was more challenging. Deciding which treasures of participants' knowledge to quote proved to be a tough consideration. I wanted to share the voices and experiences of all of the participants in my study. However, I was unable to include the

mountain of incredible data I received in one thesis. I aimed to select the heartfelt accounts of all participants to some degree. These artful conversations have become the gems that enrich and enlighten this written work. They were a joy to hear and to write about and I know they will be a joy to read about also. Wellington (2000) also states that deciding which information to add to one's thesis can be a big challenge, but one that will certainly enrich the document. For this reason, chapter four was both challenging and rewarding to compile.

There are challenges that may arise on the road to writing. Youngs (2007) states that through the challenges of the research process there may be an unexpected cycle of security followed by doubt. As a practitioner, or academic at any point in our development, we may become knowledgeable in our own world. To achieve more, to move forward, to create more authentic understanding of the current world we live in, we must investigate and reflect. Youngs (2007) recounts his journey from practitioner into the deep realms of postgraduate study as follows: "After attending my first educational research conference I reflected on how my dependency on past experiences was insufficient as a means of creating agency in my new role" (Youngs, 2007, p. 99). He continues to assert that it is essential to let the research focus inform the methodology, "rather than having a philosophical allegiance to a certain research paradigm" (Youngs, 2007, p. 101). It was the aim of the previous chapter to illustrate how the research informed this particular methodology. It was also the aim to inform the reader of the journey that I took into the land of postgraduate research. The methods employed will be outlined in the following sections.

3.3   Methods

Interviewing

The research interview can be observed as a spectrum of designs ranging from small chit chat to in-depth sharing of conversational experiences. This type of data collection can be viewed as an interchange whereby the interviewer and the interviewee co-construct their understandings through a sharing of experience and knowledge (Kvale & Brinkmann, 2009). Interviews are suitable methods for reaching data that other methods cannot elicit: "Interviewing allows the researcher to investigate and prompt things that we cannot observe" (Wellington, 2000, p. 71). These data may include thoughts, values, perceptions and beliefs. The interview process throughout this research occurred person-

to-person. Merriam (2009) asserts that this process occurs in the form of a semi-structured conversation. This way the participants could be asked to verify their interpretation of certain words and ideas. Words such as 'activity', 'play', structured' and 'unstructured' were examples of discourse that I asked participants to clarify during their responses. This in turn led to a greater degree of validity.

This thesis has been informed by semi-structured interview questions. As Mutch (2005) states: "Semi-structured interviews have a set of key questions that are followed in a more open-ended manner" (p. 126). Merriam also asserts that questions are used flexibly when specific data is required from participants. However, the foundational questions were worded in a manner which was well thought through and easy for participants to understand. Within the boundaries of this project, feedback regarding interview questions was sought from my supervisor and later from an early childhood researcher. Finally, an Ethics Advisor and the AUTEC (Auckland University of Technology Ethics Committee) gave additional support with questioning and data collecting methods. This support proved to be invaluable.

During the interview process of this study the aim was to provide a warm and comfortable environment for participants to be able to contribute openly and honestly. Refreshments were offered to participants during this process. Semi-structured interviews provided the flexibility for experiential data to arise in authentic capacity. This semi-structured interview process also allowed relationships of trust to build with participants. I was honoured by the generosity of experiential knowledge that was shared within this project. The participants showed such trust that extended to friendship and I am eternally grateful for their openness to the methodology and consequential methods of data collection offered to them. It was our role as joint conversationalists to describe and then interpret the leadership of physical activity programmes experienced.

Reflective writing

The reflection process involved a semi-structured pattern that allowed participants to contemplate their previous responses and verify or modify these accordingly. The reflective statement allowed a quiet and open space for participants to think deeply. Participants could then record their notes in written form. It was asked that these notes pertain to leadership of physical activity in early childhood education. The sole

provocation for this process was the question given to participants: "What additional information or reflective thoughts would you like to contribute in relation to leadership of physical activity in early childhood education?" As a consequence, findings within the interview and focus group processes were given strength as they correlated with the written reflections provided at a later date.

The reflection tools in this research project were initially decided upon as a way for participants to create validity of their own interpretations. These interpretations included reflections about the leadership role involved in physical activity in early childhood education. After the interview process participants were invited to take part in a written reflective task. The nature of this task was open ended to allow for their authentic reflections to emerge after the interviews. All of the six participants who were involved in the interviews contributed at a later time with their written reflections. Their data is insightful, creative and positive. The focus of the interpretivist methodology is to understand the meanings that humans create for their experiences. The features of this methodology include understanding their experiences and interpreting their experiences. Savin-Baden and Major (2013) state that self-reflection can be used as a tool to gain these further understandings. The participants used their reflection time to gain further personal understanding. They also shared this new understanding with the project as a vehicle for reaching a wider audience. Comparisons of reflection colour codes provided some expected and some surprising results. These conclusions will be further explored in the discussion in chapter five.

Focus groups

Focus groups have their roots in marketing research. They were originally constructed in the 1950s to gather data on consumer desires, preferences and in the effort to promote particular products (Merriam, 2009). Shortly after, this method was also used as a social science research endeavor. In this group setting participants may be extended in their contributions as they hear what other people have to say. Merriam (2009) believes that focus groups work best when participants don't know each other, and attend within a group of six to ten respondents. She also warns that this is not a suitable method for subjects where highly sensitive information is sought. Within this study the focus group method was chosen as highly sensitive information was not sought. Rather in-depth interpretive experiences were pursued.

The focus group questions may be structured or semi-structured. According to Mutch (2005): "Focus group interviews are generally of the structured type with pre-set questions but [with] some negotiation of responses, depending on the purpose and composition of the group" (p. 127). According to the responses of participants from the interview process the focus group questions were modified slightly. Minor adjustments were made based on findings from the interview data collection tool. After reading over the transcripts with my supervisor, we came to the awareness that the original focus group questions were not sufficient. Being responsive to the sequential process is essential to the emerging data collecting validity. Due to the minor nature of these changes additional ethics approvals were not needed. For details of these modifications please see Appendix D.

This thesis was informed by data gathered within a focus group that consisted of the facilitator and four participants from an early childhood centre located within a gym setting. One of the participants within this group had a formal management title, one had previously been a leader in a children's gymnastics setting, and the other two had emergent leadership roles of leading physical activity within their centre. A study conducted by Gehris et al. (2014) concluded that focus groups were employed so that participants could respond to their colleagues' perceptions and experiences. The researchers believed that this method was the most effective for observing where consensus occurred and where disagreement was evident. The researchers however, also indicated that power relations may need to be considered before the onset of this technique. Within the focus group conducted for this study, participants responded to their colleagues' insights and views. Disagreement was observed initially with regard to apparatuses for infants. Consensus was reached within concepts of teamwork and shared leadership. The analysis of this data will be discussed further in chapter five.

This focus group was more than a compartmentalised group interview. According to the literature, the synergy of the group occurs from the interactions within the group (Wellington, 2000). The focus group within this study sought to add depth to the prior interviews. I found the focus group was a suitable method of choice as the participants stimulated each other's ideas and stories. Conducting a focus group was the natural progressive step in the research after the themes began to emerge from the interviews. The focus group provided a vehicle to follow through with these themes where the

additional interaction provided further insight. However, there were some limitations to facilitating this focus group. I found initially that it was straight forward to set up an interview with a knowledgeable pedagogical leader. However, facilitating a common time for a group of busy professionals proved to be more challenging. Another limitation within this method was the 'participation quota'. I hoped that the participants in this focus group would all feel comfortable to contribute to the conversation. All members did contribute. However, these contributions came in varying amounts. The validity of these data will be discussed in the proceeding section.

3.4   Validity

Qualitative inquiry must be valid. Some state that it must find and include credible outcome explanations (Savin-Baden & Major, 2013). However, there are some grey areas whereby the use of objective measures may be used to justify highly subjective methods. In America the qualitative research society does not use the terms validity or reliability, believing that these are positivist terms that are not compatible within the qualitative methodology (Savin-Baden & Major, 2013). The aforementioned authors question if a new ideology for the validity of qualitative data needs to be addressed. Some assert that a new language that includes reconception of rigour as one that emerges through reflexivity and reflection, interviewing and subjectivity may be one option (Savin-Baden & Major, 2013). This is an interesting debate and one which I'm sure we will see more of in the future as the qualitative research community continues to grow in New Zealand too.

A form of triangulation was maintained through the comparison of three different research tools. These tools were the interview, the reflective statement and the focus group. The reflective statement invited participants to co-construct validity as they could check then critique or modify their own responses in a timely manner. Another method used to provide validity to these data were also used, the participants were asked to verify their interpretation of certain words and concepts. One of these examples was the interplay between the words 'activity' and 'play'. To some of the participants these words had a similar interpretation. To other participants these words were very different. Asking participants to verify their understanding was beneficial to the validity of the data collected. It was important to check preliminary insights along the way as this research path was paved with various cobblestones to navigate in stilettos and sneakers. O'Toole

and Beckett (2013) suggest it is important to check the validity of provisional insights within the initial phases of the research process. During the modification of the focus group questions these provisional insights were critiqued. Preliminary, provisional insights changed with the emerging data from the interviews. At this point it became apparent that the study would benefit hugely if these questions were adapted slightly.

Regarding the interpretation process, research experts warn fledging researchers to be aware of some issues. One of these issues is oversimplification. This may include taking what is said at face-value. Sometimes when listing themes, the researcher may fit what has been said into these themes rather than let complexity grow. With this in mind it has been my goal to dig deeper into the garden of research and uncover a section of the roots of this research rhizome. As much as rough edges may be managed the reality is that not all data will fit into the designated themes (Savin-Baden & Major, 2013). As a keen, new researcher my experiences thus far have taught me that research does not have to fit perfectly into pre designed categories. Rather to create validity (or rigour) sometimes the rough edges need to be uncovered and transparent for the reader to also make their own meaning. In effect I believe that this adds strength to my research through the raw honesty of the data and my interpretation of them.

3.5   Ethical Issues

Ethical considerations are the foundation for authentic and justified research. Ethical practice must surround any research conduction. According to some, for the practitioner embarking on a research journey, consideration of the process, strengths and limitations, methods employed and ethically sound principles underpinning the process should be clear (Mutch, 2005; Nutkins et al., 2013). Jenkins (2005) argues: "The [ethics approval] process served to enhance my research by helping me to turn a vague conceptual proposal into a more solid, carefully crafted proposal with a clear timeline for the research" (p. 103).

The challenge of ethics approval was best traversed one-step-at-a-time for me. Some of the guidance that was welcomed included keeping the confidentiality of participants secure within this thesis and allowing only the researcher and supervisors to have access to the raw data up until the data collection process was complete. Participants were also given information on the research purpose and data collection tools (see Appendix B).

This information also included the estimated time that participants could expect to contribute within each data collection tool. It was asserted that all tasks were of a voluntary nature and participants could choose to participate in one, two or three of the tasks if they decided to take part in the research. Participants were asked to consider the invitation to join the project for up to two weeks. For those who agreed to participate, consent forms were given. Details of the research team were given to each member of the participant group also. There were many other ethical considerations to take into account. I was fortunate to research under the guidance of practitioners with outstanding ethical principles. The ethics advisor and supervisors ensured that I had considered all foreseeable ethical practice before I even took my first step into the real live research world.

3.6   Summary

A qualitative methodology was adopted as the response to the nature of the project. This approach enabled leadership of physical activity in early childhood education to be interpreted by eight research participants. Participants were interviewed from three different sites: two early childhood education centres and one early childhood centre inside a gym. Triangulation occurred through the employment of multiple study tools. Interviews were conducted with leaders of physical activity in these settings. A reflective written statement was offered to all of the interviewed participants and a focus group was conducted further along. Throughout this study ethical practice was upheld and all ethical considerations were comprehensively adhered to.

4 Chapter Four: Data Results and Analysis

4.1 Introduction

This chapter aims to provide the reader with information about the data gathered. At this stage no major discussions of the findings will be presented. A wealth of qualitative data was gathered from participants from three early childhood centres. Two of these centres are early childhood centres located in Auckland, New Zealand. The other is a centre that exists within a gym setting in Auckland. The data will be presented via two categories. Data from the early childhood centres will be presented. The centre that runs within the gym will be addressed as a separate category. Quotes from participants will be used throughout this chapter. Square brackets contain words or phrases I have used to summarise the participants' data. The words inside these brackets are my own.

There were eight participants involved in this research project. Four of these participants came from early childhood settings. The other four were employed in the gym centre. For the purpose of confidentiality all participants will be referred to as Participant A, B, C, D, E, F, G or H. All participants were invited to partake in the research because of their knowledge, experience and/or formal role within an early childhood centre. All of the participants had experience in leading physical activity programmes for children aged naught to five. Three of the eight participants were also in formal leadership roles. Six of the eight participants contributed through interviews and reflections. Two of these six participants, along with an additional two participants were also involved in a focus group data collection tool. A table is provided below to identify the range of data collected from the participants.

Participant	Experience	Qualifications	Ethnicity	Leadership role
A	6	B.Ed Teaching	Chinese	Leader of PA
B	10	B.Ed ECE	NZ European	Centre director
C	10	B.Ed Primary GDip ECE PGDip Ed	Filipino-Chinese	Leader of Brain Gym
D	5	BA Maori/Art History PGDip ECE	NZ European	Born to Move leader
E	10	B.Ed ECE	Indian	Centre pedagogical leader
F	28	Dip Tchg M.Ed	Chinese	Centre manager
G	5	Unqualified	Maori	Leader of PA
H	10	B.Ed ECE	Malaysian	Leader of PA

Participant Data

In each of the following sections interpretive data that emerged through the following themes will be summarised and presented:

- Forms of physical activity and holism;

- Language and *Te Whāriki;*

- Increasing the confidence of teachers;

- Motivating children to choose moderate to vigorous activity;

- Involving family through awareness;

- Resources and the environment; and

- Shared leadership and physical activity.

4.2   The Early Childhood Centres

The following data emerged from the participants' responses within the interview process. This section of the data results relates to the interpretive data given by leaders within the early childhood settings.

Forms of physical activity and holism

All of the participants spoke about the differences between structured and unstructured physical activity. However, their views on the implementation of physical activity varied greatly. All of the participants valued physical activity that was facilitated outdoors. This was often seen as an unstructured form of physical activity in early childhood education. One of the eight participants was against implementing structured physical activity.

> *Participant E: In our centre the physical activity is very, very unstructured. Setting up the environment for the emotional, intellectual, physical, holistic… it's not the outcome, it's the process. That is the ongoing priority… learning cannot happen without play. (Structured activity?) I would never do that, let me tell you first. I'm not into that… When you force learning you kill all the areas of learning. But when you leave it open the children will blossom.*

Two of the four participants stated that a blended approach was important in the early years.

> *Participant F: The huge difference is the children's role. If children are [engaged] in self-controlled physical activity, then that will be the whole body. Because children can construct their own [physical activity]. For this age they need that. If it's structured, it's mainly from adults. But as adults we forgot. We left that*

childhood behind. We've been trained. Our brain has been shaped in a certain way. So it has limits. Structured is more related to sports and games. They have rules. I want to point out, for me, these two are entirely different. Children have urges. They are born with that. They unfold through structured and unstructured physical activities. Mainly, for young children, unstructured. Because structured is made by adults. I would recommend a ratio, this ratio should keep changing with children's development and age. So for younger children unstructured should definitely dominate. But after four or five years old, structured can start because they will enjoy the game because they have developed and mastered the basic movement skills. They have confidence. But there is definitely a portion there. Because New Zealand children start school at five (years old). Once they start school the majority will be structured. Parents will send them to sports classes. So taking all of this into account. Unstructured physical activity should be a bigger portion. When people say unstructured some people think that teachers have nothing to do with it. No. Wrong. You need to provide these things that allow them to do the unstructured physical activity. We need to observe.

Participant A: I think structured is something like you give them certain types of rules, you set up a certain target, or mission they have to complete. An example is if we're going to do a run. The children are supposed to finish this distance or journey to complete this structured task. Unstructured is more free style. For example, we might collect certain things. For example, if you go into the woods, children could collect different types of plants. You could recognise and name them. It doesn't matter what type they are collecting; they can go anywhere in a certain area. They just need to be aware of what they are looking for. At the same time, it's physical work. There are always certain activities that are ambiguous, in-between. I think in New Zealand, kids already have much more freedom and opportunity for physical activity in comparison to other countries. The philosophy here is more learning through play. In general, early childhood education organisations are more open-minded. But if we have Playball [a structured form of physical activity] a couple of times in the month it would be an additional credit I think.

Participant C described the various forms of physical activity in the following manner.

Participant C: Well, with structured you have a plan. There is a curriculum that you follow. This is what the children need to do to get physically active. But to me unstructured is more like; let's go for a nature walk and they just do whatever they want to do in the boundaries of safety... parents want both the structured and unstructured physical activity.

Participant A asserted that although a blend was important, parents and some staff members would see structured physical activity as being more important than unstructured physical activity. She stated that this may be due to a lack of understanding regarding the learning that is occurring through unstructured physical activity.

Participant A: It might depend on the parents' occupation but parents might not understand why we carry out learning in unstructured ways. Every family has a different set of rules. If we ask them to do something in a certain way, then they might not always understand why.

Language and *Te Whāriki*

All of the participants from the early childhood settings spoke about the importance of teaching physical activity in a holistic manner. The participants also referred to the holistic nature of the national curriculum *Te Whāriki*. A concept that was referred to by participants in the early childhood settings and the gym settings was 'ako', or reciprocal learning. This word is used in *Te Whāriki* to signal the importance of all members of early childhood education settings, learning from and teaching each other. This may include children being leaders of learning and helping their peers, teachers, whanau or management to become aware of new insights and knowledge. Participant E stated that her understanding of *Te Whāriki* did not align with structured physical activity in the early years.

Participant E: Teachers and children co-construct that learning. We are learning together…I don't think [structured physical activity] links to Te Whāriki. Te Whāriki is about giving choices to children and supporting their learning. Because it is structured physical activity. There is a person standing there who is telling you 'there you go run get the ball, you throw the ball this way.' Why? As a child why do I have to roll the ball the way that you want me to? If the ball is given

to my hand as a child I want to explore it in my own way. Just give me the ball and then it's my job to decide how I want to learn about it.

In regard to the concept of 'ako' and reciprocal learning, participant A discussed the physical activity leader as being an 'assistant' to the child. She also discussed learning from colleagues several times in her interview.

> *Participant A: So for us, as the child's assistant, or the one who sets up the activities, it's important to talk with colleagues and managers because there are a lot of things to take into account.*

Participant C spoke of the diversity of understanding of structured and unstructured physical activity. She stated that this may be due to the ambiguity of the implementation of *Te Whāriki*. She also asserted that a specific guideline for physical activity would help her in her implementation of physical activity. It would also help her in her justification of specific forms of physical activity to parents.

> *Participant C: In early childhood education we only have the curriculum. Maybe some preschools have more but ours didn't… But when it's written [in a curriculum document or policy form] and then the parents complain [about the way you do or don't implement physical activity]. You can say "well there's the curriculum, you can see it."*

Participant C understood *Te Whāriki* to support both forms of physical activity. She stated that the curriculum aligned with both unstructured and structured physical activity.

> *Participant C: I think [structured activity] is in line with the principles of Te Whāriki. I think it's under the strand 'Exploration.' But it doesn't matter if it's structured or unstructured. What really matters is that they are moving learning.*

She also spoke of the holistic nature of the curriculum.

> *Participant C: Well, not just moving and running but focusing on health as well. Physical activities that include healthy food, and healthy minds and bodies. If you do physical activity but you're not healthy, it's not enough. It should include the*

whole thing; emotionally, socially. Like what we learnt from the early childhood approach and the curriculum. It is the whole thing. It is the holistic approach to physical activity.

Some of the participants from the preschool settings understood *Te Whāriki* to be a curriculum that is largely open to interpretation. It is a curriculum that could be adapted to fit the philosophy of any early childhood centre. One participant used a simile of a jellyfish to illustrate her point:

Participant F: I think that Te Whāriki is like a jellyfish. You can make it go anywhere. But I think it's okay. We have the basic structure in the curriculum. But it can fit into any model.

Increasing the confidence of teachers

There were varying levels of espoused confidence in regard to leading physical activity programmes within the preschool settings. One teacher's interpretations of her small and non-athletic appearance was that the children may not be inspired to participate to such a great capacity as they might be with a stronger or bigger coach.

Participant A: I think in terms of physical activity, I'm not particularly physical. I've seen the Playball people come out and do these activities. But it's not just from how they organise it. It's also about their appearance. I think they appeal more because they look athletic too. Those coaches from their appearance I think they appeal more athletically. I think for children. If that's what they're doing, either a physical education class or any physical activity I think they learn from the coaches and gain more confidence from the appearance too. For me, I am just petite.

Participant C also stated that she was not confident to implement physical activity programmes. She would do so on a regular basis but she still lacked confidence in her ability to lead these programmes. She agreed with Participant A that outsourced structured physical education coaches in early childhood centres are beneficial. She stated that these coaches could help her by role modelling ways of coaching children in this sector. She

also believed that a guideline curriculum specifically aimed at physical education would be beneficial to her practice.

> *Participant C: I'm not confident actually. I mean I try to be but you know when I was teaching at the preschool we didn't have (structured) planning in physical activity. We did have a routine but planning is like what I did when I was teaching in primary. We didn't have that. It was more structured. We planned how we did it. Like how to use a ball; throw it and kick it. But in early childhood we don't do that. We help them. But in primary we write everything. I think [outsourced structured physical activity programmes] are worthwhile because the children are very active, happy, they are enjoying it. They are developing a sense of team work and co-operation. They are helping each other. That's why I wrote the list of all the things [the instructor would teach]. I thought I might do this. I saw that it was working.*

The other two participants stated that they did feel confident in leading physical activity in some form. Both of these participants had official leadership titles. This may have added to their confidence in implementing these programmes. These two participants had two attributes in common; they both stated they felt confident to lead physical activity, and they were both in formal leadership roles. They also both spoke of the importance to follow the child's lead, have faith in their abilities and to literally get dirty in physical activity with the children.

> *Participant E: I personally feel I am confident. Scaffold children with the resources they need to support them. Confidence is all about how well you can take your children along and support them in their interests. Then go with them, get to their level, create with them. It comes from the children's interests. But I have to be confident and comfortable that yes I help and scaffold children at the right time and the right moment... End of the day if I don't see paint on my clothes I think "have I not been to their level?" Then they come to give you a hug and they rub their nose on you I'm so glad "you made my day darling." That's what I love. I love it. End of the day when my clothes are grubby, dirty with paint oh I love it. I feel I am teacher. I was there for my children.*

Participant F: Yes, I'm really confident to lead physical activity because I really understand the children's needs. For example, at the preschool we do the duck, duck, goose game. So this for me is structured because it has rules. But now look at the babies. We have a little wooden trolley. They go up the ramp and they go down. So this is unstructured because that's what they need. Sometimes we will say 'oh don't go up there'. But then they mastered that and they wanted to go around. So this is unstructured because they can choose where they want to go. Confidence comes from listening to the children. From observing too. By getting down to the children's level and after changing my view of the children. This gave me the opportunity to see how capable children are.

Yes, I have done the Te Wheke workshop twice this year too. It is my passion. I can work with people from my heart… You know Asian children who have just arrived from their homeland are sometimes told 'you can't get dirty.' Regardless of this, these are the children that spend most of their time in the mudpit and in the sandpit. So for me, children will still maintain that connection with nature. The desire and the urge. So once the structure of the ECE setting gives them opportunity to get back to nature, they're there! The little girl whose grandfather told her 'you can't play there. You will get dirty.' Regardless she still went there. She asks Mum to come back for the school holidays now. They need it. The desire and the urge. You need to go outside. Even in the winter time. There's no such thing as bad weather, only bad clothing.

Participant F also acknowledged that some leaders and teachers may feel less confident in allowing children to take calculated risks. But she asserted that it is very important that children are allowed to take some risks in their physical activities.

Participant F: We have feijoa trees in the toddlers' room. To begin with, the team, and other adults, were not confident for the toddlers to climb the trees. But they do! Even two-and-a-half-year-olds can climb. I think because we have the philosophy to let children move around freely in an unstructured physical activity environment. Our teachers, our team, even me, saw that they can do it. So then no one panicked. But I think if new staff came they might panic. So again, I think it's

the experience. Be in the environment to witness how children are capable in this unstructured environment.

The participants also commented on the importance of professional learning and academic development to increase confidence through knowledge and understanding.

Participant F: Constant professional development is so important. Training provides the basic knowledge. The Master degree teaches you how to research. So this helped me to be a researcher. So I use a research lens to do my professional development.

Participant E: Within my degree I did one paper on physical activity but to be honest I don't think I understood it very well then. Now I can explain it better, after twelve years of working experience. As a teacher you learn and you grow every day. Now, you can tell me these words "physical activity" or "nature" and I know exactly what you're talking about. When you're studying you're just taking bullet points or highlights. But when you go and work with the children that's when you learn and do things according to children's needs. Every centre has its own philosophy, its own way of doing things.

Participants also recommended that passion and confidence can stem from leaders' own love of physical activity. For instance:

Participant C: Even me I'm fifty-four but you know, I do exercise. I go to the gym three times a week. Oh yes! I mean I know for myself. When I was teaching at the preschool I stopped going to the gym and I thought "my gosh, I feel like I'm eighty years old." Now I'm back at the gym again and I can feel the difference.

Teacher confidence was not the only theme that emerged relating to confidence. Engaging children and cultivating their confidence was interpreted as a key factor for best learning outcomes in physical activity. This theme will be presented in the following section.

Motivating children to choose moderate to vigorous activity

According to the participants from the early childhood education settings, motivating children was necessary due to some children's preference for sedentary behaviour, or a

perceived lack of confidence in their own abilities. The participants from these centres contributed solutions for opportunities to inspire children. Two of the participants, participant A and participant C, suggested that outsourcing professional, experienced coaches as athletic role models for children was beneficial. They both agreed that getting tips from these coaches was one way to improve their own leading skills too.

> *Participant A: I think they learn from the coaches and gain more confidence from their appearance too. It would attract parents to invest for their kids at your place. For the unstructured activities they don't get to really see that until they've been at the centre for a while. But if we have Playball a couple of times in the month it would be an additional credit I think.*

> *Participant C: That's why I wrote the list of all the things that [the instructor would teach]. I thought I might do this. I saw that it was working.*

However, one of the formal leaders of the early childhood centres stated that outsourced physical activity coaches only restrict young children in their freedom to express their physical bodies.

> *Participant E: Personally I never agreed and still do not and I will never. Because it is structured physical activity. Give that ball to a three-year-old and just see what they can do. They can imagine that it's space, they can imagine that this is my rocket ship, they can imagine that they can roll it up high and down. They can kick it.*

Another leader stated that she would employ outsourced structured physical activity coaches as a method for encouraging male role models into her centre.

> *Participant F: I'll tell you how we decided to do an outsourced physical activity programme. It was nothing to do with physical activity. It was about male role models. Because you know, these boys (the instructors) are great. All the children love it. One of our little girls told me, "I love the coach". It's not the programme, it's the coach. It's not the activities, it's the instructor.*

Other solutions shared to give children encouragement and confidence included giving children the space to develop their skills in a non-judgmental environment.

> *Participant C: I try to be a role model. You have to show them from the beginning. With my own children too. It's like reading; you can't expect them to just read, they have to start right from the beginning. That's the hardest thing in the education setting. There are different children from different parents. But you can't just say, 'let's go and do this.' Because some children won't because they are not used to it. If they are quite heavy, they might be embarrassed because they might be quite slow. I try not to embarrass the children, because we are all different. You don't expect children to do what they can't do. But you can model it. Maybe one day they can do it. Encouragement and helping them to have confidence. Because a lot of children don't have confidence in their physical ability.*

> *Participant E: I remember I was so keen for her to be confident to jump. I was doing my best at that moment. I was holding her hand and saying "you can do it; you can do it". But then later on I asked if it was the right thing to do? I had a good chat with my manager later. This was many years ago, as I said I was very new in the field. You learn as you go along. Then my manager said that it's not a good idea to insist that the child should jump because that child has to be confident inside and when the child is ready that child will do it. Even for children sometimes they have to build their confidence slowly. Instead of telling her to jump you just give her time and space and just sit with her. When she is ready, she will join. So I remember doing that now and I thought "Oh dear did I do that?"*

The importance of allowing risk-taking was also agreed upon by participants C, E and F. This risk-taking was seen as a form of exploration and learning. Participants agreed that it is important that leaders of physical activity are risk aware but not risk adverse. The right level of risk-taking would challenge children to move forward in their development.

> *Participant C: I believe that it's our responsibility to keep them safe but also let them take a risk. Otherwise what will happen if you don't let them, well they need to explore and climb things. Like our manager said "If they get bruised that's*

alright because that's part of learning and development". You can't wrap them in bubble wrap or cotton wool.

Participant E: Of course we have to be really careful with the safety issue. If there are resources around, we have to make sure that children use them safely but at the same time we have to let children take some risk. For example, there is a long plank at my centre. My children are really interested in construction. So before I [introduced] the logs we had a chat in the morning at our meeting. We talked about the safety issues. We talked about how important it is when you want to transport from one place to another. It's very important as a teacher that we trust them. We let them take certain risks. We make sure that we are there for them. To protect them whenever we need to.

Participant F: In this physical activity, whether it's structured or unstructured. You always need to take some risk. Everyone's risk-taking is different. Children won't like it if the risk is too high. They will feel that they can't achieve it. But if it's too easy, their urge won't be satisfied. A baby can sit, then he can stand. So if you stand him up by himself he can't, so what can he do? He will lose interest to try. It's important for adults to assess the risk-taking too. I think the environment setting should always have some risk to challenge us. It's the same for adults. You need to move forward. Then at least you will try, then I find you can put the ladder up too high sometimes.

Whist focusing on the process not the outcome was also highlighted by participant E she interpreted this focus as a method to encourage children to engage in more vigorous activity because they could take all the time they needed to revisit activities and gain skills and confidence along the way.

Participant E: It's not the outcome it's the ongoing process. That is the priority. So if we set up something this morning we might end up doing it for the whole week. It's there for children to revisit. Then they can make changes if they want; addition, subtraction of materials. We make sure we observe children and notice. Then we pass it to each other. We share it with other team members. "Hey I noticed this. Do you have any ideas for that? Or plans?"

Role modelling physical activity was of key importance for participant C as well. She stated that children would observe adults in their involvement of physical activity too. The participants from the gym setting agreed unanimously with this statement also. These statements will be presented in the following section of this chapter, The Centre in the Gym.

> *Participant C: It's role modelling too. We can't expect our children to be physically active without role modelling it to them too. You have to practice what you preach otherwise there is no point.*

Finally, resourcing for the social safety of children was asserted as a necessity for encouraging and motivating children. Leaders are aware of resourcing for physical safety, but social safety and inclusion must be considered for this age group also.

> *Participant E: For example, when playing on the log the older help the younger children to climb across. That is the children taking care of the emotional; relationships, turn-taking, supporting each other, social skills and the physical skills get developed at the same time.*

> *Participant F: The nature walks are the same. We plan for their safety. We plan for how to take them to this environment. Plan for the support of children on their very first walks. To include them. They should not be left out. People should know; unstructured physical activities does not mean teachers have no responsibilities at all. Actually, they may have more responsibility.*

Participant F also asserted that listening to children was vital to engage their inspiration.

> *Participant F: Whether you are really listening from the heart is what matters. You can't pretend to a child that 'I'm listening to you.'*

Involving family through awareness

Participant E asserted that we all have the responsibility to lead and inspire children in their physical activity. This responsibility lies with educators, health providers, family members and the wider community.

Participant E: It is all of us. When children are in our care at the centre it is the educators' responsibility. At the same time, we need a partnership with parents and the community. It's a mixed responsibility. Because our children are our future. It's very important that we all come together and aim high for our children. We must be on the same page.

However, there is a perceived lack of awareness of the importance of physical activity by parents according to participants. Parental desire for reading, writing and arithmetic is higher on the list of goals for many parents according to participants A and F.

Participant A: It depends on the individual. Some from an academic background are aware that when their kids get to a certain age they should be able to have certain knowledge to prepare them before they start school. For those parents they would prefer children to learn academic activities.

Participants A and F also talked of the need to educate parents regarding forms of physical activity that are more holistic in their nature.

Participant A: Some parents might not understand why we carry out learning in unstructured ways. In discussion with the manager of an early childhood education centre where I worked, we talked about the sandpit. How playing in the sandpit is not just playing with sand. There are other things that the children can do with the sand. For example, making a sand castle stimulates the artistic capabilities. Then for the monkey bars and the swing, it helps their body coordination, develops their teamwork and sharing.

Participant F: Yes, that's exactly it. Some parents come with us. But the majority of parents [are influenced by] modern society. When thinking about preparing for school they are only thinking about the knowledge. Literacy includes attitude, skills and knowledge. But lots of parents prepare for just knowledge. But we are telling them "they can write their name, they learn this knowledge through their playing". They develop the attitude. Competence to take on a new task and risk taking are important too.

These participants and others stated the necessity of educating parents regarding the importance of physical activity for health and wellbeing. Participant C also spoke of parents, especially mothers, being overprotective at times. These parents were referred to as 'Helicopter Mums.'

> *Participant C: Some parents would like their children to be part of the activities. But I noticed that some of the parents would worry and say things like "oh where are you taking my child". With the nature walk and safety. They were worried rather than thinking "oh my child will get fit". You can't wrap them in cotton wool. But there are some parents who I call Helicopter Mums, always above looking over their children with their propellers. But you can't avoid that. Especially as a mother. It's really important for them to keep their children safe.*

She also asserted that leaders of physical activity in early childhood centres need to be honest with parents and share their knowledge of what is good for children's health and wellbeing.

> *Participant C: But, it is not just physical activity. It includes healthy eating and also sleeping early. Actually I offended one of the parents because she said "The teacher in primary didn't put my child up to the next level." I think I offended her because I said "Well I think you better put your child early to bed." Because previously she told me that she puts her child to bed at 10pm. So I told her that she can't do that. Her child will fall asleep at school. That's probably what happened and then that's probably why the teacher decided that. Then suddenly I said to the manager "Oh I think I offended her!" Then the manager said "Don't worry. That's good. At least you told her".*

Participant E recalled an anecdotal interpretation of her students, two young siblings, getting involved in natural physical activity with their Mum and Dad at pick up time. She gave this story as an interpretive method to encourage parents in their implementation of physical activity with their own children. She also talked of the importance of communicating regularly with the children's families.

> *Participant E: It's really important that as an educator we make learning visible. We have to make sure that our parents are informed and are aware of what is*

going on. For example, if there is messy, clay play. Not all parents will understand what is going on. So it's really important when we have that kind of play with hands and feet. When we started the park visit it was only the older children going. I really wanted the younger children to go to. So we had a chat about that. They are still in nappies but it's absolutely alright. So we started that and the feedback we got from parents was amazing! The parents were so delighted that children could get the opportunity to go out of the centre, build a relationship with nature, have that time in a safe environment where they could run around, climb trees, look at the birds and nature. So parents value, respect and appreciate that. We have a parent who has children who are siblings in our centre. So at the end of the day the children come together and the parents help their children to walk on the log. So those kinds of physical, natural activities parents really like that.

Participant F asserted that there are many ways for leaders of physical activity to promote the importance of these pursuits to parents and other family members. One of her reflective ideas was to extend information to families via social media tools.

Resources and the environment

Participant C and participant E both spoke about limited resources being a barrier for leaders of physical activity in early childhood education.

> *Participant C: When I try to set up on the deck I try to do different levels. So they can go down and up. If they could go under, then I would do that too but we don't have those resources.*

However, both participants gave their interpretations of how these budget limitations could be overcome by creative resourcing.

> *Participant C: I mean you have to improvise all the time in early childhood I suppose. Especially in early [childhood]. I mean in primary they have sets of different [resources] but in early childhood you don't have lots of those. So I think that's why most of the teachers in early childhood are more creative than other professionals. We have to be. We have to think of those things. Otherwise how will the children learn?*

Participant E: So our project in class now is 'Nature and Us'. We sent an email to parents to ask them if they could send leaves to school with their children from their backyards. It was amazing! The very next day children and parents turned up with leaves and sticks and stones. So it's all about parents' involvement. Getting in touch with the wider community,

Three of the four early childhood based leaders of physical activity commented on the benefit of having outdoor equipment. They also all spoke about the opportunity to resource for physical activity from nature.

Participant C: I try to look at what the children were interested in previously. So I think about how I can extend their learning. I remember there was a boy who grabbed lots of leaves. He kept running backwards and forwards and I thought "Well this is good exercise". So he was doing flower arranging. So to encourage him to do more running I said "Those are the plants that are good", then pointed to another area and said "Those ones too". So he kept moving to different areas. At the same time, I got some for him as well. To show that I was supporting him. Gardening is also a good form of exercise and teaches them how to eat healthy as well.

Participant E: Parents love how beautiful our unstructured physical activity is; that opportunity to explore. They get the freedom to choose materials and resources in the park; sticks and bark.

Participant F: Many parents value nature walks. They will keep asking for it. The modern society limits our natural environment. But in the natural environment, someone put a swing up. They put a stick on that. The children tried it and loved it. They organised it and took turns. Sometimes we have to use the manufactured equipment if the ideas come from the natural environment. But if the natural environment has it then go there instead. I tell you, we haven't gotten rid of our monkey bars because we haven't found anything from the natural environment to replace it yet. But there were a few accidents in the past from the monkey bars. So you know I just think men-designed is still not 100% safe. Even with impact around it and when it's at regulation heights, there have still been accidents. The nature walk has been fine.

Messy play was also viewed as an opportunity for physical development.

> *Participant E: For example, our children are interested in sensory experiences. The younger children really need opportunities for that hands-on experience. To feel and touch the texture and explore with their whole body so we put the huge table outside. We put no chairs around. We put the paint in the middle of the table and let children explore with their hands. In a few minutes even the teachers and the all of the children were enjoying! The paint was all over us. It was so beautiful. That's children getting the opportunity to explore and learn. Of course when they do that they are getting hand-eye coordination, exploring with their hands. At the same time, they're making sense of what is exactly going on. Then the teacher is going to their level. It's so inviting for the children. It's play and this is a big part of learning.*

Participant F also spoke about choosing resources that were safe and age appropriate. It was also asserted that the environment must be manipulated to ensure safety and functionality.

> *Participant F: So in the babies' team teachers put all their observations together and their examples and they find out what children love. For example, they found that some of the trolleys were not safe for them because they would flop over when they went fast. So we got these other wooden trolleys. The size suits the babies. It's great. So this is our planning for the babies. We haven't planned the route, we just put them there. We have four trolleys so that all children can do it. But because there are four they also learn how to avoid each other when they are pushing the trolleys. They learn space awareness. We remind children to watch out. We don't hurt others. That's the rule. But they are entirely free to take the trolley wherever they want. Same with the tree. We chopped the tree. We made it more steady and we put a fence up. So that was our plan. We noticed that the children could go up really high. We were worried because the trees grow over the fence. But we had safety netting. That was our planning. Like our bamboo tunnel. New Bamboo shoots came through. So we realised we needed to chop these out. We wondered why aren't they playing there anymore? So from our observations we went to cut the shoots away. Then after that they went inside*

again. The nature walks are the same. We plan for their safety. We plan for how to take them to this environment. Plan for the support of children on their very first walks. Also what material is suitable for them, not too hard but also has some challenge for them. So you need to do lots of observation and monitoring.

Shared leadership and physical activity

These leaders of physical activity all spoke of shared leadership. One of the participants in a formal leadership role in her centre along with two of the teachers interviewed agreed that shared leadership was indeed very important in the early childhood education setting. Participants A, C and E spoke of the importance to include other professionals and family members in shared leadership for team decision making, risk management and programming purposes.

Participant A: Whatever I decided to organise I would ask other teachers and managers opinions on my plans. They have other perspectives on this. Feedback from parents is important too. Parents should feel comfortable with the programme.

Participant E: I'm so proud of our team. We are awesome; amazing. Every morning we spend ten minutes discussing a plan for the day. We discuss what we have noticed and observed the day before. We share with each other, what our plan will be for the day both inside and outside. It is all of us who are responsible for encouraging physical activity in young children. When children are in our care at the centre it is the educators' responsibility. At the same time, we need a partnership with parents and the community.

Participant C: Bronfenbrenner says it's firstly the parents, then the immediate family, then the community. I think it's important that anyone around the children should be involved with helping. But I think the main people should be the parents and the teachers. Yes, and everyone is connected. It doesn't matter if you know that child. Everyone is connected. Your community, your country. Everyone should help each other. Because otherwise what will happen to the children if you don't encourage them to be physically active and to go and develop into confident and competent children.

The other participant who is also in a formal leadership role herself asserted that sharing leadership with other professionals in the wider community is essential.

> *Participant F: I want to share with you, for our society, in early childhood education, health professionals need to play a bigger role. Parents listen to them more than they listen to us. So at this stage Auckland society needs them to voice-out more. Like for going outside. We get parents saying "Ah they're not well, keep them inside". Well we get health articles and we tell them "Actually to stay inside is worse, go outside to kill all the bugs". So we need more help from health professionals to support that, for the modern society parents. At this stage they should play a bigger role. From research, Plunket nurses. So I think pedagogical leaders need to do more for parents. Maybe by [holding] workshops for parents. [Informing them] "Come to us". In their training also, they should not only be taught pedagogy, but they should be trained in health knowledge too. I think that would be beneficial to change the societal attitude. In their three years of training, they need to learn so they are confident to tell the parents. Things like "you get more bugs from being house-arrested. You need to go outside. Even in the winter time". There's no such thing as bad weather, only bad clothing.*

However, Participant F also later continued in her reflective statement she stated that shared leadership within the centre walls only works effectively when all members of the team are on the same page.

4.3   The Centre in the Gym

Forms of physical activity and holism

Both of the participants interviewed from the gym team had strong philosophies on the importance of implementing physical activity that is holistic in nature and that addresses health and wellbeing in every sense.

> *Participant D: I think it's really great to see kids getting physical. To see them getting involved in physical activity. I know that it's good for their wellbeing and their learning. So to express that to parents and to get them on board with that. Because they're holistic beings, with their learning in any area of their development. Whether that be socially or speech or understanding of concepts in*

science and math, pre-literacy. That's through observation, but also a belief that I have as a teacher and a parent: That we are not segregated into compartments. We actually all fit together as one whole being and of course one part is going to affect another. I think kids can be improving in other areas through learning physical development. Getting physically active definitely supports their learning in other areas. Gaining confidence in any skill. Or being challenged with something new is going to support you in other areas too, because if you can do that in this area then you can try something new in another area too.

They also both asserted that outsourced structured physical activity is a valuable tool for promoting the development of physical and other skills in preschoolers. However, they both also commented on separate occasions that insourcing was a better plan from within a gym environment.

Participant D: We had a group that came in and taught ball skills too. I think that was valuable because there's a whole other layer when you come into that centre. If my skill base is ball skills, then I'm going to be teaching all that. I'm going to bring all the right equipment that makes it easy for the students to catch. I think it's actually really good. Budget-wise maybe not so much because it can cost a bit to outsource stuff it depends how valuable you think it is. If you want to develop your team, we're going to be inspired by what's being shown. It may create interest in the children that you can then follow on with and if you've watched the games or participated in the games you can possibly help lead those again or at least get the resources out for the kids to get into it again. I mean, you're never going to teach the same thing again. There's a lot of energy that goes into that. When you do Born to Move [a structured physical activity programme], you come in and you're like "Whoa!" Then you yoga them all out [Sic]. Then you chill. Then you go home. But you bring a lot of energy with that. You couldn't run at that pace for a whole day, at a centre as a teacher. I think there's something to be said for the energy and enthusiasm and knowledge, the professional level when people come in. They do it in schools too. So I think there's a place for it. I think it's valuable. It can spark stuff off within the centre that the parents may become aware off. The kids certainly enjoy it and if teachers have been inspired will join in too.

Participant B: I wouldn't outsource because I can insource. But at a day-care I think it would be beneficial. Actually I think it would be more beneficial to upgrade the teachers. There are people who come to centres like Tiny Tots. They just seem to pop up everywhere.

Their philosophies on the importance of physical activity were largely synonymous, although their conceptual frameworks of structured and unstructured physical activity were slightly different. These interpretations were shared later within the focus group too. In the interview stage participant B asserted that structured activity could actually be structured by adults or children. Participant D interpreted unstructured physical activity as child-led play.

Participant B: Structured physical activity to me has a set programme or it might be a game. It's structured either by the teachers or the children. Sometimes children come up with their own games that can be quite structured. Classes like Born to Move are structured. If you were to do an obstacle course; to me that's quite structured. Running races too are quite structured. Unstructured physical activity may include climbing, swinging, anything that they're doing by themselves that they're using their fundamental movement for.

Participant D: Unstructured is like child-led play. Or child led interests. So if they want to go and race around on the bikes. It's really cool to watch them when they develop something new that they want to do with their bodies. Or if they get stuck on the ladder half way up and you say "well what are you going to do about that mate?" They find a solution to that. That's unstructured but assisted. Structured is more like "okay, we're all going to do some jumping today." You have an intention. Or the child has had a particular area of play that they're interested in. For example, I remember we had a little boy and he was two and he was interested in jumping off our stage. We decided that we'd get a mat, so he wasn't jumping straight onto the ground. To keep it safe. Then other kids got sparked by that interest. But others were challenged by it too. It led to a whole lot of exploration around that.

Another theme that was highlighted in these interviews was *Te Whāriki*.

Te Whāriki

Participants from the gym centre spoke of *Te Whāriki*'s links to both structured and unstructured physical activity.

> *Participant B: I think structured physical activity does align. I'm not really into that real structured play. So structured play for me is quite loose in a sense. For this age group. Physical wellbeing. For the babies it's about being free to move and developing their muscles. Developing their fine and gross motor skills.*

When participant D was asked how structured physical activity programmes aligned with *Te Whāriki* her response was:

> *Participant D: Like Born to Move? It would be tinana, it would be the mahi tinana. The physical, I think that's part of it. It would be 'ako' [reciprocity: to teach and learn in shared learning moments] because structured involves utilising my knowledge base to share with the child. Then also being open to them returning to me where they want that to go. Or showing me something that I may not know. It's joint learning. There's planning in there too, planning, assessing and re-evaluating how that went and how you'd do it differently next time. But always keeping in mind that it's about the child. That they participate in that and that they become empowered by what they want to contribute. It's not just from a teacher's perspective.*

Again, the concept of 'ako' came through in an interview with the gym staff as it had done with the other early childhood staff also. Finally, in regard to risk taking in physical activity participant D asserted:

> *Participant D: But in Te Whāriki, Te Whakamana Tamaiti [empowerment of the child]. You actually empower them to develop a sense of their own abilities and capabilities when you give them the freedom to make that assessment themselves.*

Increasing the confidence of teachers

Participants from the gym environment espoused that they felt confident and capable to lead physical activity programmes at their centre or in other environments. However, they

agreed that lifting teacher confidence and skill levels was vital to keep the learning outcomes of young children high. Participant B stated that being risk aware but not risk adverse was a key to creating confidence. She also said that it is necessary for those leading physical activity to engage in professional learning and development. Finally, she asserted that having faith in children could raise the confidence of leaders and teachers.

> *Participant B: So, prior learning; I've done a couple of professional development courses on physical development. So years ago I went on this great course, this guy (the facilitator of the course) was an ex-army person. He said "back in the day I remember I had to climb ropes and there was a lot of physical activity in our daily school lives". He noticed that that had 'dropped off'. Schools weren't really doing that stuff anymore. So he'd done all this research and decided that the best place to start it would be in early childhood. So he had all these different skills and techniques of how to get children involved with different activities. Balancing on ropes, and learning how to jump properly by bending their knees. So taking it right back. Just having that knowledge "Oh wow, so you can balance on a rope and later you can balance while blindfolded". Most of it was structured learning but fun at the same time. I think that was the start, just having that knowledge. Then just trying all those different things out. Then through the years learning off other teachers. You know, things that they used to do. I'd think "Oh I don't know about that", They'd have kids jumping off big boxes, through hula hoops and I'd think "Oh that's a bit dangerous". But the kids did it. They were fine with it. Just that risk-taking. I think the biggest thing is just giving it a go. A lot of teachers are just scared to give things a go. It's fear of failure. Fear they're going to set something up and none of the kids will want to do it.*

She also stated that having fun and being silly with the way she implemented activities gave her confidence.

> *Participant B: Just from years and years of doing it, and not being afraid to look stupid or silly. Not being afraid to be the only one dancing. Because the kids will quite often just watch you first for a long time before they join in. So knowing that, means that you can continue doing that without thinking that you're failing if none of the children come and join you straight away. Because they're actually*

watching you before they come and join in. Then if it's fun enough, then they'll come and join you. Or if they feel confident enough that they know some of the moves then they'll come and join you. Just give things a go. Kids will love it. If not, then you'll know. You've just got to take it on the chin.

Participant D stated that real life experience with leading physical activity was the key to developing greater confidence.

Participant D: I think it's just living life. I'm a short-term teacher in terms of how long you could've been teaching. But, I think being a parent is a massive influence in good teaching practice. Just having that knowledge of how to deal with children. You gain such capabilities through that that go alongside. As a parent there's no health and safety regulations and restrictions. "Come on, we're going to the waterfalls. I can carry you down". They just come with you. Or they crawl into the ocean to first learn how to swim. So more that then a professional piece of paper to say that I've done it, but the real life experience.

She also said that the attitude of leaders and teachers and professional learning would influence their confidence. This confidence could stem from some involvement in adult physical activity too. When asked where her capabilities stem from her response was:

Participant D: A year of intense post graduate study. I could've done more drama and dance because I quite like the creative side of things too. Physical activity is a passion of mine so it comes quite naturally, and sports and things like that. Kapa haka [Maori performing arts] through study.

Participant D also agreed with participant E and F that getting truly immersed in the physical activity with the children would enhance confidence. Finally, as with participant B's response, participant D also stated that having faith in children's ability is key also.

Participant D: Not everyone's happy to go outside. They might just stand at the door where there's still a little bit of [warmth from the] heater. With the kids out the back. Whereas I'd be out there saying, "let's get out there and hunt some worms! If it's raining let's just put on our rain jackets". I love being outside and doing that kind of stuff. I had a beautiful landscaped reticulated water system too.

Which had water running into the sandpit and down through the garden. I got the freedom to plant with the kids and grow stuff. However, that's set up outside. Whether the teachers are prepared to take them there. Or follow a kid's lead to do that.

Motivating children to choose moderate to vigorous activity

Participant D spoke of the benefits of catching the children's interest to inspire them to engage in more vigorous activity.

> *Participant D: If the child has had a particular area of play that they're interested in. Then other kids get sparked by that interest.*

She also spoke of the impact that the environment and resourcing can have on children's engagement levels with physical activity.

> *Participant D: We used to have ropes hanging down from the trees and climbing activities and outdoor equipment that just lends itself to massive development. They would just choose to play outdoors in nature. Outside has a whole lot of stuff: Rocks, trees, grass, hills, all of that. Water, how that runs. That's so cool for kids because it takes a different type of physical ability to negotiate that kind of terrain. It's climbing a tree. Balance and coordination on the roughness of the bark. We've purposefully gone on trips to beaches and wide open spaces. Because it does create a view for the child of endless opportunity. It expands the mind to allow the physical body to follow that view or imagination. Then links together with how the body feels in that space too. It's freedom because it's unrestricted. There's no gates or doors.*

Involving family through awareness

Participants B and D both concurred that educating parents about allowing children to take some risks in physical activity was very important:

> *Participant B: I think it's really important for children to take risks. I think it's really important for teachers to allow them to take risks. Also to inform parents that it's okay. That even if they may fall, they also need to learn how to fall*

properly. To make sure that they're not hurting themselves. That's how it starts; from falling off a little beam. Because they learn to fall safely. So even though it may look like they're not getting across, they're actually learning. They learn that "When I fall I have to fall like this because it protects my body". Somewhere along the line, I heard that the children go into hospital with broken bones because they haven't landed properly. Children don't know how to fall. Because these days they haven't been allowed to fall properly. So I think it's really important to be able to risk-take.

As a parent you become quite worried sometimes when you see your child fall. They know what they're capable of and we do forget that as parents and educators. They don't usually put themselves in a situation where they're going to hurt themselves. They're good at knowing "I'm going to fall now, so I'm going to stop." So I think it's parents, and then it's educators and nannies. It's different when you're looking after someone else's child. Because you become very protective. You don't want them to get hurt under your care. It's accountability and the lack of knowledge of other people that this stuff is good for your kids.

Participant D spoke of parental desire for their children. She also said that helping parents to gain awareness of the benefits of risk-taking was important.

Participant D: Well there's always a lot of focus on "we want our kids to read and write". Especially in the all-day model. Here it's a different scenario because it's more about the health and wellbeing as the focus anyway. A lot of the parents are already aware of that so they're happy to have their children participate in physical activity. They enjoy that their children have that as part of their learning programme. Climbing is often one that I talk about with parents. Because we have climbing equipment that changes. As the children learn to climb up and down it's often about the best way for balance is actually to help your child come down backwards so that they can actually be more stable. When you're at the park. Often there's ladders and other climbing equipment. So I've had conversations with parents about how best to negotiate those kind of obstacles outside of the centre and how we can assist them in being confident in those and other situations outside by what they do with us.

I'm a kinesthetic learner. I learn a lot through action and through feeling the motions. So I believe that kids will actually benefit from that too. So you can try different ways of teaching to help kids gain confidence physically. I think when you can show parents or tell parents about the progress that their child has made, I think any parent would be happy about that. It's really great to see kids getting involved in physical activity. I know that it's good for their wellbeing and their learning. So to express that to parents and to get them on-board with that.

When she looked at this perspective through her parental lens she was able to interpret the safety concerns as a parent in the following manner.

Participant D: Health and safety, we want to be aware of that too. So be close if needed. But my own kids have scared me, in their capabilities. Because they've gone beyond where I would have encouraged them. I wouldn't have encouraged them to climb to the top of that three storey high tree. But they've waved to me from the top as I've gently encouraged them to come back down with chocolate cake because I'm scared out of my wits! But if I put that fear on them, that would make it harder for them to get down, and yet they got themselves all the way up there at age five years old. That's more as a parent. In a work environment you're probably a little bit more sensitive to that. Because there's unpredictability. You don't know the other children as well as you know your own children.

Not necessarily that the parent is restrictive. But sometimes they are. Through fear, or through pushing a particular academic stream. "I want you to learn your ABC's before you learn to run around or climb". My comment would be that you need to learn all of it. At the same time as much as possible. Notice and observe what your child's interests are and follow those for a life-long love of learning.

Resources and the environment

The gym centre is a 'pack-away' centre. Before the session begins the teachers will set up the resources and equipment for the day. The teachers will pack it all away at the end of the session so that the space is free again for the gym members. This impacts on the set-up of the environment in this particular setting. Also being inside a corporation whose whole purpose is to increase fitness, health and wellbeing has a major impact on the

physical activity that is occurring in the centre. Being able to take children on a tour of the gym and give them ideas about physical fitness along the way comes with the territory. However, the pack-away aspect limits the resources somewhat.

> *Participant B: We can't have the next level of monkey bars. You know pack away monkey bars. You know it's all got to be safe and sturdy for the children. Light weight to put away. It's got to tick all the boxes. So it does limit us with the resources that we have. We make do though. We've got other resources that we can tap into. But it does limit us with the next level. Lots of our children have mastered our small monkey bars. So some of them can't hang upside down on them as they are quite small. There's a whole lot of learning going on there, when they're hanging upside down. A whole lot of development. In our centre we have this massive indoor space. We don't have the outdoor space. Children are still free to have lots of space to move and develop all their skills but we don't have the resources to do that outside. For most centres it's the other way around. So if it's raining they're limited in what they can do for the children in the day. "Oh it's raining. We can't cope because all the kids want to run".*

> *Participant D: So I think it's just by the nature of what we offer that we have huge restrictions in comparison to the opportunities that are offered in an all day, indoor, outdoor flow setting. Some better than others because of their size or the location.*

Participant D spoke of her interpretation of prior outdoor experience too. She argued that open, boundless, outdoor space trumps the current model of early childhood education in New Zealand.

> *Participant D: We would take the kids up the mountain and have a day on the mountain once a month. So it had the mauri, [life force] the wairua [spirituality] of that place. Just being outdoors, it was great. We'd be rolling down the side of the mountain and sliding down and eating the little bits of grass like the seeds. We used to have waiata [song] about that. It would be part of our song about belonging to that place. My daughter still recognises "There's my mountain! There's my mountain!" Well no, actually she's Tainui [tribe of the Waikato region in New Zealand] but she associated with that because she'd sat on that mountain,*

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been to that mountain and she'd sung about that mountain every day. You can position yourself through that place, through that whenua [land].

Again, going on trips, when you go out and there's no security code to get in. We just think that's normal early childhood education but is it? Really? I definitely think that Kiwis (New Zealanders) do a good job of actually promoting physical activity comparatively world-wide. It's just something in our DNA because well we're connected to nature. It's available to us so we utilise it. It's become something that we do. It's our environment.

Shared leadership and physical activity

The participants from the gym spoke about decision making within the centre as a team endeavour.

Participant B: I think the decision making at the centre is really collaborative. At the moment we have a lot available for the children to explore freely.

In her reflective statement she appeared to value a focused and somewhat hierarchical form of leadership too as she stated:

Leadership starts at the 'top' and works its way 'down'.

Participant D: We're an open centre so we're open to input from any member of the team. But each teacher has a skill base that will be drawn upon and show themselves in their own applications. I'm definitely a physical teacher, so I like to do that with the children. But everyone sets up the equipment too. That's all going to be used physically by the children. An infants' teacher will set up for what she notices during the day. If she's thinking they're starting to pull themselves up, then she might put in equipment for that for the day. So as a team, it's definitely open for anyone to have input into how we inspire our children to be physically active. Or how we give them room and space to do that.

Leadership was also interpreted as a child's right.

Participant D: We're pretty much child interest led. For example, this child who was doing the jumping, sometimes it can be parachute play too. If that comes out and there's an interest. You can take a child's initiative and co-construct it. So it's co-construction. When you're working together, you've got some outcomes in mind that you'd like to see, the children developing physically. But they can take you, because that's 'ako' [reciprocal learning]. They can take you in a direction where they will teach you what they want to know. So it can be a co-construction. I don't really get into the behaviouristic model of "You're an empty vessel and I'm going to pour knowledge into you".

Accountability for physical activity was seen as a combined responsibility.

Participant D: I think it's everybody. I think you've got to acknowledge that the first and foremost is the parent. Because they're the ones who created you, you live with them. Or your caregiver if you happen to be in some different kind of care. Someone that cares about your wellbeing is going to be someone who cares about your physical activity. I think it's a combined effort. I think health professionals play a part. But so do governments in providing policy and funding that can actually support that within a community. Everyone has a role I think. I'm an advocate for children so of course I'm going to say we need to make sure that our kids are okay. Part of them being okay is to make sure that they're physically active.

After the interview process was complete the participants contributed via written reflective statements. The data from these statements will be given in the following section.

4.4   The Reflective Statements

All of the participants who were interviewed gave their reflective views of leadership and physical activity after the interviews. Two of the participants gave their reflections later in the day after the interview. The other four participants took between one to three weeks to reflect on the topic. Each participant was invited to contribute to the research via written reflection. The length of time allocated for this task was up to one month. The themes that emerged from the reflective statements included:

- Holistic leadership of physical activity;
- Teacher confidence in leading physical activity programmes;
- Inspiring children to participate in moderate to vigorous physical activity; and
- Shared leadership and decision making.

These themes were similar to the themes that emerged through the interviews. The data from all three centres will be presented through the above themes.

Holistic leadership of physical activity

Participants B, C and D reflected on the holistic leadership of successful physical activity programmes in early childhood settings.

> *Participant D: To love learning something new, to accomplish what we try, practice and strive to achieve. Be it to stand up on our own two feet, literally for an infant, or in any life endeavor.*

> *Participant B: I believe that children learn through structured and unstructured physical activity and as early childhood teachers we should incorporate both forms of physical activity into our planning.*

> *Participant C: We need to find ways to enhance our learning and in return enhance the learning of children. Hopefully the way we do it will have a lasting holistic impact to the children and their families.*

Teacher confidence in leading physical activity programmes

All of the six participants made reference to the confidence of teachers when leading physical activity. Participant A stated that smaller groups are easier to manage in this sector of education participant B discussed skills, knowledge and confidence; participant C interpreted confidence as coming from support from others; and participant D discussed passion and intention.

> *Participant B: We should incorporate both forms and most importantly implement these activities without fear of being judged by our peers. Whether it be that you are jumping around like a crazy elephant or sitting observing children play in*

their own unstructured way. [But] if teachers don't have the skills, knowledge and confidence in their own physical abilities or are unable to take risks, then how are they going to pass this on to the children they teach?

Participant C: I have seen on many occasions physical education/activity being the last on the list of priorities for teachers. Although I am physically fit myself, my own experience is that I have not had enough knowledge as well as support from other professionals on how to take up the challenge to become an able facilitator of physical activity. As teachers we need to make physical activity one of our main priorities for teaching, individually and as a group. We need to ask ourselves this question "What is the impact of my own learning to the learning of children I teach?"

Participant D: We can lead tamariki [children] into a joyful relationship with movement and physical activity in any environment. To me it is about intention. By sharing our own love of dance, sport, balance, strength and physical ability with our young ones we share the true gift of love.

Participant E spoke about 'taking the baton' even when you weren't sure how you would run the race.

Participant E: Though you may lack confidence initially, take up the challenge of leadership anyway. Knowledge and experience are both essential.

Participant F stated that teachers must also keep their knowledge of physical activity up-to-date.

Inspiring children to participate in moderate to vigorous physical activity

Participant B gave advice for how to inspire children and also how to avoid restricting their achievements. Participant A stated that outsourced structured activity was beneficial for inspiring young children.

Participant B: Children should be able to play freely, not limited by what adults deem to be unsafe. I also feel strongly that our role is to inform parents of the benefits of unstructured physical activity especially for babies. Parents often get

carried away with buying 'stuff' for their babies that is promoted as beneficial for their babies' development when in actual fact it is not. Babies should be free to move their bodies and strengthen their muscles and cognitive abilities just the way it was intended through nature.

Participant A: Coaches may do a better job of inspiring children since that's their profession.

Participant D reinforced her interpretations from the interview process. In her reflective statement she stated that expansive space without bounds gave children inspiration to engage in more vigorous activity. Participant E agreed and stated that expansive space in nature was the key to motivating children to engage in physical activity.

Participant D: I'm thinking about our conversations around outdoor play and the amazing way expansive space creates energy and activity for tamariki that seems boundless. Without bounds, fences, locked gates.

Resources and the environment were also interpreted as a means to inspire children in their physical development. Participants B, D and E stated that resources and the environment have an impact on physical activity and in return children's physical development. Participant B gave advice for avoiding over-use of restrictive devices such as highchairs, jolly jumpers and walkers. Participant D recommended that children be encouraged to use open spaces for boundless physical play. Participant E made reference to resourcing.

Participant B: 'Stuff' promoted as beneficial for babies' development is not always beneficial.

Participant E: Always think about your reasons for resourcing and setting up.

The following section will present the data gathered relating to decision-making and shared leadership.

Shared leadership and decision-making

Shared leadership was seen as important for best outcomes for young children's physical learning developments. Participant A reiterated that planning needed to be completed at a team level. She stated that all members of the community have the responsibility to lead and inspire physical activity in young children to create the framework for an active lifestyle in the latter years. Participant C stated that professionals working in a formal or informal leadership capacity needed to take responsibility for their own active state and also in leading physical activity for young children.

> *Participant A: Whatever I decided to organise I would ask other teachers and managers opinions on my plans. They have other perspectives on this.*

Participant B, E and F saw leadership in a more vertical manner. Referring to the hierarchical model of one main leader but also asserting the importance of sharing responsibilities with other professionals in the team.

> *Participant B: Good leadership will ensure that all teachers are implementing these activities at levels they are comfortable with and coming up with the plans to ensure teachers' personal growth in this area. After all we are all learning just like the children we teach. Leaders should be able to help others grow to their maximum potential in an environment where they feel supported that their mistakes are in fact their personal learning journey. Role modelling starts from the top (leadership) and works its way down to the teachers, parents and children.*

> *Participant E: Relationships and communication are key. Decisions should be shared. However, a formal title gives authority.*

> *Participant F: Have a main leader to lead. Share leadership when everyone is on the same page.*

Centralised and shared leadership language will be analysed in chapter five. The final data gathering tool was the focus group. The data that emerged throughout the focus group will be given below.

The focus group consisted of four participants. All participants were teaching in an early childhood education setting that was located inside a gym setting. Two of the participants had contributed to the interview and reflective statement tools previously. These members were participant B and D. The other two participants had chosen to contribute through the focus group tool only. These participants will be introduced now as participant G and H. Participant B had a formal leadership role, whilst the other members of the group would regularly engage in informal leadership responsibilities including leading physical activity programmes.

The themes that emerged from the focus group were as follows:

- Forms of physical activity, including the language used for activity;
- Increasing teacher confidence;
- Inspiring children to partake in physical activity;
- Involving families in physical activity;
- Resources that give or restrict baby mobility; and
- Shared leadership and decision making in physical activity implementation.

Forms of physical activity, including the language used for activity

Participant D made the following comment on holistic wellbeing and health:

Participant D: I consider physical activity to be part of a health and wellbeing way of living. I think mobility is so good for the soul. The antidepressant that it gives you. The adrenaline, the endorphins that you get. You know a lot of people find their highs from other things. Pursue other things in life. But I actually believe that having a good strong base in life that's physically active creates a wellbeing in your life that's holistic. You feel better, you can smile at people. Because you actually feel good to move around. Especially with our obesity issues in this nation, and first world countries. Oh my gosh, our nutrition and our exercise is not in the right balance, when you've got so many people overweight, or unable to move. People choosing not to exercise. The issues like diabetes and the strain on our health-care system. If you can plant seeds when they're young. To get them inspired to know how good it feels to move and that they can become confident at

it. That they can gain the skills necessary to climb up and over, turn around, get in rhythm with the music and just have the freedom to play.

Participants B, D and G contributed their interpretations of physical activity in the initial stage of the focus group. Participant H arrived later so was unable to make the beginning of the group - her view is not reflected here. Participant B stated that structured physical activity was more likely to be set up by an adult and would usually involve some type of game structure. Participant D said that *Born to Move* is a structured physical activity because an adult delivers the programme. She contrasted this to unstructured in the following manner:

Participant D: So if you've got a climbing frame that's probably structured in so far that we've created something for them to climb on but they will play with that how they see fit. If they want to hang upside down, or balance across it or turn it into a hut. All of that happens. Child led.

Although participant D used the terminology 'play' in the previous statement she also asserted that in fact play and activity were different concepts.

Participant D: Although they may be linked, one may feed into the other but I don't see them as the same.

Participant G stated that essentially she saw them as something different. But when participant B was asked about physical activity the word 'play' was also used in her response.

Participant B: Structured play or activities are games or when you've set up an activity for the children to do. I think they are together. It's intertwined physical activity and play.

Increasing teacher confidence

Participants B, D, and G engaged in the conversation when the concept of teacher confidence was addressed. Participant H joined the group at this stage and added her thoughts on this concept shortly after.

Participant B: Have knowledge yourself. If you have the knowledge of fitness whether it be for yourself or your children, or the experience and just joining in. Just doing it. They could start off in small groups or practice by themselves at home to build their confidence. In front of a mirror maybe. Because you know sometimes you need to see it. Sometimes you think "Oh my god, I feel like a dork". So if you actually see yourself in the mirror and you practice just in the mirror, you think "Okay that's not too bad. I didn't look too dorky". Then you can go to work the next day and say "I'll do it this way". So sometimes practicing by yourself. I think for someone who's really shy, joining in but at some sort of level. So you might not do the full-on dance but you slowly increase. You've just got to build your confidence. It's a slow process. But you've got to start somewhere. If you don't you're not going to get anywhere.

Participant D: Professional development always helps. You can get quite specific. When I did the Born to Move module, I learnt a whole lot of stuff about how to deliver to children. For their age range, what movements, whether it's rhythm, or music or actual strength building. You do yoga which is relaxation or stretch rather than actual vigorous activity. There's a few different areas. It's role modelling. Whether that's to your peers or to the children.

Participant G: I think joining in with other teachers helps. I know for me it does. I do lots of walking; I walk into work.

Participant H: Hmm, for me, just being practical and just doing it. Without being shy about it.

Participant H also asserted that leaders' personal physical activity pursuits could boost their fitness and confidence to lead.

Participant H: I do walking during the weekends and sometimes dancing but it's quite vigorous so I just do a little bit.

Inspiring children to partake in physical activity

The focus group also synergised data regarding techniques in engaging children in more vigorous physical activity. Participant D again reinforced her interpretation of expansive

space for children. She also discussed her experiences with music and physical activity in early childhood education.

> *Participant D: I think it's about role modelling. But also providing equipment and an environment where they can be extended. We talked about wide open spaces and outdoor play, where they can actually run for as far as they can until they fall over or run out of steam. We think about our space here but there's lots of different environments for early childhood education to take place. On the beach or trips to the farm creates a whole new level of physical activity and there's nothing to plug into when you're on the farm. No screen time. There's none of that available. There's no man-made structures. It's all natural. Up and down mountains and stuff like that. Also verbally. By giving children encouragement and praise. I've seen [leaders] do really cool stuff that's from music CDs about up and down, clapping and counting and it's got a lot of instruction in it as well. So language development alongside the physical. That kind of music I think is quite holistic. Children will often just start moving because music just attracts them.*

Participant B reinforced her interpretation of role modelling. She stated that providing opportunities for children to take on challenges increased children's confidence too.

> *Participant B: Provide those opportunities for the children to take risks and let them know that it's okay. Again the role modelling. So if you were a shy teacher at something, or you weren't good at something as a teacher. But if you just kept persevering then the children will also see that. You can explain that to them. "I'm not a very good dancer but I'm going to practice my dancing". Then every day you practice it. So role model that behaviour as well. You're actually telling them "I'm trying to get better at dancing so I'm practicing".*

Later in the focus group participant B also asserted the importance of children inspiring each other. She spoke of encouraging children in a jumping activity by assisting those who were not able to jump off the stage yet.

> *Participant B: We had to take it back to jumping off a little ledge. [We said] "Don't jump off the stage yet because you can't land properly. Let's jump on and off until you get that right and then come jump off the stage". So it showed the*

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ones that hadn't even reached that milestone yet. How to jump, to leap off. It was interesting to see the different levels, with just something as simple as jumping. You see the confidence build within the children. Children who were too scared, by the end of it they were leaping. Superman jumping. To the point where you're thinking "Agh, no". [laughs].

Participant G gave a small anecdotal account of her experiences at home in encouraging physical activity too. She spoke of the holism of physical activity; including nature, natural resources and looking for birds whilst involved in physical activity. She also used the word 'play' in her interpretation here.

> *Participant G: My house is a bomb site! I just let the girls go for it. Do you mean outside activities as well? We've got a rope swing, we go down and play on that. In it, over it, push each other. At the back is a huge orchard area. We go for walks right down the back there. Pick up pine cones too. Look out for the different birds.*

Involving families in physical activity

The participants involved in the focus group were in accord, stating that best physical outcomes could not be achieved without the involvement of families. Communication with families was seen as key by the group.

> *Participant D: We can certainly let families know about things that are happening in the community. Be it Drop Zone or after school programmes that we provide like Cross Fit. Things that the children may be interested in doing. But there's always parks. We say "there's these parks that they might want to try out, or this event is coming up". Just passing on information that they might want to try to get engaged with.*

> *We'll have a positive attitude towards parents who are going to work out. [I'll say] "Awesome! Which one did you do? Did you try this class? Do you like high intensity training? Balance? Yoga? What are you into?" [Sic]. Kids will pick up on those conversations. Sometimes a kid will say to me "My Mum's gone to the gym". I'll say "Yeah, that's a good place to go". We do the tours through the gym. I show the kids the equipment and explain what the members are doing: Making*

their bodies strong and exercising to be healthy. Giving them a positive outlook on it. They can hear the music while they're in there. Or watching the kids do Cross Fit or Boxing. We take the older kids. Sometimes that's their sibling and they're inspired by that. They can see that it is. It's all good stuff when you step straight out into a gym.

Participant B: Passing on that information that we have as teachers about how important it is for children to do these things. Because some parents don't actually know that when they're climbing a climbing frame, they're actually learning so much. So by pointing out what they're actually learning, giving the parents that information so they think, "it's a really good idea that they do that". Another great tool is the video. There's pictures [Sic]. But if children and families can see that physical activity on video then I think that's good too.

Participant H: Well, I do it along with the kids and show them (families) that it's good for them. Learning stories too. It's so different when I look at our Asian culture. Most of the time you're doing something to become academic. Not so much physical. I treated my children like that because I was brought up like that. Unless you have a Kiwi friend who encourages you but it's so different. For my youngest boy, I didn't get him involved. So I can see he's not so active in games (as he's older). But I encouraged him on the musical part, hands. But the physical part, no. But he's still good in his studies. Actually you have got to really start physical activity from a young age.

Resources that give or restrict baby mobility

Throughout the interviews and reflective statement tools, the concept of contraptions had emerged, although it had not come through as an overarching theme. However, during this focus group the participants were eager to share their opinions on these devices. There were some ideas that were generally agreed upon, whilst other concepts were professionally argued over. This would be a worthwhile topic of research in the future also.

Participant H referred to Gerber's philosophy that babies should be allowed the time and freedom to develop their physical skills in their own time without any pressure from adults.

> *Participant H: Gerber's philosophy is that you must always allow the child to be ready. Not force them. She believes in that. That babies have got to move naturally and when they're ready. We don't force them.*

Participant G stated that these contraptions were probably not a good idea. But that short bursts of use would not make a great difference to babies' physical development. She also acknowledged that these devices are sometimes used for hygiene purposes.

> *Participant G: Probably at home you'd put them on the floor. But at a centre you'd be wary. Well I mean up here we've got people doing their exercises here. Sweating on the floor.*

However, participant D challenged her professional associates with the following statements:

> *Participant D: Who says it's too early? Because sometimes it's fashionable and sometimes it's not. You've got to really research the researchers. Just because it's on the internet does not make it fact that it's actually bad for your child. So you want to do your own homework as a parent, or as a teacher, as to what's going to benefit or harm your child. You've got to pick them up and take them out to get the washing off the line. So actually. You know with the practical sense. With the parent. Wrapped up and you're kept close. Or you're on the back. Strapped up. The parents are actually working. Because then they can provide for the family. Ideally it's all about the kid and that's what you're looking at. But actually when you're in a family sense there may be things that need to be. Or in other cultures you strap them on and carry them until they're two. They're not even crawling or walking. Culturally it's quite interesting what apparatus is utilised. I don't believe in babies' muscles being hurt. But I also think you've got to look at your environment and the way you go about doing things. When we studied at university it was interesting to see that Mongolian kids just don't get put on the ground. It's*

freezing cold. So you're not 100% for the physical development of that child and yet it works for the development of that family. I think it's an interesting question.

Participant B was concerned that overuse of these devices would restrict babies in their development. Her statements advocated for minimal use of these resources.

Participant B: I think it's a 'no go'. It definitely restricts baby's movements if they're in it for too long. In saying that my daughter used one and she ended up being fine. But I think some people take it to the extreme and leave children in them all the time and that's when you'll start to have problems with their muscles. But I think if they were in them for short periods of time it would be okay. But I don't agree with them. But I know as parents, sometimes you need to use them because you're busy.

I think there's so many contraptions out there now. So I've spoken to you about it before, a new born baby can go from the car seat to the crib to the baby rocker back to car seat, back to the crib. They don't get time on the floor, they don't get a lot of time in arms because they're always in contraptions. So if you think of all the contraptions a new parent [will see]. They're out shopping and they might think "Oh that's really cool, that's really cool". But when your child is getting passed around in that sense to all of these different contraptions, then it's definitely bad for their development. They're always in something. They don't even get that touch. People put their car seat in the trolley when they're out shopping. Very convenient for the parent but not so much for the baby.

Someone that trained years ago was with me when I was feeding a baby and she said, "We were always taught to roll our sleeves up when we were feeding babies so you have that touch". She learnt that years ago and to her it was so strange that I was feeding a baby with my jumper on. Your skin should be touching baby.

Shared leadership and decision-making in physical activity implementation

The participants in the focus group concurred with the reflective statement conclusions. They agreed initially that there should be one main leader but that the whole model should involve team leadership.

> *Participant D: In a team environment everyone brings their own strength to the table. So someone might have a little bit more groove, or coordination. Or just have a different idea about how to extend the children's play. I quite like feeding off the team in that way. You'll see what another teacher is doing and say, "Gee I didn't even think about doing it that way and it's really good for the children". Because you can't be everything to everybody but as a team you amplify what you're able to bring.*

Participant D also shared an anecdotal interpretation of an experience of team leadership in physical activity.

> *Participant D: I remember when [a leader] saw someone was jumping and this whole physical development stream of learning stories and activities came out of that. Just because she'd noticed that. If no one had noticed that it probably wouldn't have begun. It might have happened in another slightly different way but even being able to pick it up and then start something. They like that jumping, let's try it off the stage. Let's get something else for them to jump off, or to jump over. It just went on for ages.*

Participant B gave her interpretation of shared decision-making in physical activity with critical cognisance.

> *Participant B: It hasn't happened here, but I think, even though it does work well with peoples' different approaches, it can also have a negative effect. Because if you think that a child should learn it this way, and then another teacher thinks a child should learn it another way then that's a challenge. Maybe someone wants to scaffold someone over the climbing frame whereas the other teacher thinks, "No they should learn to do it themselves". It's just those little different teaching strategies. Some teachers might think it's safe but the other teachers don't think it's safe. Some think it's a safety thing and others let them go for it. So there are challenges but the benefits are huge because everybody brings something to the table.*

Participant G stated that there may be conflicting views regarding what is safe practice of physical activity. But she agreed that working within a team leadership framework would

enhance the success of children. Participant H stated that having a leader as the first role model is usual. But that the early childhood setting works the most effectively when everyone learns and works together as a team.

> *Participant H: Learning and working together. I think that's important. As a leader, in the end, you are the one who should be actually doing it. As the first role model.*

Participant D agreed that professional learning together as a team would be beneficial also.

> *Participant D: Professional development opportunity to play alongside my colleagues, so that as a team we get an understanding of what it might look like. We just have a play at it and we have fun and then we bring that back and it eases out into the play with the kids. I've seen that work in other areas of learning where you do a workshop together and you start using it as a team with the children. Everyone has the same understanding.*

After some reflection time in the focus group participant D also made the following statement, asserting that sharing leadership with children was also important.

> *Participant D: Yeah, I think that's really interesting. Because when we hear the word leadership we kind of think of the Prime Minister. But you're right, in the context of early childhood, and back to that understanding of 'ako.' The children can teach us at times. I like that. If you're able to have an awareness that "the child may teach me something that I don't know anything about, or inspire me with something new, or show me their interests so I can follow that". You build together when you all co-construct your environment and you learn together. As a team, each team member brings their skills or expertise or understanding to expand that. It becomes a synergy or sorts where it does amplify that learning.*

Summary

The data gathered largely related to various forms of physical activity, *Te Whāriki,* confidence of teaching staff, children's choice of physical activity, involving family, resourcing and shared leadership. The data recorded was collected from eight early

childhood professionals in the Auckland region of New Zealand. The following chapter will provide a discussion of the findings from this data.

5 Chapter Five: Discussion of the Findings

5.1 Introduction

This thesis aims to outline how shared leadership impacts on physical activity in early childhood education. The question posed for this interpretive research project was:

> How does shared pedagogical leadership impact on children's physical activity in early childhood education?

The sub-questions included:

- What do teachers understand as being children's physical activity?
- How do teachers give an account about their confidence within structured and unstructured physical activity implementation?
- How are decisions made within the teaching team, regarding children's physical activity and where is pedagogical leadership evident?

These questions were answered through qualitative, interpretive methods. Furthermore, thematic data emerged that suggested raising children's confidence was equally as important as raising the confidence of leaders and teachers in creating successful physical activity programmes. Additionally, resources and the environment were interpreted unanimously as either a massive barrier or a great opportunity for successful leadership in this sector. The environment was highlighted in both the literature and in the findings from participant data regarding health and safety issues too. Finally, the collaboration needed in such a team-based environment was interpreted to be hugely contributive to successful learning outcomes for young children. This included reciprocal learning, sharing leadership responsibility with formal leaders, policy developers, health professionals, children, teachers, family members and others in the community.

This chapter is structured according to the various themes that emerged from the data synthesis process:

- Forms of physical activity;
- Language and Te Whāriki;
- Teacher confidence reflects personal experience;

- Inpiring children to partake in moderate to vigorous activity;

- Involving families in leadership of physical activity;

- Resources and the environment; and

- Decision-making, shared leadership and physical activity.

All sections are informed by the literature reviewed including the national early childhood curriculum *Te Whāriki* (1996). The findings discussed in this chapter have been validated by a method of triangulation. Data were collected from multiple early childhood education sites and participants have been included in three data collection processes: the interview, the reflective writing process and the focus group.

5.2   Forms of Physical Activity

Physical activity was referred to by participants as activities that children use their fundamental movement skills for. This could include both gross and fine movement. Participants agreed that jumping, running, climbing, balancing and crawling were examples of such movements. Participants interpreted the difference between structured and unstructured physical activities.

Structured activities were interpreted as being:

- Usually invented by adults;

- Based on rules, targets or a specific mission the child must complete;

- Always based on a plan usually created by adults;

- A set programme or game such as a dance class or obstacle course; and

- Based on adults' intentions for children.

Unstructured physical activities were interpreted as:

- Often based in nature, such as nature walks;

- Freestyle play;

- Activities based on children's choices within the boundaries of safety;

- Child initiated movement such as swinging or climbing; and

- Child-led play from children's spontaneous interests, such as riding a bike.

According to Nutkins et al. (2013) unstructured physical activity is referred to as fun, chosen, spontaneous and freedom. Whereas structured physical activity can be defined as planned and adult facilitated games, dance and sport (Dyment & Coleman, 2012). This approach involves pre-service training and regular upkeep of activity repertoire. This thesis has defined physical activity as an inclusive term that incorporates both fine (e.g. messy play) and gross motor activity (e.g. running, riding, jumping).

The participants and literature data showed that physical activity in the early years would increase the health, cognition and social development of children. Literature asserts that through movement not only physical skills are developed, but also cognitive and social skills (Chow et al., 2015; Costa et al., 2015; Gehris et al., 2014). Literature also states that obesity is a concern in both New Zealand and around the globe (Oliver, 2008; Temple & Robinson, 2014). Participants agreed stating that obesity was a hindrance to physical skill development and therefore to health improvements. Participant C suggested that children cannot engage in physical activity if they are not used to it. She asserted that it is important to avoid embarrassing children by expecting them to participate beyond their comfort zone. Participant D also stated that she interpreted many New Zealanders to have obesity issues. She continued to state that the key was to engage in more physical activity and better nutrition. Literature supports participant response. Oliver (2008) states "Sedentariness is a construct related yet distinct from physical activity, and is related to health-risk behaviours such as increased consumptions of unhealthy foods" (p. 65). This study has identified various forms of physical activity. One of these forms is structured physical activity.

According to the literature, structured physical activites are planned and adult-facilitated games, dance and sport (Dyment & Coleman, 2012). Structured activity requires leaders to regularly update and upgrade their knowledge base and skill repertoire. In some of the literature, it was found that only structured physical activities had significant impact on the learning outcomes and development of children in the early years (Costa et al., 2015; Iivonen et al., 2011). Outsourcing professional coaches has been suggested as one of the methods of increasing participation in physical activity in the early childhood sector. The data showed that participants A, B, C and D agreed that structured physical activity was an adult-led construct. Although participant B stated in her interview that physical activity could also be structured by children. She said that structured activity would be a set

programme or game that would often be created by adults, but could also be led by children. Some of the participants also agreed that if there was an opportunity for them to develop their skills in leading structured physical activity they wouldn't hesitate to participate. Participants said that outsourcing professional coaches was usually hugely beneficial for children. Reasons given for outsourcing included:

- Having male role models in the centre;
- Having physical activity role models who were strong and fit in their physical appearance;
- Having coaches whose skillset was specific and tailored to learning outcomes for physical activity;
- Having role models for teachers to gain tips and knowledge through observation; and
- Having a high energy output source for a set time limit. Teachers could not run at this fast pace for an eight-hour day, but coaches could come in and give their all for an hour or so.

A lack of role models in the community may lead to a decrease in participation of vigorous physical activity of young children (Oliver, 2008). However, participants agreed that unstructured physical activity would benefit young children just as much if not more than structured physical activity in the early years. Participant F summarised these responses. She stated that a balance of both structured and unstructured physical activity is essential in the early years. She advised that for children under five, unstructured physical activities should dominate. Unstructured physical activity is the other main form of physical activity in early childhood education.

Unstructured activity has been defined in the literature as fun, spontaneous, freedom and chosen (Nutkins et al., 2013). Participants also interpreted unstructured physical activity to be experiences that children had chosen for themselves. Unstructured physical activity was also referred to as 'play' by some of the participants. However, both literature and data from the interviews reiterated that whilst this form may be unstructured it is certainly not unsupervised. Participant F interpreted unstructured physical activity to be the greater and more important curriculum area for leaders of physical activity in the early years' sector. She also stated that teachers have more responsibility when leading these

activities. She said this was due to safety, environmental and social inclusion planning. Ernst (2012) also asserts that unstructured nature activity will involve just as much responsibility from leaders as structured physical activity. Participants also referred to unstructured physical activity as child-led. Whilst on the topic of nature play and messy play, both literature and data responses assert that involving children in messy, outdoor, or natural learning experiences is key to engaging children in physical activities. Many adults have their own stories around clay - 'too messy, too much work, too hard.' Clay is seen as a medium in which children can master the interdependence of hand and brain functioning (Brownlee, 2015). Participants concurred with the literature giving the following reasons for including messy play in physical activities:

- Children are innately interested in sensory experiences;
- Young children need hands-on experiences;
- Children explore with their whole body;
- Touching various textures is important for learning and development;
- Through these activities hand-eye coordination is increased;
- It is inviting for children; and
- Children have a special connection with nature.

Participants asserted that giving children space in their unstructured physical activity time was important. As was joining in with their activities at other times. Dyment and Coleman (2012) concur, stating "while some studies show a positive relationship between adult presence and physical activity, others show a negative relationship" (p. 91). Similarly, Taylor (2015) found that interrupting a child in an attempt to assist may cause the child irritation and take away from their autonomy. Therefore, knowing when to assist is a delicate art. It can be learnt by observing children in their self-directed physical activity. This speaks to the need for insightful and reflective professional early childhood teachers. The fact that only 50% of early childhood teachers are required to be qualified speaks to diminishing the complexity required to be a capable early childhood teacher.

Finally, a synthesis of the findings of the data collected from three research collection tools was informed by an extensive review of literature pertaining to leadership and physical activity in early childhood education. The following conclusions have been made. A hybrid approach of leading both structured and unstructured physical activity in

early childhood education is optimal. Many sources suggest that the ratio for this mix should be higher for the implementation of unstructured physical activity; however, the ratio is contextual.

5.3   Language and *Te Whāriki*

Both literature sources and participants agreed that as a philosophical curriculum *Te Whāriki* is somewhat ambiguous and non-prescriptive about 'how' learning outcomes are to be reached (Jenkin, 2010). This was also seen as a strength as each centre could implement the curriculum despite the variety of philosophical views within various sections of the early childhood education sector. Participant F stated that *Te Whāriki* is like a jellyfish, able to be influenced to swim towards structured or unstructured physical activity learning outcomes. Participant C stated that having access to a complementary document that had explicit learning outcomes for structured physical activity would help her immensely in leading physical activity programmes in her centre. The terminology used within this founding curriculum refers to children's activities, and rarely mentions the word 'play'. However, in participant responses these two words, activity and play, were often used interchangeably. One writer asserts that this may be due to the connotations of the word 'play'. She continues to suggest that the authors of *Te Whāriki* may have intentionally omitted this word as a way of being taken seriously (Alcock, 2013). Participant B stated "*I think it's together. It's intertwined. Physical activity and play*". It is my recommendation that education is disseminated to families with young children regarding the importance of unstructured physical activity through child-led play.

Participant E supported unstructured physical activity. She stated that structured physical activity did not align with the principles of *Te Whāriki.* She justified her interpretation by stating that *Te Whāriki* is a curriculum that promotes giving choices to children. She interpreted structured physical activity as restricting children in their choices. Some literature tends to agree. According to one international literature source *Te Whāriki* promotes children's learning and growing in different ways at different paces, whereas "the idea of testing at set points does not align to this approach" (Nutkins et al., 2013, p. 207). Finally, participants also viewed physical activity as a method to empower children. Unstructured activity was seen as a method of giving children the space to develop a sense

of their own abilities. This concept was linked to Te Whakamana Tamaiti (empowerment of the child) in *Te Whāriki* (Ministry of Education, 1996)

5.4   Teacher Confidence Reflects Personal Experience

Some believe that confidence grows with professional learning. Gehris et al. (2014) state that teachers have the desire to learn new skills and advance their professional knowledge base regarding physical activity. Participants agreed stating in their interviews that professional learning was essential for developing the team. It was asserted that professional learning would assist teachers in their personal growth, because like children, we are all learning. Participant F also spoke about the value that her Master of Education has added to her practice. This participant is responsible for providing professional learning to her team of teachers. She stated that she now looks for professional learning opportunities through a 'research lens'. Literature has identified that many leaders in both formal and emergent leadership positions have not been given extensive training of leadership concepts (Jones & Pound, 2008). Compounding this, team members may also lack specialised knowledge of physical activity implementation (Shoval et al., 2015). Professional learning may provide greater confidence in leadership ability (Rodd, 2013). However, the findings of literature in Heikka et al. (2012) assert that qualifications do not automatically equate to authority. Data also demonstrated that giving space for both formal and emergent leadership is one strategy for raising team confidence in a shared environment (Pearce et al., 2014; Youngs, 2009). According to the participants, confidence may also increase when teachers engage in leadership of physical activity with passion.

Both literature and findings from participant data concur that teacher confidence will often be enhanced when the teacher owns a personal interest in physical activity. This may involve the teacher being involved in physical activity her or himself. The leaders of physical activity involved in this study interpreted physical activity to be essential in their own lives. Participant D stated that sports, games and RPM classes were a personal passion. Participant F spoke of her passion for Zumba classes. Whilst participant C stated that as a leader she felt that she had to be a role model of physical activity herself. She also asserted that on a personal level, going to the gym made her feel decades younger. An advocate of nature-based physical activity in early childhood education agrees, stating that leaders are also influenced by their own interests of physical activities (Ernst, 2012).

Dyment and Coleman (2012) also assert that teachers and leaders' personal backgrounds and philosophies predetermine the type of physical activity that is implemented in their centres. However, being passionate about physical activity does not always coincide with better leadership of physical activity. As children develop their skills and movement, leaders also develop their models and techniques for implementing activities in all forms.

Another key to confidence lies in understanding that leaders will not always implement the crème de la crème of physical activities. Manning et al. (2011) state that in supporting a shared leadership model a culture of tolerating mistakes may be beneficial as emergent leaders develop. Participant B also stated that leaders of physical activity are learning just as their students are. Finally, participant A stated that her confidence emerged with the acknowledgment that she was the child's assistant in her role as a physical activity leader. Vamos (2015) concurs with this teaching role, stating that infants and children often already know what they are capable of and don't need adults to interfere with their chosen physical achievements. As the child's physical activity assistant educators are there to ensure that children are participating in a safe environment, where they are nearby, present, observing and ready to assist when children elicit their help (Nutkins et al., 2013; Taylor, 2015; Vamos, 2015). Being present and observing the capabilities of young children is key here.

Finally, confidence may increase with professional learning of healthcare concepts. According to Oliver (2008), the role of regular physical activity in adult health is well recorded. Benefits include a reduced risk of cardiovascular disease, obesity, colon cancer, breast cancer, type two diabetes, depression and osteoporosis. Researchers are beginning to shift their lens to children and have discovered that activity in the early years can influence health outcomes in later life (Oliver, 2008). It is therefore the responsibility of responsible leaders to engage in practices that encourage and enhance the implementation of physical activity in the early years. Leaders must embrace confidence in the implementation of this curriculum area for the sake of their students' best learning and health outcomes. Finally, some data emerged that stated how practice would be enhanced and confidence would grow with additional academic health knowledge. Participant F stated that undergraduate programmes must improve by including healthcare modules within their programme structures.

5.5 Inspiring Children to Partake in Moderate to Vigorous Activity

Another emerging theme grew throughout the data collection phase. Though I had not once explicitly inquired about children's confidence this theme came through the interview process like the *Shanghai Maglev*. It was my role to provide the tracks with ever listening ears. The research found that children often benefited from techniques that increased their confidence to participate in moderate to vigorous physical activity. It was found that some children may need assistance in not only physical skill development but also in social and emotional inclusion. On the other hand, it is better for some children if the leader of physical activity steps back and allows for the child's confidence to burgeon independently with time. It was found that belief and trust in children's ability will boost their confidence and their actual performance too. According to the data collected from three early childhood centres, if children are given space to take risks in a safe environment they are more likely to achieve greater learning outcomes. Showing children that we have confidence in their abilities was interpreted as a powerful tool for enhanced learning outcomes. Adversely it was interpreted that putting our fears onto children will actually take away from their confidence and consequently limit their perseverance in challenging physical activity.

Participant D stated that she liked to allow the children to guide her in their abilities. She recalled how as a younger mother her own children scared her in their capabilities to climb tall trees before she encouraged them down with chocolate cake. Participant B spoke about how previously other adults had asked her how she managed to encourage children to tackle the monkey bars. She said it was because she had confidence in the children. She was sure that they could do it. Participant F, another formal leader in the study agreed, stating that one must simply be present in the environment to witness the capabilities of children. Literature too concurs that babies and children have the capability to master their body movement (Gerber, 2002; Vamos, 2015). This giving of space for children's agency to emerge in physical activity is also recommended in the literature. Taylor (2015) writes that leaders who are encouraging and believe in their learners' capabilities lift the learning outcomes for these children. If leaders discourage young children from taking risks in the playground, children may be less likely to persist with challenging activities. Literature based on the physical learning of infants and toddlers state that children have incredible potential (Gerber, 2002; Pirard, 2013). Furthermore, adults who routinely interfere may cause more harm than harmony (Vamos, 2015).

Essentially, *Te Whāriki,* the early childhood curriculum is based on believing in the competency of children. The curriculum statement introduces us to the aspirations for children: "To grow up as competent and confident learners" (Ministry of Education, 1996, p. 9). To encourage children to grow in this way, leaders must have confidence in their learners. Both educators and other leaders of physical activity must be able to project a vision of the future skills and development of children.

Another method found for encouraging children to participate in physical activity was through communication. Participant B stated that children should be told they are allowed to take risks. She said that leaders need to provide opportunities for children to take risks in a safe environment. She stated that leaders and teachers must communicate to children it is okay to take these risks. Everybody's risk-taking is different and what is classified as a risk varies according to cultural upbringing and societal beliefs (Nutkins et al., 2013; Taylor, 2015). Therefore, the level of risk taking depends on the individual. Participants agreed. Participant F stated *"Everyone's risk taking is different. Children won't like it if the risk is too high. They will feel that they can't achieve it. But if it's too easy, their urge won't be satisfied. For me, bungee jumping? No way!"* Although, educators and leaders must not push children even when they see their great potential.

However, there is a variation of expectation from educators, leaders, family members and peers. Participant C asserted that children may have to build their confidence slowly. She stated that it is important to give children space and time to engage in physical activity. Observation may encourage participation at a later stage. Both participant E and participant F, who are in formal leadership positions in their centres concurred that inspiring children is a holistic event. Encouraging children in their physical development could only be achieved when they were given social and emotional inclusion too. Participant F stated that children should not be left out or excluded, whilst participant E stated that children would join in when they were ready and confident. According to the literature, teasing and daring may place a child at risk of exclusion even at this young age (Nutkins et al., 2013; Taylor, 2015). Those in the position to lead physical activity must be aware of the impact that this can have on children's physical development. Role modelling struck a harmonious chord too. Oliver (2008) suggests that effective role modelling may be the key to increasing both leadership and physical activity in early childhood education. Three of the eight participants stated that they could not expect

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children to be physically active without role modelling forms of physical activity to them. Participant B, a formal leader involved in this study insightfully commented that role modelling was not limited to physical activity. She stated that role modelling was an effective method to encourage important dispositions and behaviours in children too. She painted a picture of persistence through the barrier of shyness as a leader of dance.

Music and dance was also seen as key to inspiring more vigorous activity. Research by Chow et al. (2015) concluded that the greatest amount of physical exercise was to be found in music and movement time. This concurs with other literature that states music can be used as a tool to enhance the participation of children in physical activity (Nutkins et al., 2013). Participants from the gym setting also interpreted music as way to create confidence in children. Participant D stated that music was holistic and could be used for both calm and vigorous physical activity. Participant H spoke of giving children the choice of song. She said she would try playing different songs until the younger children started moving to one that they liked. Encouraging children to confidently choose physical activity was seen as important by the participants in this study. Involving whanau in the leadership of these activities was also asserted as beneficial to lifting participation levels.

5.6   Involving Families in Leadership of Physical Activity

The data from the research concluded that the most effective way to involve parents in the leadership of physical activity is to:

- Educate and communicate the benefits of both unstructured and structured physical activity in the development of children in the early years;
- Communicate the essential learning that physical activity provides. To include this part of the curriculum into other areas and vice versa. To uphold the importance of academic knowledge too, but with a focus just as strong on physical activity in the early years; and
- Promote the benefits of risk taking in the ladder of physical development. To assure parents and other family members that whilst safety is paramount, taking risks is also essential for growth and development.

Participants agreed that although parents may perceive structured activities in the early childhood sector to be the best form of physical activity, unstructured and child led activities were just as appropriate for their children's development. However, participants A, F and E stated that family members may not always be aware of the development taking place for their children in these activities. Participants concurred that it was the leaders and teachers' responsibility to share this knowledge with parents and other family members.

The literature also asserts that parental desire to increase the academic achievements of their children, frequently trumps the desire for participation in physical play (Alcock, 2013; Gehris et al., 2014). However, as physical activity in the early years may lay the foundation for cognitive and social enhancement as well as optimal health in the adult years, physical activity should hold equal if not greater importance as other learning areas in the early years. Additionally, data from the research showed that a culture of risk avoidance may exist. However, according to some, risk-taking infuses every aspect of our existence no matter how hard we attempt to avoid it. According to Nutkins et al. (2013) although we may pretend otherwise we all live with some degree of uncertainty in our lives. Participant C spoke of 'Helicopter Mums' who metaphorically, fly around in circles over their child to ensure their safety. Whilst this is common, it is not always beneficial for the child who is yearning to take greater risks and challenges in their physical activities. In fact, Participant B stated that the way to help a child to learn how to fall safely was to allow him or her to fall in a safe environment. She asserted this would lead to fewer and only minor injuries in the future as children become more aware of their bodies. Nutkins et al. (2013) state that children "may be unable to cope with the eclectic situations they will inevitably encounter and be less successful learners, unable to reach their potential" when they are wrapped in cotton wool (p. 45). However, the resources and structures must be safe in order for children to participate in risk-taking, so the environment needs to reflect this.

5.7   Resources and the Environment

According to this thesis, restrictions to leading physical activity emerged due to limited budgets in this sector of education. This is also reflected in numerous other studies (Colmer et al., 2014; Fleet et al., 2015; Oliver, 2008; Temple & Robinson, 2014). These budgets often restrict the amount of resources that are made available for young children.

Participant data also concurred that limited budgets and resources proved to restrict leaders in their implementation of physical activity. Participant C stated that she felt that she had to constantly improvise in early childhood education. As a former primary teacher she made reference to the greater amount of resources available in the primary sector of education. Her interpretation was that those working in the field of early childhood are the most creative professionals because they have to be. Participant B said that she was satisfied with the large indoor space but that the outdoor space was insufficient. Insufficient space and lack of covered outdoor area have been seen as restricting forces (Oliver, 2008). Five of the eight participants involved in this research also spoke about the importance of the natural outdoor environment. The major interpretations of physical activity in this environment included:

- Open space which promoted a sense of freedom in children;
- Connection with our natural world;
- Connection to tupuna (ancestors) through the whenua (land);
- Ability to learn in an unpredictable and diverse environment: running freely on uneven ground and climbing over rough bark;
- Connection to our local community; and
- Holistic learning about science, math and other subjects in the natural environment with natural resources.

Ernst (2012) also suggests that nature play promotes physical activity in early childhood education. Furthermore, babies blossom when they spend time outdoors. Children are happier and healthier when they spend regular time outdoors. "They sleep better, eat better, look better, and learn better. Fresh air both sooths and stimulates" (Gerber, 2002, p. 103).

Participants D and F both spoke about human-made apparatuses and natural resources. The natural environment and natural playground apparatuses were viewed as safer choices for physical activity. Data from the interview process recommended manufactured equipment should only be used if its equivalent could not be found in nature. Participant F stated that her manufactured equipment met all specified height regulations with impact mats. However, accidents had still occurred in these spaces. She asserted that accidents had not occurred to the same degree in the natural environment.

Literature also asserts that although manufactured resources may be considered safe, risk related to this equipment must be necessarily studied (Dyment & O'Connell, 2013). There may be risks and benefits in any intentional environment when studied. However participant F interpreted natural resources to be the safest option. Dissonance extending to baby mobility resources emerged also.

Through the focus group tool, disagreement was met over the use of infant contraptions such as 'walkers' and 'jolly jumpers'. Participant B held a strong conviction that over use of these resources ironically restricted infants in their ability to develop their muscles naturally. Some of the literature concurs, asserting that infants should have absolute freedom of movement and this is viewed as respectful practice (Gerber, 2002; Pirard, 2013; Vamos, 2015). Children who have been given freedom of movement not only develop agile bodies but are also able to increase their judgement of what they can and cannot achieve with their bodies. "Developing good body image, spatial relations, and a sense of balance helps [children] to learn not only how to move but also how to fall and how to recover. Children raised this way hardly ever had any serious accidents" (Gerber, 2002, p. 53). Gerber (2002) advises that infants learn best when they can move and freely explore. It is recommended by RIE (Resources for Infant Educarers) that a baby should not be put into a position that he/she could not get into by himself/herself. In 2002, Gerber found the following:

> People have the illusion that walkers help children to learn to walk. But in order to walk you have to do two things: one, you have to be able to support your weight, which you do not do in a walker; and two, you have to learn to balance on one foot. If you cannot do these, you cannot walk. (p. 160).

Participant H also agreed and quoted Gerber in her statements within the focus group. However, participant D stated that these resources are necessary for busy families. She also spoke about her knowledge from her undergraduate studies regarding the development of Mongolian children who are consistently strapped to their parents due to the cold temperature. This would be an area well worth dedicating further research to. An area that is emerging in research is shared leadership within early childhood education. The following section will elaborate on this concept further.

5.8   Decision-Making, Shared Leadership and Physical Activity

Some literature suggests that shared concepts are emerging in early childhood leadership. However, professionals in early childhood settings are still using centralised, heroic leadership language when referring to leadership in their centres (Krieg et al., 2014; Weisz-Koves, 2011). In the data collection process all of the participants used specific language to describe their views of leadership. Three of the eight participants also used centralised, horizontal language to describe leadership. Participant F stated "Have a main leader to lead. Sharing leadership when everyone is on the same page". Participant B asserted "Role modelling starts from the top (leadership) and works its way down to the teachers, parents and children". Furthermore, Participant H spoke of shared leadership concepts with a main role model "Learning and working together. I think that's important. As a leader, in the end, you are the one who should be actually doing it. As the first role model". Role modelling was also referred to by other participants. Interestingly, whilst these participants stated that shared leadership was the best form of leadership in early childhood, having one lead role model was also viewed as important too. It was not specifically discussed when this role model should step back to allow space for emergent leadership.

This may indicate that in early childhood education, the understanding of leadership and shared decision-making may be different to traditional, vertical, leader-centric perspectives. However, it also suggests that centralised language may still be used. So the sector may do well to reconceptualise some of the language used for leadership. One of the ways that these settings are currently embracing conceptual language is through the discussion around 'ako'. Participant D spoke of leadership being synonymous with one main leader. However, she continued to state that in the context of early childhood education 'ako' is important. Her interpretation of this concept was that children could be leaders and teachers too. This would be optimised when leaders and teachers became aware of the potential for learning from their students. She concluded that this shared learning would become "a synergy or sorts where it does amplify that learning".

Participants A, B, E, G and H also spoke of the importance of collaborating with the whole team. Shared decision-making was interpreted as important. One participant stated that communicating with other staff members and whanau is necessary too. She stated that it is beneficial to gain feedback from parents to ensure that they are comfortable with

the programmes in the centre. The findings from all data sources concluded that consensus was reached within concepts of teamwork and shared leadership. Sharing decision-making with the whole team, children and their families was seen by the participants as essential to best practice in early childhood education. This concept may be likened to the synergy conjured when a group of fishermen in the community work together to pull the net of fish from the sea. One person could never do this alone. But through sharing the responsibility the group is empowered to raise enough kai moana (food from the ocean) for all of the families in the community. The participants concurred that one person could not lead alone.

The research process also found that leadership performance is at its peak in early childhood education within a shared model. This model includes children, families, health professionals, teaching staff, educational managers, outsourced coaches and other members of the community. These members come together and join forces to share the leadership of physical activity in early childhood education. It was concluded that everybody has the responsibility to inspire healthy outcomes in young children. Adults who may work with and consequently influence children may include police officers, community nurses, teachers, educational psychologists, social workers, centre leaders, voluntary agencies or charities, such as Plunket and Barnados (Nutkins et al., 2013). Children can also take responsibility through leadership roles too (Tamati, 2011). Bronfenbrenner's (1979, as cited in Nutkins et al., 2013) ecological model includes the immediate family, extended family, local communities (agencies, friends, neighbours, clubs, shops), and the wider society (structures of policy making, legal systems and the media). These are modelled as social dimensions that influence each other.

However, it is also important to have one main leader to make the tough calls and decisions during times of dilemma. Often this person will be the leader who is employed as the formal centre leader, or who has a formal leadership title. However, this leading will not always come from a formal top position but could emerge through emergent distributive leadership as the situation needs (Youngs, 2012). Through this lens, individuals with overall responsibility can stand back and allow for the agency of individuals to emerge in an environment of shared leadership.

Chapter six will provide a conceptual framework of the leadership model integrated with the physical activity form in early childhood education. For the purpose of this model leadership will be referred to as shared or individual. Shared leadership in this context includes whanau, educators, leaders, health professionals, outsourced coaches and children themselves. Individual leadership refers to a solo leader in a traditional heroic, focused, vertical form.

5.9   Summary

This chapter has discussed the findings of the research. It is crucial that children's vigorous physical activity is allowed and promoted within early childhood education. "Early childhood is unquestionably an important life stage to target for developing physical activity patterns and preventing lifestyle related disease" (Oliver, 2008, p. 135). Synthesis of findings from the data and literature within my research found that physical activity in the early years is impacted by the forms that are implemented in early childhood education. This includes how teachers understand physical activity and their interpretations of structured and unstructured physical activity. The overall findings suggest that both structured and unstructured physical activity can be valid, suggesting a blended hybrid state may exist in centres. Data indicated that as a guiding curriculum, *Te Whāriki* is successful in the early childhood education sector. However, some argued that a more explicit, direct physical activity curriculum would benefit the leadership of this curriculum area. Data also indicated that teacher confidence has a great impact on the leadership of physical activity. It was agreed that if a teacher becomes involved in physical activity himself/herself then his/her passion is more likely to grow in the classroom also, thus leading to a passionate implementation and role modelling of various physical activities in the education setting. One theme that emerged strongly through the data collection was the lack of confidence of children to partake in vigorous physical activity. Dyment and Coleman (2012) state that inspiring children to choose more vigorous activity was important. Furthermore, the data from participants asserted that this was an area that must be considered in the implementation of physical activity. The best way to encourage the confidence to participate included giving children the freedom and space to observe first, involving children's families through awareness, role modelling actively and providing a stimulating environment. Some data emerged to show the interpretation that this sector functions within a relatively tight budget. Finally, decision making within a shared leadership environment is a concept that is valued within this

sector. The interpretation from Youngs (2009) is that leadership does not exist simply because of those with hierarchical leadership titles or formal roles. Rather it emerges within contextual features of eclectic communities. The members of these communities have ever-changing roles and responsibilities. The blending of shared leadership with formal individual leadership, suggests a hybrid state exists with early childhood leadership.

6 Chapter Six: Conclusions and Recommendations

6.1 Introduction

This chapter aims to present a conclusion to the research data and also outline the key findings. Some recommendations to increase the learning outcomes of students in the participating centres are suggested and further areas for research are also indicated. The overarching question for this thesis was:

> How does shared pedagogical leadership impact on children's physical activity in early childhood education?

6.2 The Major Findings

The key findings of this study are as follows:

- A hybrid approach of leadership may be ideal for early childhood education.

- A ratio of both structured and unstructured physical activity in early childhood education may lead to best outcomes for children.

- The nature of *Te Whariki* is suitable for the early childhood sector. Explicit learning outcomes for physical activity may help teachers in their leadership roles of physical activity implementation.

- Early childhood teachers may lack confidence in leading physical activity programmes. Professional learning, personal interest and implementation of ako play a role in boosting confidence levels.

- The physical environment and available resources may restrict or optimise leadership capacity.

- A new language for shared leadership is emerging in the early childhood sector.

- All members of the community share the responsibility of leading and inspiring children in physical activity.

This section aims to illuminate the key findings of this study and signal the contribution of the research to the respective areas of the early childhood curriculum, pedagogy and leadership. The major finding of this study is that a hybrid approach of leading with both a focused and shared leadership approach may be ideal in early childhood education. This corresponds with implementing both a structured and unstructured physical activity programme in early childhood education. Knowing when to assist a young child in their physical movement capacity is key here. For this reason, it is essential that there is a focus on pedagogical leadership in the early childhood sector of education. Bringing about pedagogical change in this sector may be difficult. Raising teacher capacity in physical activity implementation may also be difficult for many reasons. Some of these reasons may include resources, time and space, budget from the government for professional learning and personal confidence. Therefore, leadership is needed in the early childhood education sector.

Regarding the time spent in various forms of physical activity, the literature that was reviewed often supported freedom of movement and respect for young children's own choices in physical movement (Fatai O et al., 2014; Pirard, 2013; Vamos, 2015). However, many outsourced and insourced structured physical programmes are very successful according to participant response in this study. Five of the six participants who were involved in the interviews suggested that the ratio for this mix should be higher for the implementation of unstructured physical activity. However, this ratio is contextual depending on the philosophy of the early childhood centre. It was found through participant response that outdoor nature play increased children's engagement with more vigorous activity in the centres of the participants. This research contributes to the implementation of the early childhood curriculum. Pedagogical leaders are encouraged to incorporate a higher level of unstructured physical activity, but also consider structured forms important.

This research contributes to current pedagogical literature as it calls for consideration of minor modifications to the early childhood curriculum. The co-creators of this curriculum advise that the measure of its value will be in changing patterns of whariki and reviews of guidelines of this curriculum (Carr & May, 1993). The curriculum is currently undertaking adjustments; however, these changes are not explicit to physical activity. The literature and participant response also concurred that *Te Whāriki* is a successful open-

ended curriculum. The nature of this curriculum is appropriate for the vast array of early childhood centres that now operate in New Zealand. However, one writer found that the openness of this curriculum instilled some ambiguity in educators in this sector (Jenkin, 2010). Two of the six participants involved in the interview process agreed that having access to a curriculum that had explicit learning outcomes for structured physical activity would assist them in their leadership of physical activity programmes in their centres. Building on Oliver (2008), this research suggests stronger regulations are needed for the formation of environments that are favourable to physical activity and that deter unhealthy levels of sedentary behaviour in young children.

The research inquired within the bounds of three main questions. One of these questions was concerned with teacher confidence in leading physical activity programmes. Some literature concurs that teachers lack confidence in leading these programmes due to external and internal reasons (Ernst, 2012; Oliver, 2008; Weisz-Koves, 2011). The findings obtained through the interpretive experiences of both formal and emergent leaders can be synthesised into the following points. The first is professional learning. Leaders of physical activity from the three early childhood centres stated that professional learning was the key to increasing their knowledge. All of the eight participants involved in the study also agreed that taking a personal interest in physical activity as an adult would boost their confidence in the leadership of physical activity in the classroom too. Some of the participants also spoke of how their confidence as a leader grew as they followed the children's interests and pursuits. This would also provide conditions conducive to 'ako' or reciprocity being extended into a centre's philosophy of shared leadership.

This research contributes to the leadership of physical activity in early childhood education by suggesting that leaders engage in professional learning, follow their own physical activity passions and share leadership decisions with children also. This study found that the environment can be both a restriction and opportunity in the leadership of physical activity. Minimal budgets were found to limit the amount that this sector could afford to spend on apparatuses. However, it was also found that leaders in this sector are likely to resource creatively. Excursions to local parks or beaches alongside gathering of natural resources provided these centres with ample physical activity programme material. Collecting leaves, balancing across a felled tree trunk or digging in the garden

were found to be more beneficial than some of the more expensive apparatuses employed for physical activity pursuits. These natural resources were also viewed by some of the participants in this research as safer than the manufactured options according to their interpretive observations. Finally, infant apparatuses were found to be a contentious subject in this sector of education. Some literature asserts that these contraptions, such as walkers and jolly jumpers, may even do the opposite of what they promise to achieve (Gerber, 2002). Some of the participant data concurred that these contraptions may actually limit or restrict infant movement rather than develop it. Therefore, this research calls for a larger budget for the early childhood sector and illuminates the creative resourcing powers of pedagogical leaders in this field.
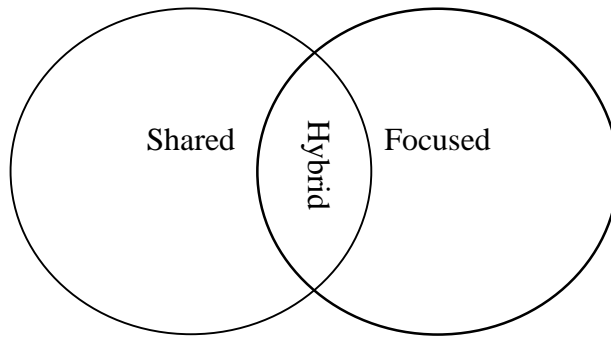
The intention of this research was focused on the ratio of shared leadership in early childhood education. As the adage advises 'it takes a village to raise a child'. We are all responsible to some extent for the upbringing of children in our cultures. The term 'ako' emerged through some of the above themes, and also within the shared leadership data. This conceptualises the reciprocal learning, teaching and leading that occurs within early childhood centres. Some literature suggests that forms of shared leadership language are emerging in early childhood leadership (Cooper, 2014; Krieg et al., 2014). However, it has been found that some professionals are still using centralised, heroic leadership language (Krieg et al., 2014). Collaboration in decision-making was asserted as being essential within this sector. However, one of the challenges interpreted within this process was encountering strongly diverse opinions within the team. This study contributes to leadership literature. It demonstrates that a combination of both shared and focused leadership is essential for the implementation of physical activity in early childhood education.

The shared leadership model includes children, families, health professionals, teaching staff, educational managers, outsourced coaches and other members of the community. Ideally, these members come together and join forces to share the leadership of physical activity in early childhood education. It was found that having one main leader within the centre is beneficial. This leader will make the tough decisions where consensus cannot be found. However, this model will only survive if leadership is shared. Within the leadership of physical activity this translates as everybody having the responsibility to inspire healthy outcomes in young children. In other words, the whole community will
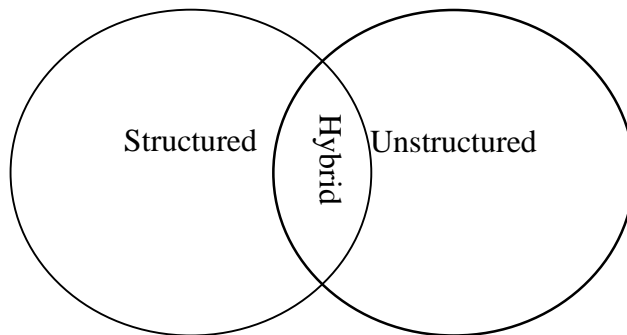
advocate and promote healthy physical activity choices. Within centres, educators can promote both unstructured and structured physical activity programmes. Outside of the centre, parents and families take over the responsibility for inspiring and role modelling this passion for a physically healthy lifestyle. Children may also lead their peers in these activities, both in centres or with families. Finally, an inspiring syllabus and well communicated health policies will provide the direction as the rudder of the leader-ship.

The overall finding of this thesis is that a hybrid approach of leading both unstructured and structured physical activity is optimal in early childhood education. The mix of unstructured and structured is contextual but will usually involve a larger percentage of unstructured physical activity. Teacher confidence plays a large role in the way programmes are led in early childhood centres. Through professional learning, personal awareness and connection with physical activity, programmes may achieve greater results in the education setting. Communicating the importance of unstructured physical activity and risk-taking is important. Role modelling and resourcing are also essential in promoting higher learning outcomes. Finally, all members of the family, health and education community share the responsibility for leading and inspiring young children in physical activity. Sometimes this will be standing back and allowing children to embark on the challenges they have already set for themselves. At other times it will be solely role modelling a ridiculous dance routine in front of peers and families. This dance could be the flame that ignites the lifelong love of physical activity in one young child's heart.

Two conceptual models are given below for the hybrid approach of both leadership and physical activity implementation.

Figure 6.1 Hybrid Pedagogical Leadership

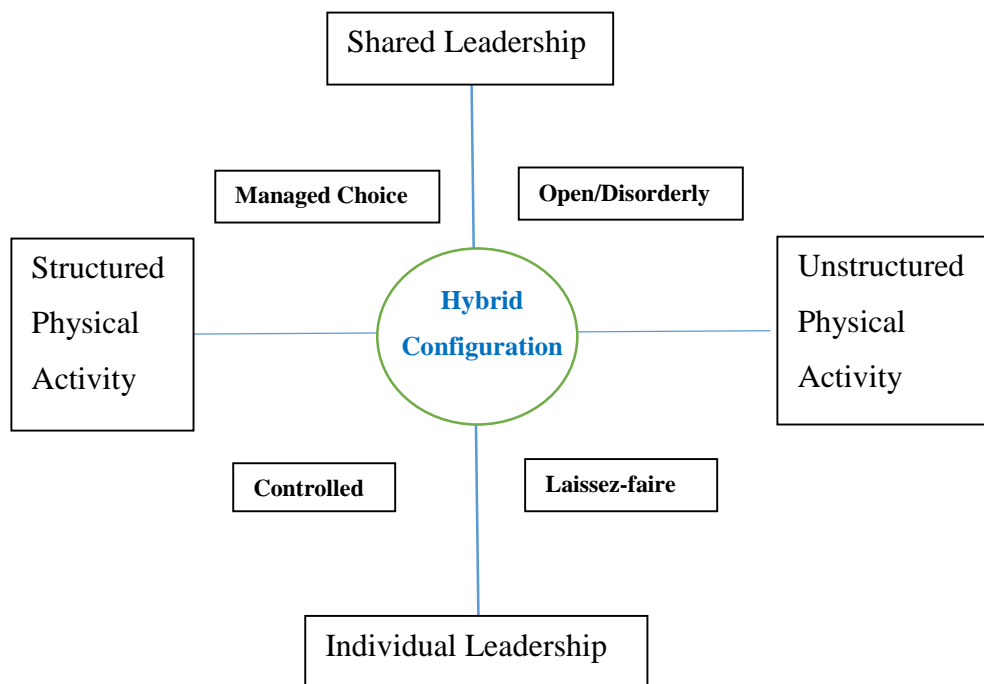*Figure 6.2 Hybrid Physical Activity*

A conceptual model for the combination of hybrid leadership and hybrid physical activity implementation can be viewed in the following manner. This framework may be used as a model for pedagogical leaders in the early childhood education setting. Essentially these leaders must hold the established patterns and flexibility in balance. This is at the heart of pedagogical leadership. Leaders would benefit from being aware of where they are placed within an axis that has shared leadership at one end and individual leadership at the other end. The same approach can be taken with physical activity, with unstructured activity at one end and structured activity at the other. Leaders are then able to ask themselves and other stakeholders:

- Where are we likely to be placed, as a team, on the axis?
- Do we experience a variety of leadership and physical activity in our centre?

- Do we need to make a shift or have a wider placement across the quadrant?
- Where would you place yourself personally on the axis?

This conceptual framework may also be used as a self-reflection tool for centres, staff appraisals and professional learning goals.

Figure 6.3 Conceptual Framework for Leadership and Physical Activity

Each subsequent quadrant can be described as follows.

Managed choice: This section of the axis promotes a shared leadership stance and a structured physical activity syllabus. Various stakeholders direct the running of the physical activity programme.

Open/disorderly: This style is concerned with a shared leadership approach and the implementation of an unstructured, free choice physical activity curriculum. The open nature of this style gives precedence to a child-led syllabus. But in its most open state may present as chaotic or disorganised.

Controlled: Physical activity implementation and all other runnings of the setting are structured by one individual leader. This is a strictly organised manner of running the centre.

Laissez-faire: Under this style unstructured physical activity is preferably led by one indidual leader. However, this leader is not generally proactive and does not interfere with the daily running of the programmes in the centre.

The more styles are in use at any one time, the more hybrid the leadership and physical activity becomes. This in turn, could produce a higher degree of complexity in physical activity pedagogical leadership.

6.3   The Strengths and Limitations of this Study

The employment of three data collection tools across three early childhood education settings allowed for triangulation of this research. Additionally, two of the centres were early childhood settings within Auckland, whilst the other was an early childhood education centre within a gym setting. Furthermore, all of the participants included within this study were experienced in leading physical activity programmes and three of the participants also had a formal leadership title. This added to the validity and rigour of this research. However, according to literature, all research will have gaps and all research will entail certain ways of implementing the research design. Readers will filter and understand research in a multitude of ways too (Youngs, 2011). This research is not exempt from these limitations. This research is based on a qualitative design. Therefore, the data has depth, however, the findings can only be taken as interpretive suggestions for better leadership of physical activity within this sector. This is due to the limited number of participants included within this study. The challenge to keep the focus on educational leadership arose at times. This may have been in part a consequence of the limited literature on shared leadership within the early childhood sector. It may have also been due to the tendency of professionals to see leadership as a leader-centric concept rather than through a more horizontal lens. Furthermore, although one male participant did fit the criteria for the data collection, and was rapidly invited to join the study, he was unable to participate this year. Therefore, although the literature review is rich with the male perspective, the data collection is somewhat limited in that it solely reflects the

experiences and interpretations of women. This does however, mirror the female-dominated environment of the early childhood sector.

6.4   Recommendations

The key recommendations of this study are as follows:

- The three centres involved in this study may benefit by studying shared leadership models.

- New definitions and discourse for shared leadership should be disseminated widely within the community.

- Leaders may create best outcomes by standing back and giving space for others to authentically emerge as leaders also.

- A pilot physical activity curriculum within early childhood education may be beneficial.

- The professionals involved in this study may increase their confidence in leadership capacity of physical activity through professional learning.

- Engaging in leadership of physical activity programmes that the leader is passionate about themself may correspond to best practice and greater student participation.

This section aims to shed light on the key recommendations of this study and demonstrate the contribution of the research to the respective areas of the early childhood curriculum, pedagogy and leadership. Based on the data retrieved from the three centres and from an extensive literature review it is recommended that the three centres involved in the study spend some time studying shared leadership models and forms and applying the conceptual framework for leadership and physical activity. It is my recommendation that the current discourse around our practice is too narrow to encompass a full understanding of shared leadership. New definitions are needed and must be disseminated widely. Furthermore, as much as the proactive leader seeks to create excellent outcomes, ironically this may be best achieved in some circumstances by simply standing back. Youngs (2009) asserts that if leadership emerges regardless of official role authority, then

this may have arisen due to space being deliberately created for others to apply their own influence. To stress this point, as formal leaders, we do not give power to anyone. However, leaders have incredible capacity to stand back and allow space for leadership abilities to emerge in others in a timely manner.

I recommend that it may be valuable to consider the pilot implementation of a physical activity curriculum within the early childhood sector, which is cognisant of the conceptual framework presented in this chapter. One researcher agrees and states that an additional physical activity curriculum may increase physical activity in early childhood education (Oliver, 2008). Preferably this curriculum would be malleable in its approach and live as a type of inspiration and resource for leaders of physical activity in the early childhood sector. It is my recommendation to have a more helpful syllabus that inspires and advises communities, managers, teachers and whanau how to formulate the physical environments that children learn and develop within. This syllabus may be in the form of a complementary physical activity curriculum. This curriculum may give the 'how' of implementation of physical activity in the yearly years. Ideally it could be freely accessed by leaders, teachers and parents.

It is also my recommendation that the professionals who participated in this research take on riskier challenges themselves by immersing themselves in further professional learning regarding physical activity leadership. More knowledge pertaining to healthcare and wellbeing for under-fives would also be hugely beneficial. The health and wellbeing of children is viewed as the responsibility of all from the findings in this research. Therefore, educators could increase their personal learning by searching for deeper knowledge regarding healthy physical outcomes for young children. I can surmise from the interpretations of participants and the literature that personal passion regarding physical activity corresponds largely to one's own success and confidence in this sector. Other professionals seeking to take the step into leadership of physical activity programmes in their centres might like to take this interpretive data as a kete (basket) of tips that may work in their own practice too.

6.5   Suggestions for Future Research

In the future I believe that it would be hugely beneficial for various forms of shared leadership in early childhood to be studied further. Pearce et al. (2014) give us an

excellent starting point with a quadrant of shared leadership styles: integrated, distributed, comprehensive and rotated. Essentially this framework could scaffold the construction of a much more elaborate library of research within the concept of shared leadership. It would certainly be an area I would be willing and eager to take the responsibility to continue studying in the future.

Nutritional practice in conjunction with physical activity and leadership influence would be another area of recommended study, particularly in how leadership practices and models may influence the nutrition of young children within early childhood education. For the purpose of this study, the gap which was identified and I hope is partially filled now, has been shared leadership influence in physical activity. However, healthy lifestyles are not limited to physical activity and are reached through other factors such as nutrition, rest and leisure activity time. I would also be very interested in pursuing qualitative or quantitative research about leadership impact on nutrition practice in early childhood education.

Finally, infant apparatuses are still a contentious term in early childhood education. Copious marketing and stores filled with the latest infant devices that claim to increase infant mobility and physical skill development line the shelves like cans in a recycling plant. I would like to see this area studied further too. It would be valuable to know if these contraptions are really increasing infant mobility or if, as some suggest, are ironically restricting the development of muscle growth in babies.

6.6   Concluding Comments

This research has investigated the impact of shared leadership on children's physical activity in early childhood education. It has specifically elicited interpretive data of teacher confidence, leadership understanding and community decision-making. This thesis has contributed to the wider body of literature regarding physical activity in early childhood education. It has done so by studying the impact of shared leadership and teacher confidence in leading physical activity in this sector of education. The area of this research is massively significant. Inspiring a love of physical activity in the early years may evolve into healthy physical habits in childhood, adolescence and adulthood, consequently, leading to a healthier lifestyle. The application of the conceptual framework requires some research now in practice, that is, a further study.

This research has been beneficial for the participants involved in this study as they have been able to gain further understanding about shared leadership and its impact on physical activity in their sector of education. On a personal note, the research journey has been both challenging and satisfying. I have gained further insight into shared leadership and the implementation of physical activity in early childhood education. I have also discovered how rewarding the research journey can be.

Finally, shared pedagogical leadership unequivocally impacts on children's physical activity in early childhood education. Educators' values, passion and qualifications may drive the leadership model that is present within various centres. Ultimately, leaders in formal and informal positions must hold the tension between a hybrid approach of both shared and focused leadership. These leaders must also find a balance between the forms of activity that are implemented within the centre. Therefore, the conceptual framework presented in this chapter could be applied as a typology of practice related to physical activity and pedagogical leadership in early childhood education.

Personal learning

The research process has been both a challenging and enlightening experience for me. I began this journey in the hope that I could make a positive impact on the implementation of physical activity in early childhood education centres. I wanted to understand the impact that shared leadership has on physical activity in the early childhood education sector. Along the journey I have discovered with immense joy that our own new addition to the family will be arriving at the end of this year. I hope that she too will be able to gain from this research. I have developed many new understandings of effective leadership practice. It is my hope that I will implement these strategies within my everyday leading practice and at home with our little family also. Furthermore, it is one of my greatest desires that this thesis, and the papers I write following this thesis, will contribute to the slowly burgeoning garden of shared leadership literature in early childhood education. I hope that the findings will benefit leaders, teachers, children and families alike.

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8   Appendices

8.1   Appendix A: Ethics Approval

29 April 2016

Howard Youngs
Faculty of Culture and Society

Dear Howard

Ethics Application: **16/168 The impact of shared pedagogical leadership on physical activity in Early Childhood Education. An interpretive analysis.**

Thank you for submitting your application for ethical review to the Auckland University of Technology Ethics Committee (AUTEC).

I am pleased to confirm that your ethics application has been approved for three years until 27 April 2019.

As part of the ethics approval process, you are required to submit the following to AUTEC:

- A brief annual progress report using form EA2, which is available online through http://www.aut.ac.nz/researchethics. When necessary this form may also be used to request an extension of the approval at least one month prior to its expiry on 27 April 2019;

- A brief report on the status of the project using form EA3, which is available online through http://www.aut.ac.nz/researchethics. This report is to be submitted either when the approval expires on 27 April 2019 or on completion of the project;

It is a condition of approval that AUTEC is notified of any adverse events or if the research does not commence. AUTEC approval needs to be sought for any alteration to the research, including any alteration of or addition to any documents that are provided to participants. You are responsible for ensuring that research undertaken under this approval occurs within the parameters outlined in the approved application.

AUTEC grants ethical approval only. If you require management approval from an institution or organisation for your research, then you will need to obtain this.

To enable us to provide you with efficient service, we ask that you use the application number and study title in all correspondence with us. If you have any enquiries about this application, or anything else, please do contact us at ethics@aut.ac.nz.

All the very best with your research,

Kate O'Connor
Executive Secretary
Auckland University of Technology Ethics Committee

30/04/2016

Project Title: The impact of shared pedagogical leadership on physical activity in Early Childhood Education: An interpretive analysis.

Dear pedagogical leaders, colleagues and friends.

As many of you are aware I am about to embark on a journey of research in accordance with the completion of my Master of Educational Research. The last year has taken me on a journey of discovery that has added to my knowledge and experience in the Early Childhood Education Sector within New Zealand and Overseas. *Te Whāriki*, the Early Childhood Curriculum Framework, creates the intricate holistic learning achievements for our tamariki (children). This document states that all children in Early Childhood Education settings should have the opportunity to be healthy in body, mind and spirit. These are not mutually exclusive but development in one area often leads to development in another.

What is the purpose of this research?

The influence of shared pedagogical leadership in the Early Childhood Sector is phenomenal. What I would like to discover are more strategies, skills and stories for developing practices that encourage and influence children in positive manners to engage in an active lifestyle from an early age. I have an inkling that this engagement may have wider impact within the whanau (family) setting and the wider community.

It is my hope that through this research I will gain interpretive knowledge, skills and strategies that can be used as tools to inform pedagogical leaders, within the early childhood setting, *how* to implement a successful physical

activity programme and therefore engage learners in a lifelong love of being active. I hope that along the way, through this sharing of ideas, children will be encouraged to take on leadership roles themselves within their homes and within the wider community, role modelling the love of an active lifestyle and sharing new insights with their peers and whanau.

How was I identified and why am I being invited to participate in this research?

I would greatly appreciate your contribution to this kete of knowledge and wisdom. I have chosen you as I believe you are one of the professionals that will greatly benefit this treasure trove by sharing your stories and experiences, tips and skills. I also believe that through our prior collegial bonds, associations and friendships within the early childhood context our capacity for sharing honest and valuable data will be enriched. Within this context I acknowledge our existing relationship.

What will happen in this research?

The project will involve one interview of approximately half an hour, a reflective writing opportunity and a focus/discussion group of approximately an additional hour. All of which are voluntary. You are under no circumstances obliged to participate in any of the above. If you would like to participate in a semi-structured interview, I would greatly appreciate your partnership and I will protect your participation accordingly. All names used in the research will be pseudonyms, any sensitive information will be stored in a safe, locked file at the University Campus. You will also have the right to leave the project after you have checked the transcripts.

What are the benefits?

As this research project is in conjunction with completion of my Master of Educational Leadership, you will be contributing to the learning that I will undertake through this course. I hope that this research will contribute benefits that reach far wider than this including the collation of data that supports pedagogical leaders in the implementation of a successful physical education curriculum. A journal article may be written and published on completion of data analysis also.

How will my privacy be protected?

All names used in this research will be pseudonyms and data will be held securely in a locked cabinet or a locked file on my computer. The only people who will see this data up until the data collection process is finished will be myself and my supervisors.

What are the costs of participating in this research?

The sharing of ideas and stories in the semi-structured interviews will take approximately half an hour, additional time may be spent within the focus groups and with the reflective task of approximately one hour. These tasks are voluntary and you may choose one or more of these tasks to participate in if you consent to participating in this research.

What opportunity do I have to consider this invitation?

Please allow for up to two weeks to consider participation from this invitation.

How do I agree to participate in this research?

If you would like to participate in this research, I will give you a consent form to sign. You may contact me directly or email or contact me via phone.

Will I receive feedback on the results of this research?

A summary of findings will be emailed to all participants in the research process.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor,

Dr Howard Youngs, howard.youngs@aut.ac.nz, +64 9 921 9999 ext 9633

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEC, Kate O'Connor, *ethics@aut.ac.nz* , 921 9999 ext 6038.

Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Thank you for considering this opportunity to develop a thesis of tips for other pedagogical leaders and whanau in the promotion of healthy bodies, minds and spirits.

Approved by the Auckland University of Technology Ethics Committee on *29th April 2016*, **AUTEC Reference number** *16/168***.**

A Karakia will be offered to participants prior to the interview and focus group initiation.

Potential Interview Questions

Please note that as the interview will be semi-structured and I will be collating data in a qualitative manner these questions may be modified within the interview process according to the response of participants.

1. What does the phrase 'children's physical activity' mean to you?
2. How confident are you in planning for and implementing a structured or unstructured physical education programme?
3. How are decisions made within your team regarding physical activity?
4. What role do *risk taking* and *accountability* play in your decisions when implementing physical activities?
5. What are some of the messages you receive from parents as to what is valued learning?
6. Can you tell me about some of your professional capabilities in encouraging and sustaining physical activity?
7. How does the physical structure of an e.c.e. setting, or the structure of routines, impact on physical activity programmes?
8. How does structured physical activity align with the principles of Te Whariki?
9. As a pedagogical leader how do you determine the worth of an outsourced structured physical education programme?
10. Who has the responsibility for encouraging physical activity? Is it pedagogical leaders, parents, other member of the community such as health professionals, or a mixture of all? What should this mix be?

Ethics application approval number 16/168

Focus Group Questions

A Karakia will be offered to participants prior to the interview and focus group initiation.

1. A few weeks ago we met to discuss structured and unstructured play. Is there anything you'd like to discuss initially?
2. Can we speak a little bit about planning again? How is planning a tool for influencing the physical education programme in positive ways?
3. What are your views on resources that give babies mobility before their muscles are ready to do so for themselves such as 'jolly jumpers' and 'walkers'.
4. What about music? Could you give me some examples of the way pedagogical leaders and children have used music to enhance the curriculum?
5. What are your thoughts on the natural environment and the man-made environment? How do these settings change the nature of physical exercise? Is one better than the other?
6. What would help you the most, as a leader, to implement or influence a successful physical education programme that impacted on successful outcomes for children's bodies, minds and spirits?
7. Is there anything else you would like to discuss before the conclusion of this focus group?

Adjusted Focus Group Questions

1. How do you interpret the difference between structured physical activity and unstructured physical activity?
2. How can we raise our confidence in leading physical activities in early childhood settings?
3. How can we inspire children to choose physical activity over sedentary activities?
4. How can we raise the confidence of children to participate in physical activity?
5. How can we invite families to share in the leadership of physical activity?
6. What are your views on resources that give babies mobility before their muscles are ready to do so for themselves such as 'jolly jumpers' and 'walkers'.
7. How do you interpret the challenges and benefits of working in a team environment?
8. What would help you the most, as a leader, to implement or influence a successful physical education programme that impacted on successful outcomes for children's bodies, minds and spirits?

Participant	Interviews	Thematic analysis
P.A.	Holistic Nature Solution: Athletic rolemodels for © Also: get tips from S.P.A coaches Be the ©'s assistant, share the decision with the whole team. Communicate. Reading emphasis	Educate parents
P.B.	© preference of sedentary activity • Solution: ♂ and funny, silly leaders Insource & teach current staff SPA is useful but we can insource	⊤ confidence; Solution Just give it a go. ♂♀ Professional Development Be risk aware. Have faith in © Educate parents Process not outcome
P.C.	HOLISTIC NATURE © preference of sedentary behaviour Solution get tips for S.P.A coaches Diversity of understandings of S.AA & U.P.A Solution:• Reconceptualisation of these concepts • specific guideline curriculum for P.A. Shared ⊙ship for decision making & risk minimisation Budgets/resources-insource & be creative OUTDOOR EQUIPMENT	⊤ confidence; solution: Guidelines (Justification) Parent Fears/over protective Educate parents © confidence: Allow risk taking Obesity & young ©
P.D.	Holistic nature Educate parents on their ©'s progress Solution: ♂, wide open space outdoors Te whāriki supports. Ako: © leadership: Everyone brings something to the table. Nature walks Various skill bases drawn upon. Let © guide you. PA is whole body · no gates/doors Real life experience Unstructured is not unsupervised. more useful than quals. ROPES, TREES, OUTDOOR EQUIPMENT © confidence: Instils Reading emphasis Inspired by outsourced PA to participants Attitude of ⊤	♂ Get involved in PA yourself! Get wet Have faith in © Te whakamana © confidence ⊤ confidence: Hybrid- do both. • Animated ⊙ship to 'get the crowd' © confidence: Don't restrict their capabilities by being over cautious.
P.E.	Holistic nature AKo Ask parents/families for resources use natural P.A. resources, nature walks OUTDOOR EQUIPMENT Outsourced S.P.A is useless	⊤ confidence: follow ©'s lead: resource Experience: PD is not enough. Get dirty Have faith in © © confidence: time & trust Process not outcome
P.F.	Reading emphasis Male rolemodels Holistic nature from outsourced PA Ambiguity of Te whāriki Be authentic, listen from the heart, connect @ others to promote shared philosophy. Listen to the ©. Nature walks PA is whole body Unstructured is not unsupervised. Health professionals must share their knowledge more/Health care module for undergraduate teachers OUTDOOR EQUIPMENT	Know the ©: observe & listen. BUT PD IS Experience Not lectures of books. ↗ GOOD. Assess risks Get involved in PA yourself! Don't be afraid to get dirty! Have faith in © Educate parents © confidence: social safety too Resource for safety eg babies trolleys Resource from nature for safety

Participant	Reflective Statements	Thematic analysis
P.A.	Smaller groups of children are easier to lead in physical activity due to safety restrictions. Planning should be a shared responsibility. Leaders encourage teachers. Parents don't always understand why unstructured physical activity is essential in ECE	Bring in confident, professional coaches who are trained in depth for P.A. coaching. Leaders and teachers in ECE have a huge responsibility to promote P.A. as they have a lot of time with children
P.B.	Children should not be limited by what adults deem to be unsafe. Children learn through both structured and unstructured physical activity. Both forms should be incorporated into team planning. PA leaders should be able to implement these activities without fear of being judged by their peers. • Educate parents of the benefits of unstructured P.A.	Good leadership ensures all teachers implement these activities at levels they are comfortable with. Leaders should have plans for personal growth for their teachers. Leaders grow others potential in an environment where they feel supported. mistakes are a personal learning journey. Rolemodeling starts from 'the top' & works its way down to teachers, parents & children. Excess 'stuff' does not help babies
P.C.	Physical activity is often last on the list of priorities for teachers. Being physically active yourself as a leader or teacher is not enough to have confidence to lead. Knowledge and support from other professionals is key to confident implementation.	It is a challenge to become an able facilitator of physical activity Teachers need to make P.A. a priority individually and as a group Find ways to enhance our learning & consequently enhance the learning of © . • This will ensure a lasting, holistic impact to children & families.
P.D.	Outdoor play and expansive space creates energy & activity for tamariki. This excludes bounds, fences, locked gates. What is the purpose of the ECE construct. We can lead tamariki into a joyful relationship with physical activity in any environment through intention. Sharing our own love of dance, sport, balance & strength ability as a rolemodel.	To love learning something new, to accomplish what we try, practice and strive to achieve. In any life endeavor. Academic analogy: Kia kaha mō to hīkoi runga to maunga teitei Strength be yours to climb the tall mountain.
P.E.	Though you may lack confidence, take up the challenge of leadership anyway. knowledge & experience are both essential. Management must consider budgets, ratios, allowance of non-contact time for planning. Safety must be addressed through staff ratios.	Training helps but is not everything, leadership comes from within. Always think about your reasons for resourcing & setting up. Decisions should be shared. A formal title gives authority Relationships & communication are key.
P.F.	Teacher confidence can be improved by ① providing up to date theory or knowledge to teachers ② involving themselves in physical activity. Physical activity leaders can make use of social media to voice out the importance of physical activity	Leaders should be required to ensure their centre meets certain standards of providing P.A. to all children through regulation. • There should be a main leader. Leadership should be shared when everyone is on the same page.