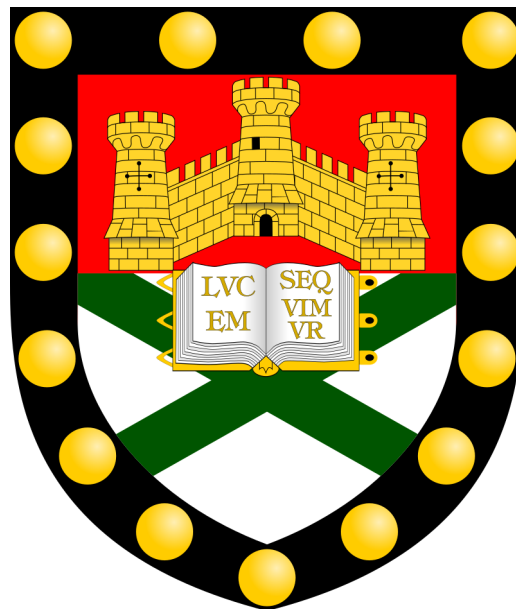


What are the experiences of non-ASC, primary-aged children participating in a school-based LEGO® Therapy intervention?

Submitted by
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to the University of Exeter as a thesis for the degree of Doctor of Educational Psychology in Educational, Child and Community Psychology in June 2022.



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Abstract

LEGO[®] Therapy was originally conceptualised by American clinical psychologist Dan LeGoff, outlined in his 2004 book *Using LEGO[®] as a Therapeutic Medium for Improving Social Competence*; based upon his clinical work with children with autism spectrum condition (ASC). Whilst working with children with ASC, LeGoff noticed that children in the waiting room of his Florida clinic would engage in pro-social and collaborative behaviour with LEGO[®], despite showing no previous inclination to voluntarily interact with others. Inspired by this observation, LeGoff decided to explore the efficacy of LEGO[®] as a therapeutic medium in a more formalised way as he felt that other therapy approaches were difficult, irrelevant, or un-engaging. Over a number of years and with several subsequent published studies, LEGO[®] Therapy became a formalised intervention with the aim of 'improving the social competency of children with ASC'. LEGO[®] Therapy has since become an intervention commonly adopted by schools for usage with a wide range of children with a range of Special Educational Needs and Disabilities (SEND), including those who do not have diagnoses of ASC.

The purpose of this piece of research is to provide a piece of literature to explore and provide some understanding of the current practice around the use of LEGO[®] Therapy as a social skills intervention for children without a diagnosis of ASC. The theoretical inception of LEGO[®] Therapy was formulated around the specific social learning difficulties that children with ASC present (LeGoff, 2004). However, the success of the approach has since attracted interest from a wider scope of professionals, who have co-opted the intervention as a more general tool for improving the social skills of all children, and there is currently no existing research that underpins this. Furthermore, no existing literature has sought to explore the experiences of key stakeholders within the intervention.

This study consists of two phases. The first explored the experiences and perceptions of school practitioners involved in the administration and delivery of LEGO[®] Therapy, and the second phase explored the perceptions and experiences of caregivers and children. Interviews, utilising a hierarchical focused interviewing (HFI; Tomlinson, 1989) approach, were completed with school-based LEGO[®] Therapy practitioners and school SENCOs, in order to gain organisational and professional perspectives, as well as interviews with caregivers of children receiving the intervention, and the children themselves (utilising a form of photo elicitation methodology; Yan, Yuejuan & Hongfens, 2005; Smith, Duncan & Marshall, 2005); in order to gain perspectives of key stakeholders benefitting from the intervention.

This study found that, generally, LEGO[®] Therapy is well received by practitioners, caregivers and children, and all parties feel that the intervention has strong utility beyond the initial (LeGoff, 2004; LeGoff & Sherman, 2006) research's focus. There are a number of structural and organisational factors which need to be considered (e.g., resourcing, training, intervention purpose) and given the socio-economic climate, may influence schools' decisions to implement and administer a LEGO[®] Therapy intervention. Furthermore, many of the factors identified as being of key importance to LEGO[®] Therapy's success are not unique to the intervention itself and may be explained, in part, by commonly occurring factors. Findings of this thesis also discuss whether LEGO[®] Therapy can be considered inclusive practice and considers the extent to which both caregiver and child voice has been implemented in the current delivery of LEGO[®] Therapy and outlines some discussion around future directions for the intervention.

Keywords: LEGO[®] Therapy; Qualitative; Photo Elicitation Interviews; Hierarchical Focused Interviews; Autism Spectrum Condition; Social Skills; Pro-Social Behaviour; Social Competence

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"For apart from inquiry, apart from the praxis, individuals cannot be truly human. Knowledge emerges only through invention and re-invention, through the restless, impatient, continuing, hopeful inquiry human beings pursue in the world, with the world and with each other"

Paulo Friere

"Be careful how you interpret the world; it is like that"

Erich Heller

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1. Introduction

In this introductory chapter I am seeking to provide the reader with an overview of the focus and rationale of this piece of research and situate it within a relevant context, outlining its importance, particularly to the field of educational psychology. I begin by outlining and defining what LEGO[®] Therapy is and what a LEGO[®] Therapy intervention consists of, as well as its overall aims and ambitions. This is then given context by linking it with my own professional understanding and observations, as well as the current socio-economic and political climate which influences the intervention's application. This is then followed with an overview of the structure of this thesis.

1.1 LEGO[®] Therapy

LEGO[®] Therapy was initially conceived and developed in a 2004 paper entitled *Using LEGO[®] as a Therapeutic Medium for Improving Social Competence* (LeGoff, 2004). The original impetus for its development was due to LeGoff's perceived 'scarcity' of effective school-based social skills programmes or interventions for improving the social skills of children with Autism Spectrum Condition (ASC) (LeGoff, 2004, p557). LeGoff (2004) also noted that existing approaches were difficult for children to attend to, were not engaging or provided opportunities which were wholly irrelevant to enabling them to succeed within a real-life social environment; and felt that a more conscious shift towards interventions which involved embedding children who struggle with social scenarios within a safe setting in which their social competence could be facilitated and supported.

Usually conducted in small groups of three or four participants, LEGO[®] Therapy is a structured and prescriptive form of using LEGO[®] which seeks to model a typical social scenario for children and young people with ASC and allows them to develop their social skills within a safe and unthreatening context.

Typically conducted in a designated quiet room within a school setting (LeGoff, 2004; LeGoff and Sherman, 2006; Baron-Cohen et. al., 2014) – usually primary (4-11 years old) – a LEGO[®] Therapy group will meet once weekly, for around forty-five minutes to an hour, to collaboratively build a pre-designated LEGO[®] set together. LEGO[®] Therapy groups will have a pre-established set of rules and guidelines, which all members must agree to and follow; usually reinforcing positive socially desirable behaviour (e.g., listening to others, waiting for your turn etc.). Within each session, each child is designated a specific 'role' to complete: one

child is the builder (i.e., the person who puts the bricks together), one child is the engineer (i.e., the person who reads and conveys the instructions from the booklet) and one child is the supplier (i.e., the person who selects the right bricks and passes them to the 'builder'). In sessions with four children, the fourth child will typically act as an 'observer' or as a 'manager' to oversee the process and will take a level of ownership over spotting children who have displayed good social skills and disseminating rewards. Each child is instructed to only complete their specific role and, as such, the LEGO[®] model can only be completed if children can effectively utilise good, clear communication, and display cooperative social skills; reminiscent of what may be expected in, for example, a classroom activity or a playground game (LeGoff, 2004).

Throughout the process a meta-conversation is continually taking place: with staff encouraged to be clear in highlighting positive pro-social behaviour that they notice, as well as discussing why it was positive and the effect that positive social behaviour had on the recipient, or the group as a whole. Child participants are also encouraged to involve themselves in these conversations as they become more adept at understanding and explaining the social skills they are developing; using the language of identifying good social interactions and explaining what was positive about them.

Throughout the building process, children are supported – in varying degrees – by an adult, who will help to model appropriate pro-social skills and reinforce behaviour where necessary. Some LEGO[®] groups also opt to integrate the usage of tangible extrinsic rewards, such as stickers and certificates to positively reinforce good social skills. Within the group, children also learn from each other and learn from the experience of negotiating a safe social scenario.

1.2 Research Context

Since its conception and initial research base, LEGO[®] Therapy has become a widely adopted school-based intervention for the development of social skills for children and young people, for a number of reasons. Throughout my professional roles, both as a teacher and as a trainee educational psychologist, I have observed schools using LEGO[®] Therapy for a wide range of purposes, and with a variety of children with different special educational needs and disabilities (SEND). As identified later, in the literature review of this thesis, this sits somewhat in contrast with the existing literature base which does not currently explore the use of LEGO[®] Therapy with children and young people who do not have diagnoses of ASC. As a developing professional I have noticed a disparity between the implications and recommendations of the

LEGO[®] Therapy literature and the real-world application of the intervention in schools and this, in part, is what inspired this piece of research.

Furthermore, due to the changing socio-economic and political landscape in the United Kingdom of the last fifteen years, the structure of educational psychology services, practices and training routes have changed (Department for Education, 2011; Farrell et al., 2006; Lee & Woods, 2017). Within the recent socio-economic climate of an austerity agenda, the role of local authorities (LAs) has also had to adapt, which has created a climate of implicit competitiveness and overt accountability, underpinned by LAs needing to limit their costs whilst maximising their effectiveness, with real-world shrinking budgets (Allen & Burgess, 2010). This environment has also affected schools, who also have to maximise their effectiveness within tightly managed budgets and, subsequently, have to select intervention approaches whilst considering the financial implications. Therefore, when schools make any pedagogical choices about intervention selection and delivery they are, implicitly, guided also by financial considerations.

1.3 Overview and Structure of Thesis

This thesis comprises five main chapters, which are outlined and explained individually below. This thesis is primarily written in the first person as this is broadly in-line with my philosophical positionality, in which I identify myself as a part of the research and cannot entirely detached myself from it, or objectify any data gathered. All data gathered in this research is socially mediated and, as a researcher, I hope that this will allow the reader to make more informed judgements about the quality of this work and the implications it may hold for the educational psychology community.

Chapter 2 of the thesis engages with constructs of social competence and engages with the current literature base for LEGO[®] Therapy. I will then explore the psychological basis for implementing LEGO[®] Therapy with children and young people who do not have diagnoses of autism spectrum condition and outline the gaps in the current literature base that this thesis is seeking to explore.

Chapter 3 of this thesis discusses the chosen methodology for both phases of this research and outlines the structure and methodological stages of this piece of research, including sampling, data collection, data analysis and ethical considerations. This section also explores my

philosophical and theoretical position and outlines the research questions that this research sought to answer.

Chapter 4 outlines the findings of this thesis organised under the research questions of the study.

Chapter 5 outlines the discussion of findings and seeks to provide answers to the research questions of this thesis. The discussion also raises wider points that arose from the findings, and discusses these in relation to the findings, and the socio-economic context of the research.

2. Literature Review

In this literature review I will first identify and discuss the underpinning concept of LEGO[®] Therapy's original ambition, which LeGoff (2004) defined throughout as 'social competence'. I will first discuss LeGoff's (2004) original study and discuss his initial conceptualising and framing of social competence, and then present an alternative conceptualisation, for the purpose of this thesis. This will then be supported by a rationale for the necessity of interventions which seek to improve children's social competence, and I will subsequently discuss a number of existing school-based interventions already undertaken routinely in UK schools. Then I will provide a rationale for LEGO[®] Therapy's potential effectiveness as an intervention for promoting non-ASC children's social development, underpinned by psychological theory and the current literature base and use this to identify the research gaps that this thesis is seeking to explore.

2.1 The Inception of LEGO[®] Therapy

LEGO[®] Therapy was originally conceptualised by American clinical psychologist Dan LeGoff, outlined in his 2004 paper *Using LEGO[®] as a Therapeutic Medium for Improving Social Competence*; based upon his clinical work with children with autism spectrum condition (ASC). Whilst working with children with ASC, LeGoff noticed that children in the waiting room of his Florida clinic would engage in pro-social and collaborative behaviour with LEGO[®], despite showing no previous inclination to voluntarily interact with others. Inspired by this observation, LeGoff decided to explore the efficacy of LEGO[®] as a therapeutic medium in a more formalised way as he felt that other therapy approaches were difficult, irrelevant, or unengaging.

LeGoff (2004) also noted that existing therapies for improving the social competence of children with ASC were framed largely around receiving and responding to direct instruction from adults 'leading' sessions. However, one of the main weaknesses of these approaches appeared to be that children with ASC undergoing these therapies could make progress within the context of the heavily adult guided session but could not generalise the social competence progress they had made to other contexts, for example: with friends in the classroom or siblings at home. Problems with generalisation of pro-social skills is common amongst nearly all social skills interventions designed for children with ASC (McConnell, 2002; Rogers, 2000).

LeGoff's (2004) premise circulated the idea that children with ASC could be promoted, through a structured intervention approach, to develop – what he termed – their 'social competence' abilities. The next section will explore this concept in more detail and follow on to provide a rationale for interventions which seek to improve children's social competence.

2.2 Conceptualising Social Competence

In this section I will begin by identifying and discussing what LeGoff (2004) defined as 'social competence' – including whether or not it can exist as a standalone construct, and whether or not the terminology is helpful - and then discuss this conceptualisation in relation to further theoretical literature. I will then introduce and discuss further literature that seeks to slightly shift the working definition of social competence, for the purpose of this thesis.

Difficulties with social perception, social understanding, interest in social engagement and atypical social interaction behaviours and patterns may ultimately be to the detriment of an individual's quality of life and adaptive functioning within a group, or in society as a whole (Klin et. al., 2007; Howlin et. al., 2004). LeGoff et. al. (2014) state that 'there is little doubt that longstanding, developmentally-based deficits in social functioning create significant, life-long disability' (2014, p119).

LeGoff's (2004) original research termed 'social competence' in its success criteria, which LeGoff (2004, p562) defined as 'initiation of social contact with peers'; 'duration of social interaction'; 'decreases in autistic aloofness and rigidity'; essentially surmising that children who had social competency difficulties were those that showed little inclination to independently engage with others, those that display a difficulty with sustaining social interactions and those that are either particularly 'aloof' or 'rigid' in thought.

Some studies, prior to LeGoff's (2004) original paper, have critiqued the use of the term 'social competence' as it is a construct with no consistent universal working definition (Ferrier, 1994; Nusbaum, 1999). Anderson and Messick's (1974) seminal review concluded that the term was often used a catch-all term for a range of specific difficulties that led children to have social difficulties, and that it lacked purposefulness and specificity. Ferrier (1994) concludes that, in research, the term is often used vaguely and is oft ill-defined, leading to inconsistencies in the research base which may make it difficult to observe trends or consistencies between literature.

One of the key difficulties with the existing LEGO[®] Therapy literature base is that it typically tends to continue to use the construct as ‘social competence’ as a proxy metric of LEGO[®] Therapy’s efficacy. However, much of the LEGO[®] Therapy research utilises different methodological approaches and measurement tools which all purport to measure the same thing (i.e., ‘social competence’) whereas, in fact, they are measuring slightly different concepts (e.g., Owens et. al. (2008) using ‘social skills’ as defined by the Gilliam Autism Rating Scale; Andras (2012) using observed frequency and duration of play-time social interactions as a ‘social competence’ proxy measure; or Brett (2013) utilising a combination of observation schedules and ‘social skill’s as defined by the Vineland Adaptive Behaviour Scale). Junge et. al. (2020) outline how, in research, the concept of social competence is often difficult to define exactly and, in turn, is difficult to operationalise as a consistent construct. This subsequently means that a research base that may look consistent in theory (e.g., such as the literature base of LEGO[®] Therapy) may, in fact, actually be incorrectly ascribing consistency to a loosely and incongruously defined concept.

LeGoff’s (2004) original motivation for the creation of LEGO[®] Therapy circulated around the idea that children with autism spectrum condition (ASC) ‘ignore the usual social pressures to conform to peer groups, imitate peers, cooperate with them or compete with them’ (2004, p563). Within this framing there is an embedded ideological positionality which would suggest that, ultimately, adults should be intervening to help neurodivergent children (i.e., “children with conditions such as autism, ADHD, or dyslexia... whose behaviours can be characterised by non-dominant cognitive styles that lead to differences in e.g., sensory processing and social interaction”, Frauenberger et. al., 2020, p2) to follow an agreed perception of what appropriate or acceptable social behaviour should look like. One could subsequently voice the opposing position and argue that it might not have to be the role of a neurodivergent child to learn how to modify their own behaviour to match the social expectations of the majority (Hayes, 2022).

If one were to make a conscious shift from a medical model of disability – which Shakespeare (2006, p325) defined as viewing “disability as a property of the individual body which requires intervention” – to a more social model of disability perspective – defined by Burchardt as “conceptualising the disadvantage experience of people with impairments which emphasises the social, economic and environmental barriers to participation in society” – one’s stance (and subsequently the philosophical stance of research) exploring autistic children and young people’s neurodiversity may change (Burchardt, 2010, p1). Some more recent literature which outlines ‘good autism practice’, such as that by Morewood et. al. (2011), posit instead that it

should be the role of educators to promote the inclusion of these children; and teach others to accommodate and accept those that are neurodiverse, rather than to change their behaviour to mirror that of their neurotypical peers.

Calder et. al.'s (2013, p1) study explored the 'extent and nature of autistic children's friendships from their perspective; concluding that, on many occasions, adults supporting children and young people with autism sought to intervene with their friendships and felt it was their responsibility to play an active role in facilitating the development of autistic children's social skills. However, Calder et. al.'s (2013) study found that, often, adults intervened in a way which they considered to be in the child's best interests and that this often conflicted with the child's desires. The findings of Calder et. al.'s (2013) study indicate that a 'broad brush' approach to supporting the social development of children and young people with autism is not necessarily an effective approach, and that gaining the views and perspectives of all involved children and young people is essential to underpinning effective, meaningful intervention. As identified and discussed later within this literature review, the current evidence base which underpins the utilisation of LEGO[®] Therapy rarely considers the viewpoint of the children and young people involved, and this is one of the gaps in the literature that this thesis seeks to explore.

For the purpose of this thesis, a working definition of social competence is better understood by considering the perspective as outlined by Odom et. al. (2008), who conceptualised social competence as a multitude of behaviours characterised not only by a child's intrinsic and personal competencies, but one also influenced by the social environment in which a child lives. To re-purpose terminology coined by Whitehurst and Lonigan (2008), a child's social competence is in essence an amalgam between skills which are 'inside-out' (2008, p854) (e.g., a child's proclivity to initiate social scenarios, or personal confidence with peers) and skills which are 'outside-in' (2008, p854) (e.g., the opportunities a child has to interact socially, the scaffolding and support that they are offered).

With this in mind, it is important to consider specifically what is meant by 'social competence' with regard to the discrete skills that underpin it. Yager and Iarocci (2013) created the Multidimensional Social Competence Scale (MSCS); which conceptualised social competence as a combination of seven categories: social motivation, social inferencing, empathy, social knowledge, verbal conversation skills, nonverbal sending skills and emotional regulation. Thus, reframing the concept as a multi-dimensional model of discrete, measurable interrelating skills. This perspective is one that is used in this study.

2.3 Rationale for Interventions Which Improve Social Competence

Social skills are an integral part of every human being's functioning within society (Meier et al., 2006) and developing these skills early with children is key to preparing them for a lifetime of healthy interactions and relationships with others. Being able to display good manners and effective communication are culturally regarded as significant developmental milestones in every child's life (Baumgart et al., 1991). If a child or young person - for example - is unable to take turns, display empathy, acknowledge personal space or learn social common overtures, they may struggle to effectively engage with friends, peers, and colleagues throughout life.

There is evidence to suggest that children who present with social skills deficits in early life may underachieve academically and occupationally (Howlin & Goode, 1998). Levin (2012) also argues that, when attempting to predict future workplace success, extrapolating from test scores or intelligence quotients (IQ) might be inappropriate or inaccurate. Measures of non-cognitive abilities, such as pro-social skills and academic motivation, are far better predictors of workplace success (Levin, 2012). Whilst cognitive skills play an undeniably central role in underpinning both academic and occupational success, Kautz et al. (2014) argue that one's academic or cognitive strengths are largely mitigated by one's non-cognitive skills; an effect which is observable particularly within education settings. For a child to be successful in school, both social-emotional and cognitive skills are necessary, as children must not only achieve in the academic aspects of school but navigate the social environment too (Duncan & Magnuson, 2011; Conti & Heckman, 2013).

Conti and Heckman (2013) suggest that promoting early childhood opportunities for the development of non-cognitive skills, such as socio-emotional and social competency skills, consistently facilitates healthier transitions to adulthood, as well as fostering improved occupational readiness and success. Heckman and Kautz (2012) argue that targeting non-cognitive skills, such as socio-emotional skills and social competence, in a child's early years – defined in their work as 'elementary years', the United States' equivalent of primary school – may be pivotal to promoting a lasting impact. Heckman (2006) further argues that the investment costs in early interventions broadly pale in comparison to the benefits, when the social, societal, and economic impact of social-emotional needs is considered over a lifespan. Indeed, Jones et al.'s (2015) study found statistically significant correlations between a child's measured socio-emotional skills at kindergarten (4-6 years old) and broader life outcomes, such as: their employment status, substance misuse behaviour and criminal activity. Whilst it must be stressed that the correlations seen in Jones, Greenberg, and Crowley's (2015) cannot

and should not be used as proxy measures for interpreting causality, the evidence may well support a compelling case for early intervention in children's social competence. Poor social skills may also be seen as a strong indicator of mood and anxiety problems later in life (Myles, 2003).

Supporting children with their social skills may be a key early intervention if lasting meaningful change is to be made to their overall personal, social, mental, academic, and occupational life outcomes. Furthermore, some research shows that social skills deficits do not improve with development (Schopler & Mesibov, 1983). Instead, distress caused by difficulties with social skills may only increase over time, as children and young people become more aware of their social difficulties and relationships becoming more complex (Schopler & Mesibov, 1983; Tantam, 2003).

In summary, there is a strong rationale to suggest that intervention approaches which seek to improve children's social competence skills can be useful, purposeful, and meaningful for children who may not otherwise have developed these skills. The next section acknowledges and discusses some interventions that seek to improve children's social competence, that are already adopted in UK schools.

2.4 Social Skills Interventions

Structured social skills interventions are typically popular approaches in UK schools and are commonly adopted across a range of mainstream and specialist settings, across both the primary and secondary age ranges (Wolstencroft et. al., 2018). Typically, these interventions seek to improve children's social skills through a combination of explicit instruction, group working, role playing or parent/carer coaching (Safer-Lichtenstein et. al., 2019). UK schools have adopted a number of evidence-based intervention approaches to promote the development of social skills for children with a range of needs in school, some of which are discussed below.

There has been extensive research into more structured social intervention approaches. Karkhaneh et. al.'s (2010) meta-analysis, for example, explored the efficacy of Social Stories™ and found that the intervention provided statistically significant positive results for improving the social skills of children with ASC. Koegel et. al.'s (2016) study exploring the effectiveness of 'Pivotal Response Treatment', an intervention which seeks specifically to stimulate autistic children's motivation to interact with others, also returned positive results. Reichow et. al.

(2012) also explored the efficacy of social skills groups in schools, a popular intervention approach. Their summary of studies also indicated the overwhelmingly positive impact of the intervention, with zero reported adverse effects.

There has also been a number of studies that evidence the positive impact of social modelling from adults and peers. Laushley and Heflin (2000) found that pairing autistic children with a small peer group, who could act as 'mentors', has a significant positive effect on the quantity and quality of children's pro-social interactions. Similarly, Sng et. al.'s (2014) review found that there was a large amount of evidence to suggest that the use of video modelling helped to improve the social interaction and conversational abilities for children with ASC and found that results were generally consistently positive across a range of studies ($N= 358$).

There are a number of research-backed interventions to improve the social skills of school aged children and yet in my professional experience, as discussed above, LEGO[®] Therapy is being utilised to meet this need for a wide range of children in UK schools, despite there being little evidence for it (Bond et al., 2016) and being used in different ways that originally designed (LeGoff, 2004). LEGO[®] Therapy is currently being utilised by schools to meet a diverse range of needs, with little underpinning evidence (Evans, 2019), and the understanding of the experiences of key stakeholders has yet to be explored. This, in part, is one of the ambitions of this thesis.

To begin to understand the appeal of LEGO[®] Therapy, and to begin to explore schools' rationales for selecting the intervention as a mediator of social competence skills in non-ASC children, I will begin by highlighting and discussing relevant psychological theories, which underpin LEGO[®] Therapy. After identifying some relevant psychological theories, I will then link these to the current literature base which explores LEGO[®] Therapy's efficacy and effectiveness, before highlighting gaps in the literature and outlining the purpose of this thesis.

2.5 Psychological Frameworks for LEGO[®] Therapy

2.5.1 Social Learning Theory

One of the driving theories behind the success of LEGO[®] Therapy is the idea that children can learn social skills in a small group environment, where positive social interactions are modelled by staff and other peers and gives children an opportunity to observe and imitate pro-social behaviour in a safe environment (Harris & Handelman, 1997; Koegel, 1995). The psychological

principles which underpin LEGO[®] Therapy are somewhat akin to Bandura's (1977) social learning theory, which builds upon the praxis of both classical (i.e., learning through association) and operant conditioning (i.e., learning through behavioural reinforcement) and further posits that behaviour is learned from the environment through observation and that between a stimuli and a response, a mediating process must occur (Morrison et. al., 2001).

Within the context of a LEGO[®] Therapy environment, the above outlined social learning theory principles are clear. Children are placed in a small group of peers and, with adult support, are prompted to engage in a shared task or goal. Crucially, children are only able to obtain their shared objective (i.e., building the LEGO[®] model) if a collaborative effort is made, and their team working and communication is effective; as each child can only play one role within the group (i.e., one child cannot complete the LEGO[®] building process themselves). Through this cooperative process children learn to communicate with one another in effective and appropriate ways. Children's pro-social behaviour is modelled by others (i.e., children get to observe their peers having successful and unsuccessful interactions), is reinforced through success or failure (i.e., children are reinforced by an adult or their peers positively or negatively if their interaction goes well, or is appropriate) and children learn to associate their social actions and social communications with outcomes (e.g., asking someone for something returns a better response than taking it from them without asking).

2.5.2 Scaffolding and Zone of Proximal Development

Another psychological perspective relevant to a LEGO[®] Therapy intervention is drawn from Vygotsky's social interactionist perspective (1978). Vygotsky (1978) posited that cognitive processes are initiated through social contexts, and that development of these occurs on two levels. The first level is embedded within independent learning; where children are able to take ownership of problems, and creatively problem solve without support. The second level is termed the 'zone of proximal development' (ZPD); which Vygostky (1978, p.86) defined as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers".

Within the context of a LEGO[®] Therapy intervention, both the guidance provided by the adult facilitator and the inter-dependence that participant children need to display in order to achieve the task outcomes take place within the zone of proximal development. The nature of the intervention provides children with a safe context in which to rehearse and practice

bridging 'the distance' between their current social competency abilities and the ability to implement them fluently and independently. Furthermore, Vygotsky's (1978) reference to the inclusion of 'more capable peers' hold particular significance in the context of this research, as one of the aims of this research is to explore the roles that non-ASC peers play within the context of LEGO[®] Therapy sessions: whether or not, to an extent, they help to 'guide' their peers with ASC in their own zone of proximal development.

2.5.3 Constructive Application Theory

A third theory which may underpin the efficacy of LEGO[®] Therapy is one which primarily concerns the motivational aspect of the approach. Whereas the previously mentioned psychological theories outline the cognitive processes which may underpin the 'learning' of pro-social skills, Attwood's (2006) constructive application theory may outline theory as to LEGO[®] Therapy's success in terms of the motivational factors which help to keep children with ASC engaged in the intervention for a meaningful duration.

Attwood (2006), essentially, argues that neurotypical children tend to be able to be intrinsically motivated by wanting to please their parents or teachers, to impress their classmates and peers or to act in a way which would see them included within a social group by enacting a certain social identity. Neurodivergent children, such as those with ASC, may not necessarily act this way; and may rely on differentiated motivational approaches to sustain their focus and engagement. Attwood (2006), therefore, argued that for most interventions to be meaningful, purposeful, and successful for children with ASC, it must be constructed around a pre-existing interest or source of existing motivation for that child or young person. LEGO[®] as a resource and as a concept, according to LeGoff (2004), is one which is felt to be intrinsically motivating; especially for neurodivergent children. LeGoff (2004) felt that utilising LEGO[®] was a key facet of the therapy's success, as neurodivergent children found the process of building LEGO[®] models to be logical, methodical, and process-driven, which he found to be appropriate for their typical cognitive profiles. In essence, LEGO[®] is a resource which – due to its practical and logical nature – is already motivating for children and young people with ASC. Building a therapeutic approach around this resource, which children with ASC typically already find motivating, may be one of the key psychological components which underpins its success.

The previous section may go some way to identify and outline schools' rationales for implementing a LEGO[®] Therapy intervention for non-ASC children, by outlining relevant

psychological theory that can be seen as underpinning LEGO[®] Therapy. The next section explores the current evidence base for LEGO[®] Therapy, including the original research which inspired its inception, and discusses the evidence which both promotes and questions its usage.

2.6 Research Basis for LEGO[®] Therapy

The search for the literature included within this section was facilitated by the use of online search engines, including EBSCO, PsychArticles, PsychINFO and Google Scholar. Some other literature included published UK Government documents have also been referenced throughout this thesis. The key search terms used for this literature review were: “LEGO Therapy”, “LEGO”, “LEGO interventions”, “LEGO” + “social skills”, “LEGO” + “social competence”, “LEGO” + “social”, as well as specific searches for “LEGO” or “LEGO Therapy” + “SEMH”, “Non-ASC” and “Neurotypical”. Studies were typically included if they explored the use of LEGO[®] Therapy in any capacity with school-aged children. Some literature (e.g., previous DEdPsych theses) was also accessed through the online library systems of some UK universities (e.g., the University of Exeter) where institutions have decided to internally publish these bodies of work. The same search criteria were applied to these internally operated search engines.

The evidence base which underpins the current usage of LEGO[®] Therapy is small in both amount and scope but represents a fairly consistent picture of LEGO[®] Therapy’s strengths and limitations. LeGoff’s (2004) original study is universally regarded as the original instigator of LEGO[®] Therapy as an approach. Over a twelve-week timespan, LeGoff delivered weekly two-and-a-half-hour LEGO[®] Therapy sessions in his Florida psychology clinic, with forty-seven children – all of whom had diagnoses of Autism Spectrum Condition (ASC). LeGoff (2004) took pre- and post-measures using the ‘Social Interaction’ subscale of that Gilliam Autism Ratings Scale (GARS; Gilliam, 1995). LeGoff also trained a number of behavioural observers to observe children in unstructured times and to record their pro- and anti-social behaviours accordingly. LeGoff (2004) found statistically significant improvements in children’s pro-social behaviours over the course of the twelve weeks; children were more likely to initiate and engage in social interactions post-intervention, and social interactions lasted longer.

However, therein exist some methodological weaknesses that must be acknowledged. Firstly, the sample size of LeGoff’s study ($N=47$) is small, and participants were not selected at random. Rather, they were all young people (aged 6-16) who were referred to LeGoff’s clinic;

and no other confounding variables, other than their IQ, (e.g., other learning needs, medical diagnoses, ethnicity etc.) were controlled for. Secondly, whilst this study presents a useful initial argument for the usage of LEGO[®] Therapy, it must be acknowledged that the research occurred within a clinical setting, with a significant amount of weekly time (150 minutes) committed to the sessions. One could subsequently propose that – whilst useful – the results of this study cannot be considered ecologically valid or necessarily representative of LEGO[®] Therapy's applicability to a school or classroom environment (Kihlstrom, 2021). Lastly, LeGoff (2004) utilised the Gilliam Autism Ratings Scale (GARS; Gilliam, 1995) both pre- and post-intervention as a measure of progress. However, it has been proposed that the GARS presents with questionable psychometric properties and can often report a high rate of false negative results (Mazefsky & Oswald, 2006), making it an unreliable tool for clinical research. I would also suggest that there are certain problematic ideologies embedded within the GARS, as in some sections it would characterise behaviours such as avoiding eye contact, displaying social anxiety, being 'unaffectionate' and displaying aversion to physical contact all exclusively as traits of ASC which, context dependent, are not exclusively characteristics unique to children with ASC.

Whilst LeGoff's (2004) initial research as discussed presents with some methodological concerns, it is nevertheless considered a landmark piece of research in developing the LEGO[®] Therapy approach to improving social competence. Following on from his initial research, LeGoff and Sherman's (2006) study attempted to explore and measure the long-term impact of a LEGO[®] Therapy intervention, two years on from the initial study. LeGoff and Sherman (2006) collected existing Vineland Adaptive Behaviour Scales (VABS; Sparrow & Cicchetti, 1985) and Gilliam Autism Ratings Scale (GARS; Gilliam, 1995) scores for children who had completed LEGO[®] Therapy sessions consistently for three years ($N= 60$), which were then compared with comparative scores of a control group of children who had received no social skills intervention but whom had been referred to the mental health support services ($N= 57$). Participants were matched as best possible between groups on the basis of age, sex, and diagnoses. LeGoff and Sherman's (2006) study found that children who had received LEGO[®] Therapy had made statistically significant improvements in their social competence, as measured by the GARS and the VABS, when compared to the control group.

Again, however, one could identify methodological weaknesses in this study. Firstly, the authors selected their measurement tools 'post-hoc', after the data had already been collated. LeGoff and Sherman's (2006) study utilised several measurement tools, but only reported data analysis from the GARS and VABS which, as discussed, may have had some psychometric issues

(GARS; Gilliam, 1995; Mazefsky & Oswald, 2006). Secondly, as identified in LeGoff's original study, the research occurred within the context of a clinical setting, and therefore may not be a representation of LEGO® Therapy's effectiveness upon its later adaptation to school contexts.

The third and final study which forms the original research basis of LEGO® Therapy was conducted by Owens et. al. (2008). This study was the first to explore the usage of LEGO® Therapy in the United Kingdom, and also the first to provide a comparative study design against an existing social skills intervention, the Social Use of Language Programme (SULP; Rinaldi, 2004). Owens et. al. (2008) recruited twenty children with diagnoses of ASC or Asperger's Syndrome through Cambridge University's Autism Research Centre. An unspecified parental questionnaire was adopted, and children were grouped into matched pairs based on the outcomes of these questionnaires, with one child from each pair receiving a weekly LEGO® Therapy intervention, and the other receiving a weekly SULP intervention; allocated randomly. Active intervention participants were also compared against a third group of children with ASC diagnoses, acting as a 'control group', who were active participants in a different Cambridge University study, but who did not receive any social skills intervention input. The authors used pre- and post-measures of the GARS (Gilliam, 1995) and the VABS (Sparrow & Cicchetti, 1985) as measures of social competence, as well as using an observation schedule at unstructured social times.

The results of Owens et. al.'s (2008) study appear to indicate the significant positive effect that LEGO® Therapy has on the development of social competence in children with ASC. The authors found that children who had undertaken a weekly LEGO® Therapy intervention had statistically significant lower incidences of ASC specific social difficulties, when compared to children in the SULP and control groups. The authors also found that children who had completed a LEGO® Therapy intervention were also more likely to initiate social contact in unstructured times and that, on average, these interactions lasted longer when compared to participants in other groups. Interestingly, the authors further concluded that LEGO® Therapy was more effective for children with 'maladaptive behaviour' than it was for children with speech, language, and communicant needs (SLCN), but the exact mechanisms behind this are not explored.

Whilst, initially, this study appears to corroborate existing research by LeGoff (2004) and LeGoff and Sherman (2006) in providing a consistent research basis for the implementation of LEGO® Therapy there are, again, a number of methodological limitations that must be

acknowledged. Firstly, as the participant children in the control group were simply gathered based on their convenience of being involved in another study already being conducted by Cambridge University, it cannot be stated that these participants were randomly allocated to this group. It must therefore be considered that children in the control group may have had unidentified characteristics that made them an inappropriate control group, which was not explored by the authors. Secondly, in this study both the GARS and the VABS (again presenting possible psychometric issues; Mazefsky & Oswald, 2006) were completed by parents who knew of the intervention and knew of its aims; therefore potentially 'priming' participants to make favourable judgements about their children's social competency progress.

Since LEGO[®] Therapy's original inception, a small research base has developed seeking to both further explore the implementation of LEGO[®] Therapy and attempting to replicate the original findings, with mixed success. Following an initially strong research basis, as identified above, more recent literature has struggled to consistently replicate the findings of LeGoff's (2004) seminal study. I will now identify and discuss more recent academic literature exploring the efficacy and effectiveness of a LEGO[®] Therapy intervention, which will then lead on to identification and discussion of the gaps in the literature that this thesis is seeking to explore.

Some studies report the positive impact of LEGO[®] Therapy on school-aged children and have been able to largely replicate the results of the original studies. Andras's (2012) study explored the effects of a 45-minute weekly LEGO[®] Therapy intervention implemented within UK primary schools. Eight pupils (aged 8 to 11) with diagnoses of ASC were observed six times over the course of the academic year, in ten-minute snapshots whilst concurrently receiving a weekly LEGO[®] Therapy intervention from a trained member of staff. Andras (2012) found that children who had completed the intervention significantly increased their frequency of social interactions, increasing the frequency of verbal communication and decreasing incidences of inappropriate physical contact and copying behaviours. Children also showed increased inclination to engage in organised playground games.

Furthering Andras's (2012) work, Brett's (2013) study built upon the original praxis of LeGoff (2004), LeGoff and Sherman (2006) and Owens et. al. (2008) and sought to explore the extent to which social competence could be improved by a weekly, UK school-based LEGO[®] Therapy intervention. In Brett's (2013) study fourteen children with diagnoses of Asperger's Syndrome received a weekly, forty-five-minute LEGO[®] Therapy intervention for nine weeks and progress was measured through pre- and post-Vineland Adaptive Behaviour Scales (VABS; Sparrow & Cicchetti, 1985) and the use of a 20-minute playground observation – which was adapted from

the observation schedule utilised by Owens et. al. (2008). Brett (2013) found that, after the intervention, children increased the frequency and duration of self-initiated social interactions, and measured significant increases in adaptive socialisation skills, which provides a useful point of corroboration with previous LEGO[®] Therapy research and provides further evidence for the efficacy of implementing a weekly school-based LEGO[®] Therapy intervention.

Building upon the work of Andras (2012) and Brett (2013), Levy and Dunsmuir (2020) also sought to measure the impact of a LEGO[®] Therapy intervention on the social competence of children with ASC. Their sample consisted of six secondary aged boys with ASC, who all completed a weekly LEGO[®] Therapy intervention, delivered twice weekly for 45 minutes with a mixture of children with ASC and typically developing peers. All sessions were video recorded and analysed by the authors, and pre- and post-intervention Social Skills Improvement System checklists (SSIS; Elliot & Gresham, 2007) were given to parents and teachers. The authors found statistically significant increases in duration of social engagement, frequency of initiations, responses, and positive social behaviours within the context of the sessions (found through video analysis) and found that skills were sometimes generalised to other contexts, according to the SSIS, but that this was inconsistent. The results of this study appear to support the usage of LEGO[®] Therapy to support the social competency development of children with ASC, however, it must be acknowledged that, in this study, LEGO[®] Therapy sessions were delivered twice weekly, which is double the amount of intervention time delivered in all other research, and twice the outlined frequency as proposed by LeGoff (2004), and may not represent a realistic representation of the feasibility of schools' capacity to deliver.

Whilst the above-outlined study provide a strong rationale for the efficacy of LEGO[®] Therapy, some research has begun to question the true effectiveness of the intervention in UK schools. Boyne's (2014) study, for example, built on the hypotheses explored by Brett (2013), and also sought to measure the effectiveness of LEGO[®] Therapy for children with ASC in mainstream UK classrooms. In Boyne's (2014) study six children with ASC received a weekly thirty-minute LEGO[®] Therapy intervention from trained school staff. Children were filmed weekly for ten minutes engaging in a social activity and a Social Competency Inventory (Rydell et. al., 1997) and a Belonging Scale (Goodenow, 1993) were completed pre-, post- and delayed post-intervention (six weeks delayed). Boyne's (2014) results showed that there were some positive effects, measured through the observations and two questionnaire inventories, but that these effects were largely changeable. Boyne (2014) concluded that there was some evidence to

suggest social skills adaptations can be maintained (as measured by the delayed-post measures).

Cheng's (2015) study further built upon the framework of both Brett (2013) and Boyne's (2014) studies and sought to explore the effect of a school-based LEGO[®] Therapy intervention for children with ASC. Uniquely, Cheng's (2015) study design split participants ($N= 23$) into three groups: one group containing only children with ASC, one group containing a mixture of children with ASC and typically developing peers, and a control group who received no intervention. Cheng (2015) used a Playground Observation of Peer Engagement (POPE; Kasari, Rotheram-Fuller and Locke, 2010) and a Teacher-Rated Social Responsiveness Scale (SRS-2; Constantino & Gruber, 2013) as measures of progress. Cheng's (2015) was the first study of its kind to implement a comparative group methodology, and utilised methodologies with stronger psychometric properties than previous studies (Mazefsky & Oswald, 2006; Lyall, 2011 in Constantino & Gruber, 2013).

Cheng (2015) found that results from both the POPE and the SRS-2 found no significant differences in any sub-domain of social behaviour. Cheng (2015) also implemented a number of programme fidelity measures, implemented to ensure consistency between groups, which found that all LEGO[®] Therapy groups were conducted in very different way; a concept that, up until Cheng's (2015) study, had not been considered as a significant confounding factor in LEGO[®] Therapy research. Cheng's (2015) study does not provide any evidence supporting the use of LEGO[®] Therapy in UK schools, supporting conclusions drawn by Boyne (2014), further calling in to question its true applied efficacy in UK schools.

Furthermore, Griffiths' (2016) study sought to build upon the existing research basis exploring the efficacy of a LEGO[®] Therapy intervention for children with ASC, but adopted a mixed methods approach, and opted to include gathering parental and practitioners' views qualitatively as part of their methodology; the first study in the LEGO[®] Therapy research base to recognise the importance of parental voice. Griffiths' (2016) study utilised four school-based LEGO[®] Therapy groups ($N= 13$) conducted weekly, for six weeks, lasted for roughly 45 minutes each. Gilliam Autism Ratings Scales (GARS; Gilliam, 1995) were completed pre- and post-intervention with staff, post-intervention focus groups were conducted with practitioners, and post-intervention semi-structured interviews were completed with parents. Griffiths (2016) found that both teachers and LEGO[®] Therapy practitioners perceived improvements in social competency skills when engaged with LEGO[®] resources but felt that there was a lack of generalisation of these skills to wider, non-therapeutic contexts (e.g., the classroom). Parents

perceived that their children displayed an increased interest in LEGO[®] materials as well as improved communication and initiation of interaction at home, which suggests that an element of skill generalisation had been achieved. However, statistical analysis of the GARS suggested no statistically significant differences between social competency scores over the duration of the intervention, limiting the extent to which one could suggest that LEGO[®] Therapy had an impact.

The current literature base uses a variety of methodologies, primarily to explore the efficacy of LEGO[®] Therapy interventions with children who have diagnoses of ASC. However, the literature base does not map against the current implementation of LEGO[®] Therapy in schools, as acknowledged by my own professional practice – both as a teacher and a trainee educational psychologist – and as identified in some literature (Evans, 2019). There exist a number of gaps in the current literature base that mean that the evidence does not match with the practice. In the next section, I will identify and explore some of the research gaps identified from the literature review, and link this to the aims and ambitions of this thesis.

2.7 Gaps in the Existing Literature

One of the core underpinning features of autism spectrum conditions (ASC) is a profound deficit in ‘social reciprocity skills’ (Williams-White et. al., 2007) or a deficit in their ‘social competency skills’ (LeGoff, 2004). It could be argued, therefore, that LEGO[®] Therapy’s initial focus on children with ASC was appropriate in its aims and its goals; to take a group of children with a core defining deficit in social competence and create an intervention approach to resolve it.

However, since its inception as a targeted intervention for children with ASC, LEGO[®] Therapy has been adopted by a range of professionals (speech and language therapists, advisory teachers, educational psychologists) as an intervention for all children with difficulties in social competence, regardless of whether or not they have ASC. Devon County Council (2019) on their website detailing ‘LEGO Therapy training’, for instance, state that ‘LEGO Therapy was developed to improve social competence in children with autism, however it may also be helpful for children with other social communication difficulties and anxiety conditions, depression or adjustment difficulties.’ LeGoff, Gomez de la Cuesta, Krauss, and Baron-Cohen (2014, p28) also claim that whilst LEGO[®] Therapy was ‘initially developed for improving social competence in children with ASC’, it may well be ‘helpful for children with other social communication difficulties and anxiety conditions.’

However, LeGoff et. al. (2014, p29) concede that 'research has yet to evaluate the effectiveness of the approach with other difficulties.' LeGoff's (2004) initial study included children with anxiety disorders, depression and 'adjustment difficulties' and noted that they also found the intervention supportive; but provided no data for their progress, or a rationale for their engagement. LEGO[®] Therapy's continued usage in schools for children who do not have diagnoses of ASC may well be beneficial to these children, however, there is currently no evidence base with which to support its current implementation. The links between the basis upon which children are selected for this intervention and their experiences within the intervention are yet to be understood.

The existing literature exploring the efficacy and effectiveness of LEGO[®] Therapy all consider realist ontologies and positivist epistemologies, and subsequently utilise a number of primarily quantitative methods. This is where a philosophical gap in the literature resides, as the current literature base makes a number of assumptions and assertions. The existing literature (which utilises a 'realist' ontology) assumes that the concept of 'social competence' as an independent concept exists, and makes the subsequent assertion that it can, therefore, be measured through reliable and objective quantitative methodologies (from a positivist epistemological perspective). In essence, the current research base consistently assumes the existence of an independent and observable metric of 'social competence' and further assumes that this can be captured and measured through purportedly objective means, despite many of those measures having questionable psychometric properties, e.g., such as Mazefsky and Oswald (2006) suggest with the GARS, or utilising a level of subjectivity or pre-existing biases; e.g., such as Sparrow and Cicchetti (1985) suggest with the VABS.

This assertion, in itself, could be seen as being a stance of particular difficulty, as it subsequently assumes that a highly complex construct such as 'social competence' can be condensed to a contextless list of skills or observable behaviours, and subsequently measured and quantified in a way which can objectively capture a child's entire social profile within a solitary number or score. I would assert that current attempts to measure and quantify 'social competence' as a numerically valid concept and operationalise improvements in these 'scores' as evidence of any intervention's effectiveness may be a reductive philosophical and methodological stance. This thesis introduces an alternative philosophical lens, explored later in the methodology chapter.

2.8 Rationale for this Study

Currently, there exists no research to underpin the usage of LEGO[®] Therapy for children who do not have diagnoses of ASC, and yet it is being widely implemented for this population. The theoretical inception of LEGO[®] Therapy was formulated around the specific social learning difficulties that children with ASC present (LeGoff, 2004). However, the success of the approach has since attracted interest from a wider scope of professionals, who have co-opted the intervention as a more general tool for improving the social skills of all children (Evans, 2019; Merrick, 2021). The first gap that this research seeks to address is to build on the praxis presented throughout this literature review, and to explore, with school practitioners, their perceptions of the intervention and their underpinning rationale for including non-ASC children within the intervention; including an acknowledgement of school systems, structures and wider contextual factors that might influence those decisions.

As discussed in the literature review, one of the key facets often omitted from the current research base exploring the efficacy of LEGO[®] Therapy is the views and perspectives of the practitioners themselves. Previous research has mainly focused on the 'social competence' progress that children make within the sessions (usually limited to a discrete series of quantitative scores) (LeGoff, 2004; LeGoff & Sherman, 2006; Brett, 2013). Some of the existing research goes one step further and sought the views of the teachers and/or caregivers to assess the extent to which the intervention has fostered generalisability of social skill improvement, either in the classroom or home environments (Griffiths, 2016; Levy & Dunsmuir, 2020). Nevertheless, no existing study has sought qualitative data to gain and understand the perspectives and views of LEGO[®] Therapy practitioners themselves. For the outcomes and discussion of this thesis to be purposeful and useful for schools it is essential, in my view, to explore the very practicalities with which schools can implement this intervention in future.

The second research gap identified that this thesis seeks to explore, is the lack of research exploring the perception of the experiences of the intervention by the children themselves, or of their parents and carers. None of the existing literature explores children's experiences of the intervention, or children's perceptions of their inclusion within the intervention. The existing literature base tends to focus on whether or not the intervention is effective. However, no existing research has sought to understand how children experience the intervention, and their perceptions of being included within the intervention.

Furthermore, whilst some research (e.g., Griffiths, 2016) has made some reference to including parental views in exploring and understanding the outcomes of a LEGO[®] Therapy intervention, there exists no research which seeks to explore and understand parents' and carers' understanding or perceptions of the intervention in the first place. It is the final aim of this thesis to seek to explore caregiver perceptions of the intervention, as well as exploring their understanding of their child's needs, and why LEGO[®] Therapy may have been selected as an intervention technique to meet those needs.

2.9 Literature Review Summary

In conclusion, in this literature review I have provided an overview of the current literature base which both supports and critiques the efficacy of LEGO[®] Therapy whilst also seeking to provide a rationale for its ongoing study whilst also considering the underlying psychological theory which may provide some rationale for LEGO[®] Therapy's wider utility. This has then led on to an identification and discussion of the gaps in the current literature base, which I have linked to my own professional experience and some wider literature (e.g., Evans, 2019).

Considering the identified philosophical and practical gaps in the current literature base, the next section of this thesis will outline the specific aims and purposes of this study and set out the research questions that this thesis sought to answer. Within this, I will set out my own philosophical position, developed from the literature review, and explain the methods chosen in this study, and the rationales behind their selection.

3. Methodology

In this section I will consider the philosophical assumptions made in the existing literature base - as explored in the literature review - and seek to provide an outline of, and rationale for, the ontological and epistemological assumptions and positions that are considered within this thesis. This section will provide a congruent link between the philosophical stances of the existing literature and its subsequent methodology, and the methodologies adopted within this thesis.

3.1 Research Aim, Objectives, and Questions for Both Phases

This study involved two interrelated phases (illustrated, below, in Figure 1. The first phase of this thesis explored the perceptions and experiences of school staff and school practitioners, involved with the selection, administration, and delivery of school-based LEGO[®] Therapy interventions. The second phase explored the perceptions and experiences of key stakeholders benefitting from involvement in the intervention; caregivers and children.

In Phase One of this study, interviews with LEGO[®] Therapy practitioners explored their perceptions of the benefits of the intervention to non-ASC children and exploring school staffs' rationales behind organising and administering this intervention to a wider range of children than LEGO[®] Therapy's initial authors intended.

Phase Two of this study involved two parts. Firstly, interviews with the parents or carers of children undertaking a LEGO[®] Therapy intervention were completed to explore how they perceive the benefits or limitations of the intervention and to find out whether they felt their child had benefitted from involvement. Secondly, this study also utilised a photo elicitation interview (PEI) methodology with non-ASC children and young people, who were receiving or had recently received a LEGO[®] Therapy intervention, to explore the perceived purpose and benefits of involvement in the intervention from the perspective of the children themselves.

The research questions for both phases of this thesis are as follows:

Phase One

1. What are school staff and practitioner perspectives on the perceived purpose, benefits, and limitations of organising and administering a LEGO[®] Therapy intervention in school?
2. What are the professional structures and organisational arrangements which influence schools' rationale to run a LEGO[®] Therapy intervention for non-ASC children?

Phase Two

3. What are caregivers' perceptions of a LEGO[®] Therapy intervention, including the perceived benefits and limitations of a child or young person's involvement in a LEGO[®] Therapy intervention?
4. What are the experiences of non-ASC children within a LEGO[®] Therapy intervention, and what are the perceived benefits and limitations of a child or young person's involvement from their perspective?

This is therefore a two phase, exploratory, qualitative study exploring the structural and organisational perceptions and beliefs surrounding the administration and delivery of LEGO[®] Therapy interventions in school, as well as an exploration of the perceptions of children receiving the intervention, and the perceptions of their caregivers. The study's design is presented in more detail below, in section 3.3

3.2 Theoretical Framework

In this section I will consider the philosophical assumptions made in the existing literature base - as explored in the literature review - and seek to provide an outline of, and rationale for, the ontological and epistemological assumptions and positions that are considered within this thesis. This section will provide a congruent link between the philosophical stances of the existing literature and its subsequent methodology, and the methodologies adopted within this thesis.

3.2.1 Philosophical Positionality of this Thesis

I will begin this section by discussing my conception of the nature of reality, in relation to the efficacy of a LEGO[®] Therapy intervention and use this discussion as a means of introducing the epistemological and ontological positions of this thesis, before discussing my chosen methodology.

The philosophical positionality of the existing literature, coupled with its proclivity to adopt quantitative methodologies, is predicated upon the notions that “the world has a physical reality; it is possible to measure all the phenomena that occur, and the results of such experimental measures will be the same whenever it is repeated” (Matthews & Ross, 2010, p141). This thesis seeks to offer an alternative perspective to the existing literature base and outline an alternate philosophical lens. Whilst this thesis does not necessarily disagree with the current literature base’s philosophical standpoint in its entirety, it could be asserted that an alternative philosophical world view may provide a new perspective. Namely, this research considers the nature of reality to be subjective and socially constructed, rather than one of universal truth and objectivity.

Ontologically speaking, this thesis adopts a social constructivist viewpoint which asserts that the factors and phenomena which contribute to our social world are only ‘real’ in the sense that they are continuously being experienced, acted, re-enacted, and reviewed by the active social participants within them (sometimes referred to as the social actors). The process of ‘reality’ is one of perpetual action, interaction and reflection and the concept of a ubiquitous or universal ‘reality’ does not exist (Pfadenhaueris & Knoblauch, 2019; Hubert, 2019). Whilst the universality of reality is not available for study, the social phenomena experienced by the social actors within a group can be studied, with the researcher as an active participant in the social world. Within the concept of LEGO[®] Therapy itself, this thesis seeks to question the pre-existing assumption that it is ‘effective’ for improving social competence because it can be ‘proven’ through quantitative analyses purporting to evidence increases in one’s social competence. This thesis seeks instead to understand the perspectives and experiences of both practitioner and participant to unpick the intrinsic value in the approach, as constructed by those involved within in.

So, this research study adopts an interpretivist lens. Blaikie (1993, p96) described this as “knowledge is seen to be derived from everyday concepts and meaning- the social researcher

enters the social world in order to grasp the social constructed meanings and then reconstructs them in social scientific language". In other words, an interpretivist epistemological perspective explores people's experiences and the way that they interpret them. The primary focus of social research, through an interpretivist epistemological lens, is to explore and understand how social actors interpret their social world and the phenomena within it. This ontological and epistemological world view lends itself primarily to the operationalisation of qualitative data to seek to gain a richer understanding of the viewpoints and perspectives of the studied social actors.

3.3 Research Design

This study involved two phases. The first of these two phases explored the perceptions of eight school-based LEGO[®] Therapy practitioners and Special Educational Needs Co-ordinators (SENCOs) and the second phase explored the perceptions of non-ASC children who were (or had recently been) part of a LEGO[®] Therapy group, and the view of their parents or carers. The conception of these two distinct phases was designed to provide point of corroboration between three separate perspectives between the three key stakeholders in a LEGO[®] Therapy intervention, namely: the school, the child, and their parents/carers. Whilst it is acknowledged that an interpretivist perspective is not necessarily concerned with the concept of triangulation it was felt, in this thesis, that exploring the perspectives of the three main stakeholders of the intervention would be a positive approach to gain a well-rounded view of perspectives. This was divided across two phases as a means of providing distinction between the organisational context (i.e., the school or education provider) and the personal or home context (i.e., the child's home and personal views). The two phases of this thesis and the interconnectivity between them is visualised in Figure 1.

Figure 1

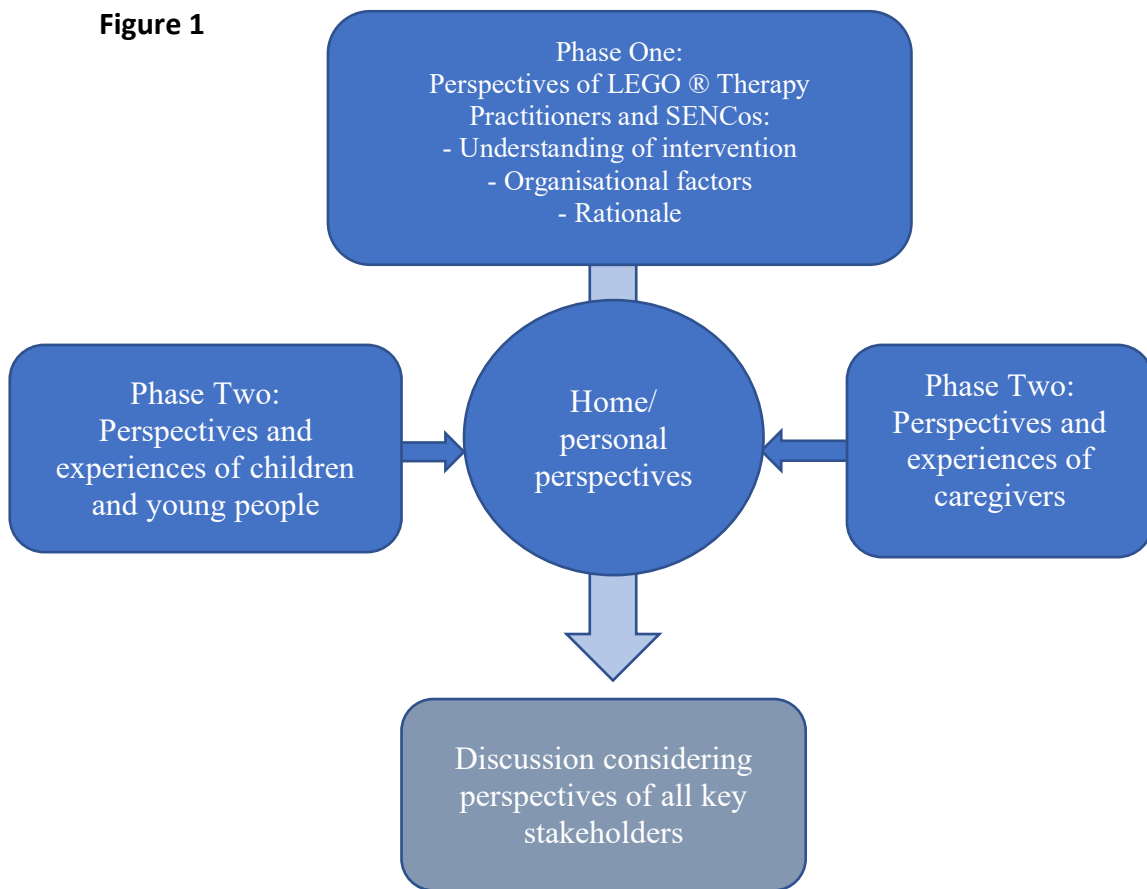


Figure 1: Visual Conceptualisation of the Two-Phase Study Design

In this section I will initially begin by conceptualising an appropriate sample for this study, before outlining my sampling and recruitment approach, providing summaries of the participants for each section of this study. I will then discuss the research methodology adopted in this study, with reference to appropriate theoretical literature, and outline my approach to data collection and analysis.

3.3.1 Sample and Participant Recruitment

An appropriate sample for a small-scale research project conducting interviews would be for between 6-10 participants (Braun & Clarke, 2013, p48). Therefore, it was the initial ambition of this research to find six-to-eight schools within the local authority catchment area who currently run at least one LEGO® Therapy group to participate in this research.

All schools in this study were primary-aged (4-11), with a mix of local authority-maintained schools and academy schools. As the primary age range is the main focus of the initial literature base, and the majority of subsequent research, it was felt that it would be most beneficial to maintain that consistency throughout this study, for ease of comparison with existing literature. Independent schools were not included within this study, because it was believed that if children were to be undertaking a LEGO[®] Therapy intervention within an independent school, they may have very different experiences to those in mainstream schools due to the significant differences in school's pupil numbers, proportions of children with identified SEND, staff ratios and availability (MacBeath, 2013). Whilst the perspectives of these schools and children would undoubtedly have been of value to the body of existing research, for the purpose of this thesis, it was felt that the experiences of these children – for reasons outlined above – may have been too different to those in mainstream settings. Furthermore, when completing initial recruitment of potential participant schools, no streams of recruitment - as outlined below – identified any independent schools that ran the intervention or had completed the Local Authority's training.

Phase One Recruitment

Schools included within Phase One this study were sourced through two distinct and separate strands of participant recruitment. Firstly, a service-wide email was sent to all educational psychologists (EPs; January 2021) within the Educational Psychology Service, asking them to identify primary schools which they thought were conducting a LEGO[®] Therapy intervention. Secondly, the company's Communication and Interaction Team (C&IT) - who run the LEGO[®] Therapy training sessions for all schools within the local authority catchment area - were also contacted and asked for a list of all schools that had been trained within the last three years. The EPS email returned a total of five schools, the C&IT email returned fourteen schools (Total $N= 19$). All nineteen schools were contacted on at-least two separate occasions (by email, June 2021; September 2021) to ask for voluntary participation unless they had explicitly declined participation after first contact.

Of the nineteen schools contacted, a total of eleven ($N= 11$) replied positively to the initial email approach and agreed to participate, and the school's Special Educational Needs Coordinators (SENCOs) were used as the primary liaison contacts. Upon further email and phone correspondence two of the schools were not conducting a LEGO[®] Therapy intervention in line with the recommended structures, duration or frequency of the existing guidance or training, and these schools were subsequently discontinued from the research. For the

purpose of this thesis, schools were included if they ran a once-weekly LEGO[®] Therapy group for 3-4 pupils, and used the structure and roles as outlined by LeGoff's (2004) original works. Of the remaining ($N=9$) schools, two had agreed to take part and were conducting an appropriate intervention but became unresponsive to emails and phone calls seeking to establish interview dates; despite being contacted on at least four separate occasions and these two schools were subsequently discontinued from the research. Of the remaining seven schools one participant school voluntarily withdrew, because the LEGO[®] Therapy practitioner had gone on long-term sick leave. The final six schools, with a total of eight respondents across them ($N=8$), including both LEGO[®] Therapy practitioners and school SENCOs. All participants in this study were members of staff in their current school and directly involved in the administration, recording-of and access-to their school's LEGO[®] Therapy intervention; either as a teaching assistant (TA) or learning support assistant (LSA), or as the school SENCO. Participants are summarised in Table 1, below. A flowchart summarising the recruitment process is presented in Appendix 1.

Table 1

School	Participants	N
School 1	Teaching assistant/ LEGO [®] Therapy Practitioner	1
School 2	Teaching assistant/ LEGO [®] Therapy Practitioner	1
School 3	Teaching assistant/ LEGO [®] Therapy Practitioner	1
School 4	School SENCO	1
School 5	School SENCO and teaching assistant/ LEGO [®] therapy practitioner	2
School 6	Two teaching assistant/ LEGO [®] therapy practitioners	2
Total:		N= 8

Table 1: Summary of Participants for Phase One

Phase Two Recruitment

In Phase Two of this thesis, a paired-samples approach was considered to identify non-ASC children who were taking part in a school-based LEGO[®] Therapy intervention and their caregivers. Two separate recruitment emails were sent out to members of the EPS to identify schools (September 2021; January 2022), as well as recontacting schools who had taken part in Phase One and had indicated verbal approval of participation for Phase Two. Schools identified appropriate children for the study and were asked to forward parent information and consent

sheets for both their child’s participation and their own participation to be returned (appendixes 4, 5, 6 & 7). In total, seven ($N= 7$) caregivers consented to both their own and their child’s involvement in the study. However, after commencing Phase Two, one child was accepted on to the Local Authority’s ASC Pathway and was discontinued from the research. One parent also voluntarily withdrew their participation. This sample is conceptualised in Table 2, characterisation of children’s identified SEND is outlined in Table 3, and the recruitment process visualised in Appendix 2. Details of children’s SEND needs were gathered in interviews with caregivers and consent to report them was achieved both verbally through the interviews and is included within the consent forms that caregivers signed.

Table 2

School 1	Child 1	Parent/Carer 1	Key Stage 2 (aged 7-11)
School 2	Child 2	Parent/Carer 2	Key Stage 2 (aged 7-11)
	Child 3	Parent/Carer 3	Key Stage 2 (aged 7-11)
School 3	Child 4	Parent/Carer 4	Key Stage 2 (aged 7-11)
	Child 5	Parent/Carer 5*	Key Stage 2 (aged 7-11)
	Child 6	Parent/Carer 6	Key Stage 2 (aged 7-11)
	Child 7**	Parent/Carer 7**	Key Stage 2 (aged 7-11)
	Total = 6	Total = 5	

Table 2: Conceptualisation of sample for Phase Two

* Parent/Carer 5 voluntarily withdrew their own participation from this study

** Child 7 was accepted on to the Local Authority’s ASC Pathway during the study, and was subsequently discontinued

Table 3

Child	Identified SEND
Child 1	Early childhood trauma; SEMH needs
Child 2	Hearing Impairment; cleft palate; difficulty with speech clarity
Child 3	SEMH needs; speech delay
Child 4	SEMH needs; anxiety
Child 5	<i>Unknown</i>
Child 6	Developmental language disorder; speech delay; anxiety

Table 3: Identified Special Educational Needs and Disabilities of participant children in Phase Two

3.4 Data Collection

3.4.1 Phase One: Interviews with LEGO[®] Therapy Practitioners and SENCOS

Methods of collecting qualitative data are used to formulate detailed accounts of human experience and human nature, embedded within the contexts in which they occur (Rubin & Rubin, 2005). Dornyei (2007) states that interviews are a useful method of collecting data from willing participants and can be operationalised to gather detailed information directly from the social actors who experience them, allowing scope for comprehensive explanations and discussion of complex social phenomena.

Blaxter et. al. (2010) feel that interviews are perpetually worthwhile endeavours within social research as they present researchers with previously unidentified opportunities to uncover deeper information that was “probably not accessible using techniques such as questionnaires and observations” (Blaxter et. al., 2010, p172), by means of carefully structuring interview approaches, asking for expansions on certain aspects of responses and giving breath to interesting details within interviewee’s responses; something which is not possible in more closed methodologies, such as questionnaires. Dornyei (2007) further suggests that not only are interviews good for exploring social phenomena and formulating hypotheses, but also for eliciting narrative data that can be operationalised to understand individuals’ perspectives in a greater level of depth. Interviews not only allow for a deeper exploration of, sometimes complex and intricate, social concepts and constructs but also allow scope for participants to “speak in their own voice and express their own thoughts and feelings” (Berg, 2007, p96).

Interviews as a method of data collection also have an added beneficial dynamic, as they can be utilised to explore concepts and phenomena which are not explicitly observable, but only exist within the social zeitgeist. Kvale (1996) explains how, using interviews, social constructs that can not be directly observed or measured through discrete quantitative methodologies are best explored through interviews with the social actors within those contexts, who are able to articulate and express their understandings of their experience of explored concepts. As interviews can be a dyadic, interactive process (although, not in all cases), interviewers can flexibly adjust approaches to fit emerging constructs and can probe deeper in to unpicking explanations of new or interesting concepts; through interviews, researchers are able to extend the span of investigation of explored social phenomena.

Throughout these differing definitions there exist several key themes, namely: the nature of interaction between interviewer and interviewee; the relationship between interviewer and interviewee; the role that research and participant play in the construction of meaning; and interviews being given an explicit, clear, and shared purpose. In essence, an interview – for the purpose of this thesis - can be described as a two-way, reciprocal procedure in which an explicit purpose is shared (i.e., a research focus) and meanings and understandings of social phenomena are discussed openly, and meanings are co-constructed.

Whilst interviews are undoubtedly regarded as a sound choice of method for exploring social phenomena in depth, they are not administered without difficulty (Hermanowicz, 2002). There exist implicit difficulties with uncovering and co-constructing meaning with interview participants as, ultimately, despite every insurance being made to protect the content of interview data from outside influence, research interviews inherently bring perspective and unconscious bias into the interview domain (Chenail, 2011). Interviews are, by design, shaped through the schedules which guide them and, by proxy, the biases and processes that have shaped the questions themselves. Similarly, from the perspective of prospective interviewees, responses can also be shaped by either social conventions or implicitly guided by assumed research purpose, i.e., responding in a way which an interviewee perceives will be most helpful or most interesting to an interviewer, which may come at the cost of obscuring a respondent's authentic or honest view (Hammersley & Gomm, 2008). Some theorists go as far as to argue that "interviews alone are insufficient form of data to study social life" (Walford, 2007, p147) precisely because of these constraints. Views gathered through interviews are, implicitly, subjective perceptions of an experience; perceptions which may be prone to evolution depending on context or circumstance.

This is precisely where, as Barrett and Twycross (2018) suggest a well planned, semi-structured interview is an appropriate methodological choice. Semi-structured interviews allow for central tenets of a phenomena to be explored explicitly through direct questioning, but also allow opportunities to capture wider data in key areas whilst still affording participants a level of flexibility and autonomy in bringing their own personality, perspectives, and views into the conversation. Overly structured interviews are useful for the identification and classification of limited, discrete information from a predetermined list of closed questions, and unstructured interviews (such as those used in ethnographic studies) lack the specificity and purpose required for research where there is a designated focus (Luo & Wildemuth, 2009). Semi-structured interviews provide researchers with a balanced opportunity both to explore pre-

identified concepts and expand upon existing knowledge through reciprocal conversation and co-construction of meaning.

One such approach to designing and implementing a semi-structured interview was outlined by Tomlinson (1989), who first termed the 'Hierarchical Focused Interview'. Tomlinson (1989) contended with the notions asserted by qualitative researchers before him that attitudes, perspectives and views could be explored through a pre-designed structured list of questions. Tomlinson (1989) asserted that for qualitative research to explore one's perceptions, it has to consciously wrestle with how participants construed the subject matter. Tomlinson (1989) further contended with the idea that structured interviews could simply frame questions around a participant's understanding of a topic and then administer questions which would explore one's 'attitude' to it. Tomlinson (1989) felt that if qualitative researchers were not carefully around the construction of their interviews, and their understanding of their participants constructions of the nature of the topic, interviews could easily become confirmatory exercises, which only seek to solidify researchers' preconceptions about a given topic.

Furthermore, without consciously involving participants in the purpose of the research topic therein lies a danger of interviews becoming purely semantic affairs, where surface-level understandings of topics are discussed with no particular nuance or substance; with the potential for researchers to miss the depth of exploration and risk obscuring the discovery of participants' honest perspectives. Tomlinson (1989, p158) further suggested that providing this explicit 'reflexive clarity' fosters the ability of researchers to keep their 'analytical distance' and helps to prevent 'casual interviewer influence'; whereby the presence of the research has an undue influence on the truthfulness of responses, potentially at a cost to research validity.

Tomlinson (1989) outlined a five-stage process for designing and implementing Hierarchical Focused Interviewing as a semi-structured interview technique. Tomlinson's (1989) five-stage process was followed in the development of the semi-structured interviews utilised in this thesis and is discussed at each stage of the process:

Step One: Initial Analysis of Domain

The first stage of Tomlinson's (1989) Hierarchical Focused Interview procedure begins with the researcher developing a clear conception of the research topic. As Hierarchical Focused Interviews take place philosophically within the paradigm of constructivism – making it an

appropriate choice of method for this thesis – researchers must make explicit their own philosophical positionality on the research topic, and must engage consciously with their own understanding, preconceptions and understanding of the research; as well as their motivation for selecting the topic for further exploration. This initial phase of interview design will likely represent broader view of the topic as a whole, and seek to outline potential research avenues, making some brief forays into decisions about chosen research angles.

Tomlinson (1989) outlined how this first stage of interview development must give life to the breadth of the research topic, whilst also providing an engagement with the inter-relation between the different aspects of a topic. This, inherently, is through the ontological lens of the researcher – which must be acknowledged – and predispositions and sources of potential conflict between interviewer and interviewee should also sought to be identified at this stage. The structure of this first step is likely, by its nature, to be hierarchical; structured by beginning with larger, superordinate concepts before burrowing deeper into more niche, subordinate concepts.

For this thesis, this was created through engagement with the current literature base, as explored above, and identification of gaps in the existing literature. The initial domain analysis for this thesis. In the style of Tomlinson (1989) is illustrated in Figure 2. This represents the first step of the development of the interview schedules for this thesis, by identifying areas to be explored guided by the study's research questions.

Figure 2

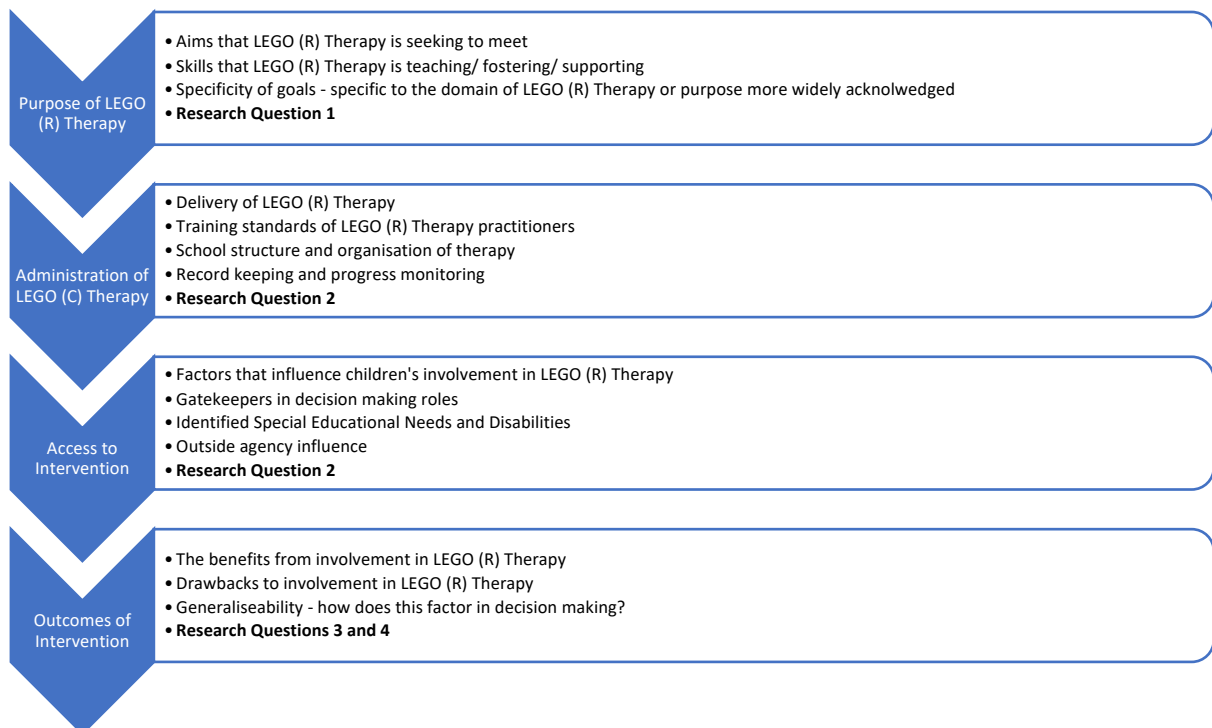


Figure 2: Visualisation of Initial Analysis of Domain

Step Two: Selection of Research Interview Subdomain

The next stage of Tomlinson's (1989) process is to begin to narrow the research focus from the broader 'initial' exploration in step one. This step is the first stage at which researchers should attempt to begin to not only hone their research focus but begin to map research ambition with practicality constraints such as interview feasibility, interview specifics (e.g., length, complexity, delivery), social acceptability of topics and a consideration of how articulatable certain concepts would be. Step two has no discrete or concrete process or visual representation and acts as more of a virtual framework for reflection and deduction, leading in to step three.

Step Three: Construction of Interview Agenda

After having funnelled one's understanding from an initial exploration of the research domain through a process of reflection and feasibility assessment, researchers can begin to construct the agenda for their interviews. Tomlinson's (1989) proposed approach to the construction of interview schedules was through the implementation of a hierarchical focusing approach; one which seeks to elicit participants' understandings and constructions of phenomena with as

minimal framing as possible, asking questions with more specificity or detail only when necessary.

Tomlinson (1989) outlined the 'top-down' approach to hierarchical focusing, whereby questions asked first are of the highest level of generality, phrased neutrally with as little conscious framing as possible (e.g., "What is the purpose of LEGO[®] Therapy?"). As questions descend the order in the 'top-down' approach, they increase in their level of specificity and detail, but are only administered if the information has not already been gathered from a more general question, administered 'higher up' the hierarchy. For example, a sub-question underneath the example given above might be "What skills is LEGO[®] Therapy trying to teach children?", but this would only be administered if the participant's response to the initial, more general question had not already alluded to specific skill development. This is done to ensure researcher framing or unconscious bias is kept out of interview schedules, as far as possible.

The interview schedules used in this thesis were created through a cyclical process of reflection and review, and arranged as hierarchically as possible, derived from the processes of both step one and step two. Tomlinson (1989) recommended the use of a skeleton interview schedule, in which researchers can record which questions were answered spontaneously (i.e., without the need for directly asking a subordinate question; denoted by a 's') or where participants needed to be prompted (i.e., a subordinate question needed to be asked to receive a further level of clarity, detail or missing piece of information; denoted by a 'p'). Questions included within the interview schedules were either derived directly from engagement with the current literature base (as explored above in the 'Literature Review') or conceptualised from the identification of explicit research gaps. The skeleton structure interview schedules are appended to this thesis in appendixes 9, 10 and 11.

Step Four: Interview Procedure

Linking directly to the above-outlined skeleton structure and administration of a hierarchical focused interview, Tomlinson (1989) recommended that good research practice to potentially eliminate undue researcher influence even further would be to begin all interviews with a very broad, unfocused research question as a means of engaging the participant and bringing them consciously in to the domain of the interview (e.g., the starting question of this thesis's interview schedule was "Tell me about your experience of LEGO[®] Therapy"). This type of starting question helps to frame the interviewer or researcher as being neutral or impartial

and helps to contribute to the elimination of unconscious researcher influence on participants' answers.

Furthermore, this process acts doubly almost as a form of inductive hierarchical focusing as, by beginning an interview with a broad, general question, participants are likely to answer with the aspects that they consider to be most important or noteworthy; thereby unconsciously eliciting their own hierarchical construct of the topic. The researcher may then choose to follow this line of questioning with the most relevant question(s) from their skeleton interview structure. Tomlinson (1989) outlined that, by their nature, semi-structured interviews need not necessarily have a set order and the flow and direction of interviews, by necessity, are arbitrary. It may, instead, be more appropriate to take participants' lead in hierarchical focused interviewing, and almost allow participants to unknowingly guide the structure of interview delivery where necessary.

Step Five: Data Analysis

Tomlinson (1989) recommended highly that interviews completed through use of the hierarchical focused interviewing approach be recorded and for transcripts to be written as fully and as verbatim as possible, to allow for a deeper level of interpretation. Some anonymised sample transcripts for this thesis are provided in appendix 12, 13 & 14. The exact method of data analysis for this thesis is discussed next.

3.4.2 Phase Two Data Collection: Caregivers' Interviews

For the first part of the second phase of this thesis, interviews were conducted with caregivers of children who were receiving a LEGO[®] Therapy intervention in school. Tomlinson's (1989) five-stage process for Hierarchical Focused Interviewing was used again. The same initial analysis of domain, as illustrated above in Figure 2, was utilised for the development of interviews in both phases of this thesis, as this represents the topic of LEGO[®] Therapy in its broadest sense. However, the Phase Two interview schedules were adapted appropriately for caregivers and children

This process fed into the construction of a semi-structured interview schedule synthesised in a hierarchical focused format; with several questions starting at the highest level of generality, with more specific, subordinate questions only asked if necessary. Once again, in line with Tomlinson's (1989) recommendations, interviews started with a broad, open question so as to

reduce or remove any undue researcher influence, and to present the researcher with a level of neutrality on the topic, reducing the potential of any influential bias on participants' responses. this process acts as a form of inductive hierarchical focusing as, by beginning interviews with a broad, general question, participants are likely to answer with the aspects that they consider to be most important or noteworthy; thereby unconsciously eliciting their own hierarchical construct of the topic. A skeleton structure of the hierarchical focused interview schedule for this part of phase two data collection is appended to this thesis (appendixes 10 & 11).

Once again, all data collected in this strand of phase two of this thesis was gathered directly through interviews with caregivers of children receiving a LEGO[®] Therapy intervention in school and were completed over the Microsoft Teams video conferencing application. Audio recordings were captured, using the built-in 'record' function of Microsoft Teams and audio recordings were kept and stored securely on the University's password protected OneDrive system. Again, following Tomlinson's (1989) recommendation that interviews completed through use of the hierarchical focused interviewing approach be recorded and transcripts written as fully and as verbatim as possible to allow for a deeper level of interpretation were followed. Some anonymised sample transcripts for this thesis are provided in appendixes 8 and 9. The exact method of data analysis for this thesis is discussed later.

3.4.3 Phase Two Data Collection: Children's Interviews

This thesis recognises that children have agency and autonomy and are not merely passive forces reacting to a social reality changing around them (Stephenson, 2009). Therefore, utilising a research method, such as photo elicitation interviewing (PEI) is a purposeful methodological choice to actively engage child participants with the research.

Photo elicitation generally refers to any research methodology where photographs are used as stimulants or triggers to evoke responses in participants (Meo, 2010). There exist several different adaptations of the photo elicitation interview approach, each with their own benefits, drawbacks and levels of feasibility given the circumstances. Yan et al.'s (2005) study, for example, explored early years children's perceptions of activities they felt were important to them. Yan et. al.'s (2005) study utilised photographs that were pre-selected and contained pictures of other similarly aged children engaging in a range of activities. The participant children involved in the studies did not appear in any of the photographs that they were studying. Instead, generic photographs were used, and children were asked to identify and

classify the photographs upon first sight. Whilst this may be considered a more ethically sound approach by not directly taking photographs of children within an education setting, this has the limitation of meaning that the participant children were perhaps disconnected from the research process and their classification of presented images may have been impacted by this.

Smith et. al. (2005) also used researcher selected images, but instead chose to include images of the participant children in a variety of settings. This method allows children to use photographs of themselves as clear and concrete visual prompts to guide their reflection, but some ethical dilemmas exist e.g., taking of photographs, sharing of photographs, storage of photographs, consent. Furthermore, whilst this is arguably a more valid method than that adopted by Yan et. al. (2005), it relies on children's oral contributions, which may have limited usage with younger children or those with communication and interaction or speech and language needs, as like many of the child participants in this thesis.

Contrastingly, Eirnasdottir (2005) utilised a variation of photo elicitation whereby children were actively engaged in the collection and administration of the photographs themselves and were asked to take the researcher on the tour of their learning environments; taking pictures of things that the children felt were most important to their learning. Once photographs had been gathered, children were interviewed about their learning by the researcher, with their own photographs used as stimuli. Eirnasdottir (2005) identified that, whilst this approach meant that children who were less verbally able were still able to contribute, it meant that the data gathering was restricted to the domain of whatever was gathered on the researcher's guided tour. This means that some activities or areas of potential significance may have been missed and are subsequently unable to be explored in the follow-up interview.

Essentially, PEI is generally considered a fairly flexible method, which can take a variety of different forms (Meo, 2010). There are several challenges to gathering rich qualitative data directly from children and young people, such as utilising techniques which are developmentally appropriate, addressing the power differential dynamic and bridging language and communication barriers (Cappello, 2005; Stephenson, 2009). Sometimes, this may be exacerbated by researcher predispositions, as researchers may tend to assume that children are unable to articulate meaningful answers until they can "offer an adult-like perspective in adult language" (Hogan, 2005: p.27). The utilisation of PEI can help to mitigate such communication challenges by allowing children to communicate through both verbal and visual means (Clark, 2007; Thompson, 2008). Furthermore Capello (2005) suggests that researchers integrating PEI into data collection is more appealing and intrinsically motivating

for child participants, leading to a potentially greater depth of engagement. Furthermore, there exists some empirical evidence to suggest that children as young as three years old can share consistent self-conceptions (Measelle et. al., 1998), as well as being able to provide accurate and meaningful person experiences (Hogan, 2005).

For this thesis, a combination of some of the above outlined approaches to photo elicitation interviews was adopted. This thesis utilised a model of PEI, which utilised pre-selected stock images (gained through an online stock photo wholesaler) (Tinkler, 2013) of children not involved in the research engaged in LEGO[®] based play. Children were interviewed individually in a quiet space familiar to them in school and presented with stock photographs all depicting aspects of LEGO[®] Therapy. Pictures chosen all contained non-familiar adults and children engaged in group LEGO[®] tasks, sometimes guided by an adult and sometimes guided by children. Children were asked to identify what was in the picture and asked prompting questions about what that image might mean to them, or about their understanding of LEGO[®] Therapy in relation to the chosen pictures. Interviews were child-led, where possible, and children were asked to identify pictures they felt were most interesting or most important to them and asked to expand on their thoughts. The research framework and questions administered to children is appended to this thesis in appendix 10.

3.5 Findings Analysis

All data collected for Phase One of this thesis was gathered directly through interviews with LEGO[®] Therapy practitioners and school SENCOs overseeing LEGO[®] Therapy interventions in school and were completed over the Microsoft Teams video conferencing application. For Phase Two, interviews were completed with children, in school, face-to-face and interviews with their parents and carers were completed over the phone. Audio recordings were captured, using the built-in 'record' function of Microsoft Teams or a Dictaphone, and audio recordings were kept and stored securely on the University's password protected OneDrive system.

The first phase of thematic analysis of this thesis, as outlined by Braun and Clarke (2006; 2013), took place shortly after each interview was completed as all interviews were transcribed by hand, by me. Thomas (2011) recommended transcribing interviews shortly after completing them, to capture as much of the nuance as possible and allowing for as accurate a transcription as possible. All transcripts were written as verbatim as possible, including any word fillers or vocal disfluencies (e.g., "Uum" or "Uhh" etc.), to try and capture the essence

and nuance of the conversations, and to avoid placing any undue researcher influence on the accuracy of transcription. Whilst a lengthy and time-consuming endeavour, Braun and Clarke's (2006; 2013) first step of thematic analysis involves familiarising oneself with the content of interviews and beginning to build up a rich perception of the data in the mind of the researcher; beginning to think about themes and connections between them, immersing oneself in the richness of the responses.

Following this, once all transcriptions were completed, the second stage of thematic analysis took place, following Braun and Clarke's (2006; 2013) six-step approach, which was to code the transcripts into initial codes. The process of generating initial codes involves generating ideas and creating labels for particularly salient aspects of the dataset; capturing both data which is semantic and data which is conceptual (Braun & Clarke, 2013). Each transcript was written in Microsoft Word and uploaded to the NVivo transcription software (version 12.1.5) and generated initial codes.

After initial coding was completed for each transcript the third stage of Braun and Clarke's (2006; 2013) thematic analysis took place, which is the searching for themes amongst the codes. Braun and Clarke (2006) state expressly that themes do not 'emerge' passively, moreover that themes are explored and constructed actively by researchers both inductively and deductively through a process of immersion and reflection. The original codes were condensed into a series of initial themes. After initial themes were constructed from the identified codes, stage four of Braun and Clarke's (2006; 2013) thematic analysis took place, which is a cyclical process of reviewing each theme, and the interconnectivity between them. In this stage, a more concrete understanding of the themes develops, and initial codes can be reviewed alongside their identification within certain themes, solidifying researcher understanding of the nature of the content of the data. After this process, themes were identified and given explicit names, which were then synthesised into a research narrative (i.e., a holistic set of themes which simplify and encompass both the breadth and depth of the dataset and help to articulate the 'story' of the explored topic), which represents Braun and Clarke's (2006; 2013) fifth step of thematic analysis. A fully coded example transcript for this thesis is included in Appendix 15. Finally, the identified research narrative was written up in prose, with examples and rationale, in the results section of this thesis.

3.6 Ethical Considerations

Ethical approval of this study was obtained from the University of Exeter's College of Social Sciences and International Studies (SSIS) Ethics Committee before any data was collected. A copy of ethical approval has been appended to this thesis in appendix 8. This research was conducted in line with the British Psychological Society's (BPS, 2009) Code of Ethics and Conduct and was guided throughout by guidance from the British Educational Research Association (BERA, 2018). Furthermore, this thesis was also underpinned by the Health Care Professions Council's (HCPC) guidance on Conduct and Ethics for Students (2016), with particular attention to the guidance around affectively communicating with, and protecting, service users.

A participant information sheet for LEGO[®] Therapy practitioners was created (appendix 3) and for caregivers of children receiving LEGO[®] Therapy (appendix 6) outlining the project and its purpose; in order to ensure that participant consent was informed (i.e., understanding fully what their participation entails before they decide to take part). The information sheet also outlined participants' right to refuse to take part, as well as their right to withdraw themselves, part of their data or the entirety of their data at any point in the study, up until the point of the writeup. Practitioners were all interviewed between June and December of 2021 and were given until the 31st of January 2022 to withdraw. Participants names were not recorded, and in the body of this thesis, all participants have been numbered instead, to maintain their anonymity. The names and details of all schools involved has not been recorded. Prior to the interview, it was explained that interviews would be recorded (using the Microsoft Teams video recording feature) for the purposes of transcription and analysis but will be heard and seen by nobody else. Prior to the commencement of the interview, participants were advised that they were able to turn their camera off - if they wished - as the recording would capture both video and audio. All data has been kept anonymously and video/audio footage and transcripts have been kept on a password protected computer and encrypted USB memory device. All original data (video/audio recordings and transcripts) were destroyed upon completion of data analysis for Phase One.

It was explained to participants that their participation was voluntary, and that they were under no obligation to agree to take part, or to complete the interview even if they had already agreed to do so. A contact email address was appended to the information sheet and encourage participants to contact me directly with any concerns. All participants in this study gave full written consent for their participation and the use of their responses as part of a

Doctoral thesis, the ramifications of which were explained verbally before the start of each interview, and in written form on the participant information sheet.

The purpose of the study was also explained to child participants, and it was outlined how they would be asked some questions about LEGO[®] Therapy and that I, as the researcher, was interested in hearing about their experience of the intervention. It was explained to children that our conversation would be recorded on a Dictaphone, which they were shown, and that they did not have to take part if they did not want to. Children were also informed that if they did not wish to answer any questions, or wished to suspend the interview at any point, that this was fine. All children were also given the option of being accompanied by a familiar adult (e.g., a member of school staff). Of the six ($N=6$) children who participated, four chose to be accompanied by an adult, who was asked to sit on a different table away from the interview, and not to intervene unless the child was becoming upset or distressed, at which point the interview would be terminated. None of the accompanying adults involved spoke at any point during any of the interviews that they accompanied.

Ethically speaking, both the LEGO[®] Therapy intervention and the interviews with practitioners pose very low risk to either the child or the practitioner. The LEGO[®] Therapy intervention is conducted within a quiet, safe, individual room within the school building and poses very low threat of physical or mental harm to the children or the practitioner. Risk assessments were completed as part of each section of ethical approval from the SSIS Ethics Committee. The interviews with both LEGO[®] Therapy practitioners and caregivers were conducted over Microsoft Teams or over the phone, at a time and place that was comfortable and convenient for the participants. Interviews completed with children in school were completed during lesson time, and children were asked for verbal confirmation of assent before commencing interviews. The content of the interviews was also not anticipated to cover any disturbing or distressing topics; although participants were advised that they should not feel obliged to answer any questions that they did not want to. However, whilst the risk of physical or emotional harm was very low, I acknowledge that – as with all things – the threat of harm is not non-existent. If at any point in time the practitioner feels that the intervention or the interview were directly causing harm to either themselves or the children, they are encouraged to contact their line manager or myself to attempt to resolve the issues. If issues cannot be resolved, practitioners reserve the right to withdraw their participation from the study at any time.

4. Findings

In this section I will discuss the findings from each of the four research questions of this thesis, organised by phase. In each section I will present my thematic structure of each research question and provide relevant quotes from participants to support findings where appropriate. A thematic map for each research question is provided at the beginning of each section

Phase One

4.1 Research Question One

What are school staff and practitioner perspectives on the perceived purpose, benefits, and limitations of organising and administering a LEGO® Therapy intervention in school?

In this section, the findings of the Thematic Analysis (Braun and Clarke, 2006) related to the second research question of this thesis. All data gathered in this section of the findings was gathered from Phase One data collection: interviews with eight LEGO® Therapy practitioners and SENCOs based in schools. A thematic map of the emergent themes and sub-themes is presented below in Figure 3.

Figure 3

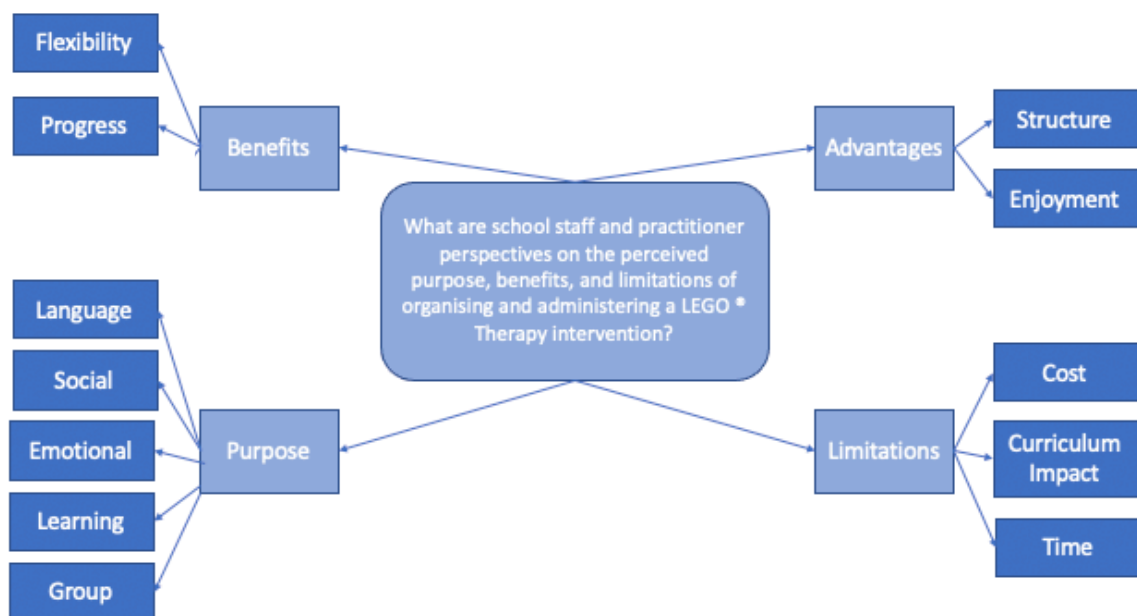


Figure 3: A Thematic Map of themes presented under Research Question One

One of the most frequently reported themes which was created in the thematic analysis process of Phase One data was surrounding the perceived purpose of LEGO[®] Therapy to develop children's language. Some participant school staff felt that the LEGO[®] Therapy intervention provided children with an opportunity to understand, develop and practice their language skills, particularly in collaboration with peers and support staff within the context of the intervention.

"Well, I think, I mean the purpose really is around... It's communication. So, about being able to use language and then to be able to communicate that language, and also to be able to interpret that language, and respond to that language I think that's one of the key areas." –

School 4, SENCo

Vocabulary Development

Several practitioners also spoke about the specific development of vocabulary explicit to the context of the LEGO[®] Therapy intervention, and children being able to learn, utilise and reflect upon their adoption of an expanding vocabulary; some of which may be pertinent to wider concepts applicable in classroom contexts (e.g., shape, number, and specific positional vocabulary).

"You actually build up a very good vocab around it. Yeah, it's learning different words - you've got your positional language and it just extends some children's vocab range." – School 2,

Teaching Assistant

"You can use the colour of the brick and you can also, like I said, point to the pieces required and you can get them to handle the pieces, explain the size, the shape, and I just think it's really, really brilliant for that specific language." – School 1, Teaching Assistant 1

Model of Language

Some practitioners also felt that, as well as providing children with specific vocabulary and opportunities to communicate with peers and develop language, LEGO[®] Therapy also gives children an explicit model of language to follow and operationalise across a range of contexts.

"They learn the language of, you know, "it's my turn now", "You said this, but I think this". "So how can we do that, instead of doing it this way, could we do it like that", all that sort of language is modelled throughout the group." – School 6, SENCo

"It provides them with a model of language that they can use. It provides them with possible strategies that they can use to interact more successfully." – School 2, SENCo

4.1.1.3 Social Skills Development

The primary purpose of LEGO[®] Therapy, in its purest of forms as outlined in the papers which document its creation is to improve the social skills of the participant children within it. This purpose had not escaped the perspectives of the practitioners delivering it in schools and was particularly prevalent under two sub-themes, namely: developing and understand relationships and developing and understanding the nuances of collaboration and teamwork.

Developing and Understanding Relationships

Several practitioners identified that, within the context of the intervention, children were given opportunities to develop relationships with a consistent group of peers which, in turn, became an instrumental component in the development of their understanding of how relationships work, and how one might negotiate a social relationship.

"What we have found as well ... with being with the same partner for quite a period of time... is that building relationships and actually you can use that as a tool to help them understand what a relationship is." – School 4, SENCo

Developing Collaboration and Teamwork

Some practitioners also identified that, within the subdomain of social skills development, children in LEGO[®] Therapy groups were developing their abilities to co-operate and collaborate with peers, as well as developing a conscious recognition that teamwork would yield more success; providing opportunities for more 'self-centred' or 'egotistical' children to develop explicit teamworking skillsets.

“Some children who are very impulsive... we also include them often in the Lego therapy because... [you have to] listen to others, otherwise you don't know what your role is what to do, you don't know the next step and you can't actually progress through to... to complete the model as a team.” – School 6, SENCo

“You'll always get one child that is more self centred or competent than another one, and egotistic, but they have to work as a team.” – School 1, Teaching Assistant 1

Some practitioners also explicitly identified the purpose of LEGO[®] Therapy was circumventing the direct concept of reducing children's impulsivity and allowing them to relinquish control over the activity, and allowing necessary teamwork and collaboration to take hold, to achieve a collective goal.

“It also helps to slow down those very impulsive and forceful children ... it sort of shows them that slowing down and taking your time, can help you to make better choices and that way you can get along better...” – School 6, SENCo

4.1.1.4 Emotional Development

Another key sub-theme within staff's perceived purpose of a LEGO[®] Therapy intervention surrounded the concept of children developing their emotional skills; both in the sense of intrinsic emotional development (e.g., self-esteem) or developing their emotional support structures in school.

Sense of Achievement

The first of these, as outlined above, relates to practitioners identifying that engagement in a LEGO[®] Therapy intervention results in children feeling a sense of achievement and, in turn, may develop a child's self-esteem. Some practitioners identified that, sometimes, participant children in LEGO[®] Therapy were not typically used to feeling a sense of success, and that LEGO[®] Therapy provided a structured environment in which to promote a sense of success for some.

“I think particularly those children that don't necessarily have those experiences at home and for those children that need self esteem, boosting...” – School 2, Teaching Assistant

“That’s really important thing, I think, that you need to celebrate success.” – School 1, Teaching Assistant 1

“She had the biggest smile... and just because it was only small, she managed to complete it within that first session, and yeah, she was buzzing.” – School 5, Teaching Assistant

Emotional Support

A further facet of LEGO® Therapy’s perceived purpose, in relation to the development of children’s emotional skills, is in developing what in this thesis is broadly defined as an emotional support. This subtheme groups together several less frequently occurring codes which all indicated or implied that a LEGO® Therapy intervention had a wider emotional purpose, encompassing factors such as helping children to feel regulated, safe and sense of belonging; that sometimes was not present or apparent in other contexts.

“[Children] feel that they’re in a safe environment where they’re treated the same as everybody else, and children that have got [SEND]... That in itself is hard... they’re not part of a school or an environment or a class or group.... [LEGO® Therapy] definitely helps.” – School 1, Teaching Assistant 1

Some practitioners also explicitly identified the emotional component of developing children’s resilience as a core purpose of a LEGO® Therapy intervention.

“... with social interactions, a lot of it is for the children that... resilience - that’s a good one. When it’s not going quite how you planned.” – School 2, Teaching Assistant

“I think the biggest thing that I’ve noticed is the social interaction and the resilience.” – School 2, Teaching Assistant

4.1.1.5 Learning Skills

Another theme created through the thematic analysis process conducted with Phase One data was the perceived purpose of LEGO® Therapy developing specific skill sets parallel and interrelated to those required in the classroom. It was postulated by several staff that LEGO®

Therapy enabled an environment in which children could learn a series of discrete learning skills (e.g., problem solving or spatial reasoning skill), which could promote their classroom or curriculum engagement.

“It gives them the ability to, I suppose, behaviour-wise, so that learning with the younger ones: learning to sit down, learning to take turns, learning to listen to each other... And they're problem solving.” – School 1, Teaching Assistant 1

“Lego is a really nice intervention to run for ... those children lacking those basic skills of “if they haven't done that sort of thing that isn't going to fit on there” or “that is going to fit that”... that awareness of spatial awareness, that awareness of what might work and might not work.” – School 2, Teaching Assistant

4.1.1.6 Group Identity

The final theme created under the umbrella of practitioner perceived purpose is with LEGO[®] Therapy helping children to develop a group identity or affinity to a certain group when, perhaps, they had previously been unable to do so. Some practitioners spoke about how, sometimes, children identified for participation in LEGO[®] Therapy were socially excluded and lacked a sense of group affinity, either with a specific group of peers or with the school. LEGO[®] therapy, in some instances, was perceived as being a catalyst for developing a sense of group identity or affinity for participants.

“It's just showing them how to... be part of a group because lots of them don't feel part of a group and LEGO really definitely helps them feel part of the group.” – School 1, Teaching Assistant 1

“Nobody is singled out, nobody is thought of as any different from anyone else, you know? Everyone seems to treat each other the same...” – School 1, Teaching Assistant 2

4.1.2 Perceived Benefits of Approach

The second heading created through the thematic analysis of Phase One data was surrounding the concepts of the benefits of schools adopting a LEGO[®] Therapy approach. Under this heading, three themes were created, namely: approach flexibility, the progress that children

make and strengths of a school adopting a LEGO[®] Therapy approach. Each of these themes is expanded upon and explored below.

4.1.2.1 Approach Flexibility

A first key theme that was developed was that practitioners perceived LEGO[®] Therapy to be a fluid or flexible approach, which could be adapted to suit a variety of contexts and children. A large number of codes created through thematic analysis of phase one data indicated that 'approach flexibility' warranted inclusion as a theme of its own, separate from the more general 'strengths' sub-theme explored later in this section.

Group Size

The first aspect of approach flexibility that became apparent in this research was the degree to which practitioners could differentiate the approach by group size, using higher levels of staff support and scaffolding to support learners who – from qualitative judgement – were not ready to be included within a group of their peers yet. Some practitioners spoke of initially completing the intervention as a one-to-one, before gradually increasing the group size.

"We've also done it with just one child and an adult, where the adult is taken on to other roles or the child has taken on two of the roles, so we, we do sort of mix it up depending on need and what seems to be working best for the child." – School 6, Teaching Assistant

"I did start a session with one child on their own, who we started with just him and two adults. That has moved on now, I've passed that on to someone else because we believe he's reached a stage we can introduce another child." – School 1, Teaching Assistant 1

Some practitioners also perceived that, regardless of the initial group size and any potential gradual increases, the recommended group size of three children per one adult was an effective ratio and, in some instances, mirrored the social realities of their daily difficulties with navigating social situations.

"I think having that amount of children the builder supplier and engineer. I think that works really well. You know, throughout school life children find it really difficult in threes. You know, we get a lot of friendship issues of three is not the magic number..." – School 3, SENCo

Generalising Approach to Other Contexts

Some practitioners perceived that the flexibility of the LEGO[®] Therapy approach yielded the potential to expand its core principles to wider situations and contexts, not necessarily restricting the principles of LEGO[®] Therapy just to the domain of 'LEGO'[®]. Some practitioners explained that the core tenets of the intervention gave staff a structure with which they were encouraged to adapt flexibly, adopting the approach with different resources of within different activities and settings.

"I like it because you could scope to adapt it to different things... [At our school] we do the same sort of concept with cooking, so you don't have to stick... it's an intervention where you can use other resources so I could make up something else..." – School 1, Teaching Assistant 2

"You can do it, but it also it gives staff that structure as well. You know, so they can then use that same structure elsewhere in a different context." – School 4, SENCo

4.1.2.2 Children's Progress

Akin to some of the themes explored above in the 'perceived purpose of LEGO[®] Therapy' section, in chapter one of this findings section, many practitioners identified that a benefit of the LEGO[®] Therapy approach was observed in the progress that children make within the intervention, and how that progress is then generalised to other contexts. There exists some overlap in this section between 'children's progress' and 'perceived purpose', but every effort has been made to differentiate the two.

Social Skills Progress

One key theme identified within the context of progress surrounded observable progress that children had made in their social skills: the primary ambition of a LEGO[®] Therapy intervention. Practitioners felt that social skills progress was made by all participant children, and that this had been noted across several discrete social skills, such as in being more confident and assertive, being more patient and waiting for other children, learning to take turns appropriately and developing their skills in reducing or avoiding conflict with peers.

"For some children it they do come out of their shell, and they are more confident, they're more assertive." – School 6, SENCo

“Some progress with a group of three boys that I've been working with, so at the very start we didn't like to share to start off with. Now we are quite happy to share. It's nice to see obviously... that patience has developed.” – School 1, Teaching Assistant 1

“They did finish building one that took them a few weeks, and they actually... Nobody fought over it... I didn't actually have to intervene then at all, which was which was really nice thing to see.” – School 1, Teaching Assistant 2

Learning or Classroom Skills

Again, similarly to staff's perceived purpose of LEGO[®] Therapy surrounding the concept of children developing transferrable classroom or learning skills, this was also apparent in staff's perceived benefit of the approach for participants. Practitioners consistently identified several core cognitive concepts that they felt children improved through engagement in a LEGO[®] Therapy intervention and were, in turn, applied in their classroom learning experiences. Practitioners identified concepts such as visualisation skills, planning and problem-solving skills, and working memory skills as discrete cognitive skills that were improved throughout the course of the intervention.

“I think the Lego is a really nice intervention to run for particularly... those children lacking those basic skills of "if they haven't done that sort of thing that isn't going to fit on there" or "that is going to fit that"... that spatial awareness, that awareness of what might work and might not work.” – School 2, Teaching Assistant

“I think actually it's got, you know, in the sense of sequential working memory, auditory processing, that kind of visualisation, you know, there's so many skills that actually you're developing that every child would massively benefit from” – School 4, SENCo

Generalisation of Progress

A third key concept identified in the thematic analysis of phase one data, under the heading of staff's perception of the benefits of LEGO[®] Therapy is the idea that LEGO[®] Therapy's progress can be generalised across contexts and observed by practitioners. The extent to which progress within the domain of the intervention can be generalised to other contexts has been a longstanding discussion point of LEGO[®] Therapy, and practitioners in this thesis identified,

unprompted, that progress seen within the intervention was also observed in the classroom, and on the school playground.

“They can take those skills to relate them to play with other children... when they're relaxed, you know, if they have any social time in within the class or then anything... their knowledge of play and their description of things, helps them move on to other games and playing within a group in the playground.” – School 2, Teaching Assistant

“With them learning within the session, they could take it back to the classroom they can take it during PE lessons, definitely, and into play times as well.” – School 5, Teaching Assistant

4.1.3 Advantages to Adopting Approach

A third key heading, created under staff perceived benefits of LEGO[®] Therapy surrounded the concepts around the perceived organisational and structural advantages of schools adopting the approach, and the perceptions of why the school felt that a LEGO[®] Therapy approach fit with the socio-cultural, economic, and contextual factors of the school community. This section explores staff constructs around how practitioners perceived the strengths of schools adopting the approach above other social skills interventions available.

4.1.3.1 Structure

The first identified theme is that practitioners identified the benefits of LEGO[®] Therapy's clear and explicit structure and felt that the framework in which the intervention was set gave staff a coherent and logical structure to follow; enabling consistent intervention delivery and results. Some practitioners felt that LEGO[®] Therapy's uncomplicated and transparent approach meant that it was able to be adopted easily by other staff members, allowing schools for greater flexibility in school delivery.

“I think what Lego[®] Therapy does is give you the clear structure in order to do some of that groundwork. I think that's the thing... it gives staff that structure as well. You know, so they can then use that same structure elsewhere in a different context.” – School 4, SENCo

“What Lego therapy offers is a structure for teaching social skills, that if I ask a TA to go and like run a little social group with children, I'm not sure that we can get the same outcomes.” – School 5, SENCo

4.1.3.2 Enjoyment

A second theme identified by practitioners as a benefit of schools adopting the approach is that practitioners felt that, as an intervention, LEGO[®] Therapy was inherently enjoyable for participants, and that this benefitted both practitioners and children alike as their engagement tended to be higher. Some staff expressed that, in other interventions, children may struggle to engage if they don't find the content stimulating. Whereas the inherent enjoyability of operationalising a fun resource, like LEGO[®], explicitly promoted children's engagement with the intervention.

"I've really enjoyed it. It's fun. The children love coming in to do it, and it's the whole mystery of what are we making today kind of thing." – School 4, Teaching Assistant

"I think it's a really fun, relevant... you know, most people are familiar with Lego... it's generic it's not, boy, girl associated. I think it's brilliant." – School 2, Teaching Assistant

4.1.4 Perceived Limitations of Approach

As well as several positives, practitioners did also identify a series of perceived weaknesses or limitations of the LEGO[®] Therapy approach. Practitioners' perceptions of a LEGO[®] Therapy intervention were relatively consistent between them, with three frequently reported themes being constructed from phase one data, namely: expensiveness or financial cost of resourcing, the impact LEGO[®] Therapy had on classroom or other curriculum learning and the time-consuming nature of running the intervention regularly in school, for several groups of children concurrently. Each of these subthemes is explored below.

4.1.4.1 Expensiveness or Cost of Resourcing

One of the key perceived limitations of the LEGO[®] Therapy approach, as identified by most practitioners, is the cost of resourcing; especially where LEGO[®] Therapy warrants the purchasing of several different complete 'LEGO[®] sets', complete with instructions. Furthermore, due to the nature of the intervention resources cannot be shared between groups, meaning that the cost of resourcing a LEGO[®] Therapy increases exponentially with the amount of groups completing the intervention in school. Whilst most schools were happy to fund, and continue to fund, the intervention; it was nevertheless an identified drawback and

was implied as being a factor that may contribute to a school's decision not to administer a LEGO[®] Therapy intervention.

"The cost of the kits... Yeah... Especially for a school, you know it is expensive. We have had some donated... Yeah, financially, there's a drawback..." – School 3, SENCo

"One of the drawbacks is resourcing because Lego is expensive and depending on how many groups you run or and for how long you run it, you do have to have quite a lot of kits available, or quite a lot of Lego available..." – School 6, SENCo

4.1.4.2 Impact on Loss of Curriculum or Classroom Learning

Another of the perceived limitations of running and administering a LEGO[®] Therapy intervention in school, according to practitioners, is the impact that engaging in the intervention has upon children's engagement and subsequent attainment in the classroom, or in curriculum subjects. Several practitioners acknowledged that they felt that, in some circumstances, LEGO[®] Therapy provided a more direct benefit to the identified children than a classroom lesson would, and that the intervention was proactively teaching children essential prerequisite classroom skills that would better enable them to engage with a curriculum. However, it was consistently felt by several practitioners that the impact of LEGO[®] Therapy's intensive intervention demand may have had, or be having, a consequential impact upon children's curriculum engagement and subsequent academic attainment.

"The other thing is that they... it is an intervention where you have to withdraw the children. So it's weighing up what's more important for the child, is it more important for them to be learning these social skills than the other learning that they would be missing out on in the classroom." – School 6, SENCo

"The other thing is about taking the children out of the content out of the lessons so they're missing... Missing aspects of the curriculum, which then leads to kind of knowledge gaps and skills gaps if it's over a long period of time." – School 4, SENCo

4.1.4.3 Time Consuming Nature of Intervention

A third perceived limitation of a LEGO[®] Therapy intervention, as identified by practitioners is that the intervention, as well as having a direct financial resourcing cost, also has a wider

indirect cost attributed to the amount of time and high staff ratio it requires to run. The recommended frequency and duration of a LEGO[®] Therapy intervention is between forty-five minutes to one-hour, typically with a 3:1 staff ratio or less, run once per week. Several practitioners identified the difficulty with this, and that often discussions had to be had around the cost-benefit analysis of running the intervention for some children, which some practitioners identified as being of particular challenge.

“It takes a lot of time from for these people to be trained.... And you'll get you'll get taken out once a week and that's valuable time and sometimes I can see that some people would think well, for a half an hour with this group every week.... It's taking my TA away...” – School 1, Teaching Assistant 1

“It is time consuming. It's quite intensive... Adults are very important resource and like, know, if you're only working with two children, or one child... one-to-ones quite a bit of the time at the moment... That will improve, but still is quite an expensive resource.” – School 5, SENCo

What are the experiences of non-ASC children within a LEGO[®] Therapy intervention, and what are the perceived benefits and limitations of a child or young person's involvement from their perspective?

4.2 Research Question Two

What are the professional structures and organisational arrangements which influence schools' decisions to run a LEGO[®] Therapy intervention; including an exploration of schools' rationale for participant selection and how this influences access to the intervention?

In this section, the findings of the Thematic Analysis (Braun and Clarke, 2006) related to the fourth and final research question of this thesis. All data gathered in this section of the findings was gathered from Phase One data collection: interviews with eight LEGO[®] Therapy practitioners and SENCos based in schools. A thematic map of all themes is presented below in Figure 4.

Figure 4

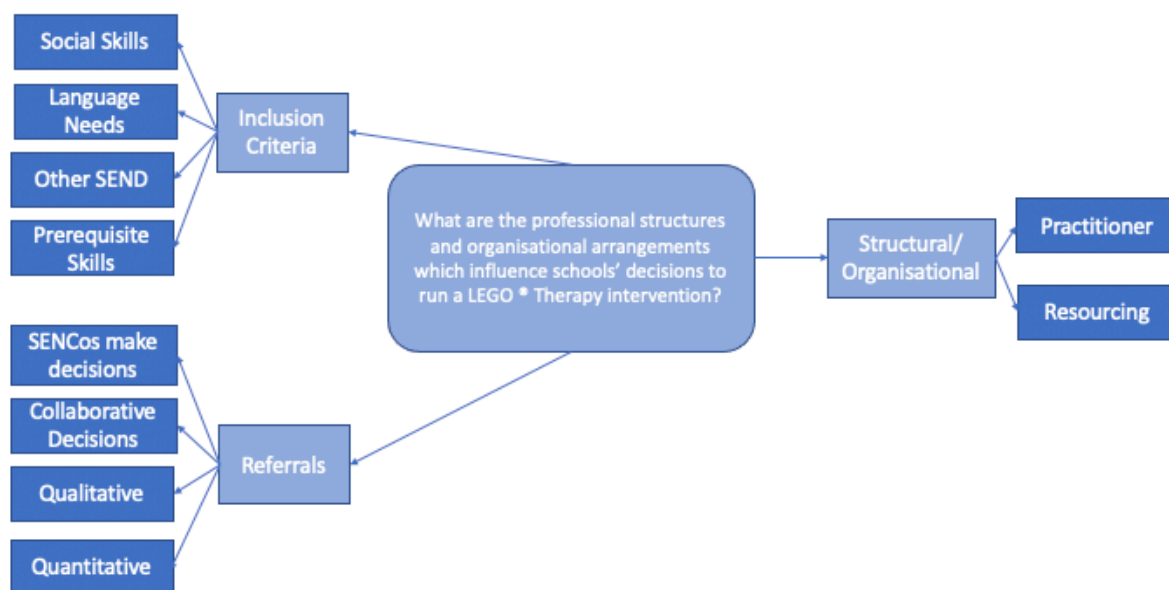


Figure 4: A Thematic Map of themes presented under Research Question Two

4.2.1 Referral Process

The first heading explored under this research question concerns the referral process that school professionals (i.e., teachers, teaching assistants, LEGO[®] Therapy practitioners and SENCos) underwent in determining the access arrangements for identified children in attending a LEGO[®] Therapy intervention in school. This section concerns only the structural and organisational decisions within the referral process of enabling a child to access the intervention, the exact inclusion criteria behind schools' rationales for including children is explored later in this section.

4.2.1.1 SENCo Making Decisions

The first theme in this area concerned several school practitioners identifying that access to a LEGO[®] Therapy intervention was solely gatekept by the school's SENCo. Some practitioners identified that the decision to both administer a LEGO[®] Therapy intervention as a school-wide intervention, and the specific identification, selection and access arrangements for individual children was the decision of the school's SENCo alone.

“It was my [SENCo] decision. It was my decision... after we did the training I kind of looked at the children... and I set it up because, you know, 'I think this would really work well for that child'” – School 4, SENCo

“The referrals are done through myself... I made the decision and the basis was their ability to socialise that they may not have a diagnosis but they do have difficulties with expressive language and joining social... socially with other children.” – School 5, SENCo

4.2.1.2 Decisions Made Collaboratively

Whilst some practitioners identified that the referral process was orchestrated by SENCOs, some outlined a complex referral process in which decisions were made in consultation with a number of relevant members of staff, namely: class teachers, teaching assistants, pastoral workers, and SENCOs'. Decisions for children's inclusion were made collaboratively between several key staff who collectively identified a child's needs, and collectively determined the appropriateness of a LEGO[®] Therapy intervention.

“I discuss with the teacher and then we talk about whether the children are suitable for the programme or not. If they are... We then, I then, sit down with the communication interaction TA and we made a joint decision.” – School 6, Teaching Assistant

“It would be, I guess, it will be the whole team... I'll be able to talk to [TEACHER], and we would be working together, and we would talk to the inclusion team, and the [SENCo] and make a decision together.” – School 1, Teaching Assistant 1

4.2.1.3 Judgements for Inclusion are Qualitative

Within the context of the referral process for children accessing LEGO[®] Therapy provision in school, most practitioners identified that the referral process was mostly, or entirely, a consultation process with key staff or subjective judgements being made about a child's specific strengths or difficulties. Most practitioners identified that, when deciding on which children should access LEGO[®] Therapy, the process relied, sometimes solely, on informal, qualitative observations or judgements being utilised.

“We [Staff Team] have to be able to see them. Can they... do they give instructions? Do they listen to instructions and carry out what they've been asked to do? So, it is qualitative rather than quantitative...” – School 6, SENCo

4.2.1.4 Referrals Based on Quantitative Assessments

A further interesting theme to be created from this section of the research appeared to be the utilisation of some quantitative measures as means of both identifying and justifying the referral process for children’s potential involvement in LEGO[®] Therapy. Some practitioners identified that the referral process of children’s selection for LEGO[®] Therapy was underpinned by the use of some quantitative or baseline measures; sitting in direct contrast to the more qualitative or collaborative referral processes outline above.

“I mean we do so we would do the sort of baseline, we have a little baseline assessment on that around, you know, their ability to, you know, make themselves understood and things... So, we start with the baseline and then decide...” – School 4, SENCo

4.2.2 Inclusion Criteria

The second, and most frequently occurring set of themes created under this research question through analysis of Phase One data was an exploration of the inclusion criteria that schools implemented in identifying and selecting children for a LEGO[®] Therapy intervention in schools. All practitioners identified a number of factors that would promote the inclusion of children within a LEGO[®] Therapy intervention, with some overlap between practitioners. A total of 16 separate and unique codes were identified in analysis of this data, and this section of the findings tries to categorise and present the data under the headings of several different sub-themes, namely: social skills, language needs, formalised diagnoses (except Autism Spectrum Condition) and emotional regulation.

4.2.2.1 Social Skills

One of the primary identified perceived purposes of a LEGO[®] Therapy intervention, as explored in the findings section of Research Question One surrounded the intervention’s intention of improving children’s social competence or social skills, akin to the original conceived purpose of LEGO[®] Therapy, as defined by its initial authors. This perceived purpose is almost exactly mirrored in the rationales behind schools’ and practitioners’ decisions for

including certain children within a LEGO[®] Therapy intervention, with qualitative judgements being made about a child's apparent lack of general social skills.

"It would be as a result of them having displayed poor social skills within the classroom or within the playground." – School 6, SENCo

"So usually, children with social skills... social interaction difficulties. It could be to do with a listening and attention as well... Those are the children that I would consider using Lego therapy for." – School 5, SENCo

However, within the broader theme of 'social skills', several small, discrete social skills were identified by several practitioners which shone light on, perhaps, more specific needs or difficulties that were recognised by schools as being key indicators of the potential for LEGO[®] Therapy inclusion. Some practitioners spoke only of children with social skills difficulties in their broadest sense, but most were able to identify and categorise more specific social skills difficulties that influenced schools' decisions to include children within LEGO[®] Therapy, as explored in further detail below:

Impulsivity or Forcefulness

One of the key identified sub-themes within the theme of 'social skills' surrounded the idea of including children within the intervention because of their impulsivity or forcefulness. Some practitioners identified that one of the key social difficulties for children who were selected for LEGO[®] Therapy was an informal observational judgement being made about their behaviour being impulsive (i.e., acting without forethought or appropriate planning) or forceful (i.e., acting egocentrically with physical force).

"So, the sorts of children who can be extremely forceful with others often work really well in Lego[®] Therapy groups... Children who are very impulsive, we also include them often in the Lego[®] Therapy... it helps to slow down those very impulsive and forceful children who can hurt others." – School 6, SENCo

"They [the children] might have real difficulties in letting go and might prefer to be the leader in the games that they usually play... they would argue about everything... because control's the big issue." – School 5, SENCo

Co-operation, Teamwork and Turn Taking

Another of the key identified sub-themes in this area, as recognised by school practitioners, surrounded the concept of children being included within LEGO[®] Therapy due to specific difficulties with co-operating with peers, acting as part of a team, sharing resources, and taking turns appropriately; all of which would be typically identified as being age-appropriate pro-social behaviours. Several practitioners identified that children had been selected for their LEGO[®] Therapy groups after informal observations had been made about some included children having specific difficulty with these skills.

“If they find waiting and taking turns difficult then Lego therapy works really well for them because it does teach them some control over jumping in, they have to wait their turn, because they have a specific role within the group they can't just take over and do it whatever they want.” – School 6, SENCo

“It would be as a result of them having displayed poor social skills within the classroom or within the playground, and sort of a lack of ability to cooperate with other children and get along well.” – School 5, SENCo

Lack of Social Confidence

Another interesting sub-theme developed in this section of the research involved practitioners identifying that some children may have been identified for inclusion in a LEGO[®] Therapy intervention for an apparent lack of social confidence, and displaying, in some scenarios, behaviours which may have been interpreted as being socially avoidant or anxious. It was felt by some practitioners that LEGO[®] Therapy would promote the social confidence of shy or anxious individuals, and some children were selected for the intervention based on these qualitative observations or judgements.

“So, quite often it's... those children who step back and let everybody push them around...” – School 6, SENCo

“Those children struggling with navigating friendships in social situations... I think particularly those children that don't necessarily have those experiences at home and for those children that need self esteem, boosting...” – School 2, SENCo

“We base it on children with social... not disabilities... but maybe they’re shy or they haven’t got the confidence to go up and, you know, meet new friends, or are socially awkward...” –

School 5, Teaching Assistant

Difficulties Reading Social Cues

A fourth and final sub-theme from this section of the research was practitioners identifying that a final specific need that would indicate a referral for inclusion in a LEGO[®] Therapy intervention would be a judgement being made around a child’s difficulties with reading and understanding social cues; broadly defined as a child’s ability to both recognise and interpret a range of spoken and unspoken cues which would, in turn, moderate or modify their own behaviour (e.g., recognising when another child is upset and adapting their behaviour accordingly to show concern or provide comfort). Some practitioners identified that, in some cases, children had been selected for LEGO[®] Therapy on the basis that they were not able to consistently display age-appropriate social cue reading.

“I suppose they can be, you know, very black and white and they tend to... they can be awkward and say things... like, often there’s no filtering of what comes out of their mouth and so they don’t particularly read social context very well or the read social cues or emotional cues that people might be giving them.” – School 4, SENCo

4.2.2.2 Language Difficulties or Needs

A second theme that was created through thematic analysis, under the heading of ‘Inclusion Criteria’ was that one key identifying need for children in accessing LEGO[®] Therapy were specific language difficulties, or communication and interaction needs. Some practitioners identified that children had been selected for a LEGO[®] Therapy intervention because a qualitative judgement had been made about their spoken language skills, and it had been decided that LEGO[®] Therapy would help to promote these. ‘Communication and Interaction’ (as outlined by the SEND Code of Practice, 2017) is a broad area of need that encompasses a range of specific language skills, such as speech clarity and articulation, verbal comprehension, and expressive vocabulary, as well as a child’s ability to appropriately communicate and interact with adults and peer alike. Some practitioners identified a range of ‘Communication

and Interaction' skills that would underpin their identification for a LEGO[®] Therapy intervention.

"Might be like speech difficulties, because that impacts a little as well, especially if they are the engineer, you know, you don't you don't want to put that pressure on somebody who finds, for instance, saying their "L's" difficult." – School 3, SENCo

"I made the decision, and the basis was their ability to socialise that they may not have a diagnosis, but they do have difficulties with expressive language and... usually language... communication and language. In fact, I can tell you that that's what it is. There is not a diagnosis of autism, but it is in the area of communication and language." – School 5, SENCo

English as an Additional Language

Another theme created through thematic analysis when exploring inclusion criteria for LEGO[®] Therapy was somewhat related to the above mentioned 'Language Difficulties or Needs' but was considered distinct enough for it to be considered its own theme. Some practitioners identified that children were selected for LEGO[®] Therapy due to having English as an Additional Language (EAL); where English is not their first spoken language. Some practitioners outlined that EAL children were included for similar reasons as outlined in the previous 'Language Difficulties or Needs' section and felt that LEGO[®] Therapy would naturally provide opportunities for EAL children to develop their English language skills.

"I also had we trialled it with our sort of EAL, so our EAL lead was doing some Lego therapy we tried it with that in Key Stage Two, just to gain... thinking about language development... I thought maybe it would be really good to have the EAL children..." – School 4, SENCo

4.2.2.3 Wider Diagnoses of SEND

Some practitioners identified some wider diagnoses of Special Educational Needs or Disabilities (SEND) that would indicate that a LEGO[®] Therapy intervention would have been an appropriate choice of approach. This theme encompassed a small range of needs, including diagnoses of attention deficit hyperactivity disorder (ADHD), dyspraxia and social, emotional, and mental health needs.

“Children who have got ADHD, mental health issues, dyspraxia anything, anything really... anxiety and right now because of COVID and mental health issues.” – School 1, Teaching Assistant 1

Attention Deficit Hyperactivity Disorder (ADHD)

Perhaps the most prevalent theme to be created in this section was the identified SEND of ADHD as a prerequisite diagnosis for inclusion in LEGO[®] Therapy. Several practitioners identified that children they had decided would benefit from inclusion in the intervention had diagnoses of ADHD, consistently reporting that it was felt by staff that the structure of LEGO[®] Therapy, in theory, lent itself to children identified with ADHD as it required patience, turn taking and reducing impulsivity (as previously explored).

“Also, some children... like children who have ADHD, we also include them often in the Lego therapy because, once again, it involves waiting, taking your turn, having to focus and listen, listen to others...” – School 6, SENCo

“Children with ADHD. They really get a lot out of it. I think that's also the attention that they're getting as well. It's positive attention and I think that has a lot, a lot to do with it...” – School 3, SENCo

Social, Emotional and Mental Health Needs (SEMH)

A second prevalent theme to be created in this section of the research was practitioners identifying LEGO[®] Therapy as an appropriate intervention approach for children with social, emotional, or mental health (SEMH) needs. The SEND Code of Practice (2017) outlines that SEMH needs cover a broad range of factors, including diagnosable mental health difficulties such as anxiety, depression, self-harm, substance misuse and eating disorders. Some practitioners identified that some children had been selected for inclusion in LEGO[®] Therapy because of either a diagnosed SEMH need, or a judgement being made about a child having SEMH needs in school.

“Social, emotional, mental health - they're really significant. So, attachment... So, yeah, and they've, you know they've got significant interruptions in their social emotional development... that's probably something that the children that are not autistic - more on that social emotional...” – School 4, SENCo

“I had a background knowledge of the children that were struggling emotionally with things that were going on at home... if it was somebody with social, emotional, [needs] I would implement that between the child and I first of all, so it gives them an ability to talk about things before we bring in other children.” – School 3, SENCo

4.2.2.4 Essential Prerequisite Skills

Every practitioner identified several key needs, difficulties or disabilities that would prompt a child’s inclusion in LEGO[®] Therapy, as explored above, which may consider a very deficit-led model of intervention administration. However, conversely, several practitioners also identified a number of key prerequisite or essential skills that children would already need to have, in order to be able to take part in LEGO[®] Therapy; not simply addressing the skills that children lacked, but also considering children’s existing abilities.

Language Skills

Some practitioners identified that, as an essential prerequisite skill, children needed a pre-existing level of language to be able to begin to engage with the intervention. No practitioners identified an exact threshold for inclusion or exclusion, based upon a child’s existing language skills, but it was consistently reported that it was felt that children needed some level of language for LEGO[®] Therapy to be appropriate or successful.

“Well, they have to have language some language, definitely.” – School 4, SENCo

“So, before they can actually have a meaningful kind of interaction around a “barrier game”, which is what I think Lego therapy is, they need to have the language to be able to communicate, give instructions...” – School 5, SENCo

Emotional Regulation

Another essential prerequisite skill that was identified by some practitioners was an existing ability to regulate their own emotions, and to be able to behave safely around other children. Some practitioners reported instances of either having to discontinue a LEGO[®] Therapy intervention, or actively deciding against administering one, based on a child’s difficulties with regulating their own emotions.

“There was a boy who I thought Lego[®] Therapy was perfect for him, but he who would only be able to do that with an adult who could contain the situation and not let the child dysregulate because, you know, with some children, that could happen...” – School 5, SENCo

Interest

Another theme identified by practitioners was that children’s appropriateness for the intervention and, in turn, its successfulness was often predetermined by a child’s existing interest in LEGO[®] as an item. Some practitioners identified case studies where children’s engagement and subsequent achievement in LEGO[®] Therapy had been largely assisted by their implicit engagement with the LEGO[®] itself and that, in some circumstances, where children did not have an existing love of LEGO[®], their engagement was waning, and difficult to motivate or encourage.

“... because they just don't have a love of Lego... They just don't enjoy Lego and I think you can't, you can't force them to enjoy Lego, if they don't enjoy it but they, they don't enjoy it, they don't want to do it... and whatever you do, isn't going to change that.” – School 6, SENCo

No Prerequisite Skills Needed

Some practitioners, conversely, identified that it was not necessary for children to have any pre-existing or prerequisite skills to be able to take part in LEGO[®] Therapy. Some articulated that it was, instead, the intention of LEGO[®] Therapy to promote those skills, and that children would not necessarily have any of the above-outlined skills to be able to engage successfully with the intervention.

“I don't think they do need any skills thinking about it... I don't think they need any skills I think if you're patient enough with the children, I think any child could do it, I think it's how the adults put it over I think...” – School 3, SENCo

4.2.3 Structural and Organisational Factors

The third and final theme identified through the thematic analysis of Phase One data, in relation to Research Question Two, was the identification of several structural and organisational factors that influenced schools’ decisions to run LEGO[®] Therapy as an

intervention, and factors which contributed to its successful delivery. Some practitioners identified a number of crucial components that were necessary for them to be able to successfully implement LEGO[®] Therapy in school.

4.2.3.1 Importance of Practitioner

Perhaps the most prominent theme identified by practitioners was the importance of the member of staff delivering it. All practitioners identified that the skillset and aptitude of the member of staff in charge of LEGO[®] Therapy's administration made a significant impact upon the intervention's success and, in turn, schools' willingness to implement it.

"I think it's the person who's delivering it. They need to be ready to understand the programme they need to understand the purpose of the programme they need to enjoy working with those children, they need to have the patience to work with children when it doesn't go right..." –

School 4, SENCo

Training for Staff

A less discussed theme, linked to the importance of the practitioner, surrounded the training input that staff had received. All practitioners identified the training process that had received to enable them to deliver LEGO[®] Therapy, and the range of responses was significant. Some practitioners were able to articulate experiences of official training courses, which enabled them to administer LEGO[®] Therapy, some had had in-school training from another member of staff, and some had had no training whatsoever. Some practitioners also expressed criticism at the formal training delivery and it, perhaps, raises questions about how practitioners are prepared to deliver LEGO[®] Therapy.

"To be completely honest I haven't had any training... I have got training next month... So I've had literally about an hour, one on one with that our SENCo here just to describe so I've kind of learned as I've gone on..." – School 5, Teaching Assistant

"Lego[®] Therapy is being offered as a as a training is usually one and a half hours long or two hours long, so it's not very long and it's a one-off thing, and I don't know whether that's enough in terms of like developing a skilled practitioner..." – School 5, SENCo

4.2.3.2 Resourcing

Several practitioners also identified the crucial factor of appropriate resourcing as a key influencer of a school’s organisational and structural decision to be able to successfully implement a LEGO® Therapy intervention in school. School staff identified that resourcing was one of the biggest challenges to implementing a LEGO® Therapy intervention in school, and some practitioners identified that both the staff cost, and equipment cost played a key role in schools’ decisions about administering LEGO® Therapy.

“I think also having the right kit, that’s a really important one as well, having nice LEGO® kit, you do need that. We wouldn’t be able to run it otherwise...” – School 4, SENCo

Phase Two

4.3 Research Question Three

What are caregivers’ perceptions of a LEGO® Therapy intervention, including the perceived benefits and limitations of a child or young person’s involvement in a LEGO® Therapy intervention?

In this section, the findings of the Thematic Analysis (Braun and Clarke, 2006) related to the third research question of this thesis. All data gathered in this section of the findings was gathered from the second strand of Phase Two data collection: interviews with five parents or carers, hereafter referred to as ‘caregivers’, whose children are currently, or have recently, undertaken a school-based LEGO® Therapy intervention. A thematic map of the themes is presented below in Figure 5.

Figure 5

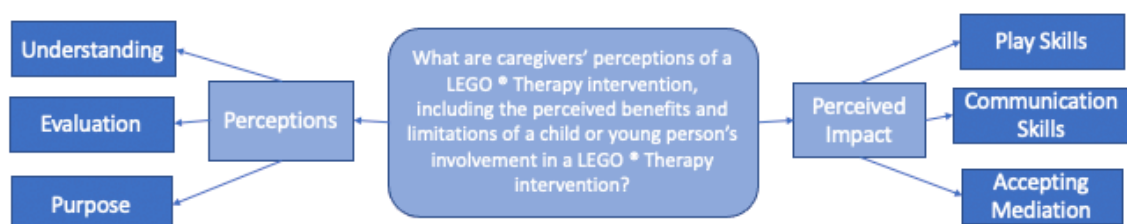


Figure 5: A Thematic Map of themes presented under Research Question Three

This section of analysis sought to explore caregivers' perspective of LEGO[®] Therapy, including their understanding of the intervention and their level of involvement and engagement with it, as well as their evaluation of LEGO[®] Therapy, including what they considered to be the impact of the intervention on their children, both positively and negatively. Thematic analysis of the interviews with caregivers created initial codes, which were broadly coded under two themes, namely: caregiver perceptions of LEGO[®] Therapy (including their evaluation of the intervention, their understanding of its purpose and important factors that contributed to its success) and caregiver perspectives of the impact of their child's involvement in LEGO[®] Therapy. Each of these themes are explored in more detail below.

4.3.1 Caregiver Perceptions of LEGO[®] Therapy

The first theme discussed in this chapter concerns the exploration of caregivers' perceptions of a LEGO[®] Therapy intervention. Caregivers discussed their own understanding of LEGO[®] Therapy, and how schools introduced and involved them within the intervention, as well as discussions about caregivers' perception of what they felt the purpose of the intervention was. Although they were discussed separately, caregivers' understanding of the purpose of the intervention was intrinsically linked to their understanding of the school's rationale for including their child within the intervention and they are discussed together. Caregivers were also able to identify and discuss a number of important factors that they felt underpinned LEGO[®] Therapy's principles and were vital to the intervention's implementation and success.

4.3.1.1 Understanding of LEGO[®] Therapy

The first thing to note, before discussing caregiver perceptions of LEGO[®] Therapy, is first to provide an outline of caregivers' understanding of the intervention. One could argue that caregivers may not be well placed to critically evaluate an intervention they have no knowledge of. However, all caregivers were able to give sound, comprehensive explanations of what a LEGO[®] Therapy intervention may look like, as well as being able to demonstrate an awareness of the understanding of intervention specifics, such as the importance of the different roles that children play within the intervention.

“Hasn't there got to be more than two people doing it? One's got a job of an engineer one's got a job of a builder and the other is the person who finds it all, isn't it learning to pass each job on to somebody else?” – Caregiver 1

However, most interestingly, every caregiver interviewed – although able to provide a sound outline of the details of a LEGO[®] Therapy intervention – identified that they were not confident in their knowledge of LEGO[®] Therapy and felt that they were not well-placed to understand the specifics of the intervention. Whilst all caregivers knew that their children were undertaking a LEGO[®] Therapy intervention, and knew roughly what it entailed, they felt like their understanding was not as comprehensive enough as to be able to engage with their child's school about it.

“To be honest I'm not sure what LEGO therapy is I've kind of it's something I've not looked in to... when it was mentioned to me I kind of briefly looked not really got an understanding of it...” – Caregiver 1

“Well, I'm not really sure, but I think that it has something to do with children sharing things together... Maybe they use the LEGO to help each other to build something... they might even do it as a team.” – Caregiver 4

Whilst caregivers felt that they did not necessarily have a comprehensive knowledge of the intervention, despite being able to provide reasonably sound outlines, all caregivers articulated that they were happy for their children to be involved as they trusted staffs' ability to provide interventions which met their child's needs. In other words, despite not having a full understanding of the intervention, caregivers were generally happy to allow staff to make pedagogic decisions, on their behalf, to provide children with a LEGO[®] Therapy intervention as caregivers felt that schools would always operate with children's best interests at heart.

“Overall, the school have been fantastic and everything they've suggested and with {CHILD} has been really helpful. So, when we got letter saying, this is what we're doing, I said 'great'.” – Caregiver 2

“I mean, the schools have the children's education, their best interests at heart. If they say so, why would they put a child in like that?” – Caregiver 3

This is not to say that caregivers did not wish to be more involved and were happy to leave their children's wellbeing entirely within the staff remit. Some caregivers expressed a desire to be more involved in the intervention and, perhaps, for the school to engage them more actively in their intervention planning. Some caregivers raised a desire to learn more about LEGO[®] Therapy, and to be encouraged to become a more active part of reinforcing its specific benefits at home.

"I do want to look into it because it's a concept I find interesting... I do find it interesting. I do want to look into it to see exactly what's involved and what the aim of it is. I do want to learn more about it." – Caregiver 1

4.3.1.2 Evaluation of LEGO[®] Therapy

Generally, caregivers spoke positively about the impact of LEGO[®] Therapy (discussed in more detail later in this chapter), and caregivers identified that their children enjoyed attending LEGO[®] Therapy. For some children, caregivers identified, LEGO[®] Therapy was a positive experience embedded, sometimes, within a generally less positive school environment.

"She does seem to really enjoy it... it can be difficult when you're trying to put a positive slant on school for a child that doesn't want to go, so sometimes it's nice to be able to say 'well, what else have you got to do? You've got LEGO Therapy? Oh, that's good. You enjoyed that last week?' So that's been really helpful." – Caregiver 2

No caregivers could identify drawbacks to their child's involvement. All caregivers understood that, in order to do LEGO[®] Therapy, their child was removed from at-least one timetabled curriculum lesson per week, which may have arguable consequences. However, all caregivers discussed how they felt that a LEGO[®] Therapy intervention was for their child's greater good, and that substituting some timetabled curriculum learning for LEGO[®] Therapy was a generally positive thing. This was, again, typically linked to caregivers' perceptions that schools had their child's best interest at heart, as explored above.

"No. I don't think [there is a drawback] because I think he's doing it at school, and I think they're doing an amazing job." – Caregiver 1

4.3.1.3 Purpose of LEGO[®] Therapy

Caregivers identified a wide range of factors that they felt LEGO[®] Therapy intended to address. Most caregivers identified that they felt LEGO[®] Therapy's primary ambition was to improve their child's social skills, and the micro-skills which underpin them, but many identified some wider physical, emotional and communication skills that they felt LEGO[®] Therapy aimed to address.

Social Skills

All caregivers identified how they felt that LEGO[®] Therapy aimed to improve the social skills of their children, through the construction of a scenario in which children are encouraged to cooperate in order to achieve a shared goal. It was typically identified by caregivers that their children had particular difficulties with social skills, and that a structured intervention approach to resolving these difficulties was an appropriate pedagogical choice.

"The social interaction, for my daughter, particularly, that's really difficult for her... so working in a peer group is normally hard..." – Caregiver 2

"Is it to help with like social interaction? ... Improving their social skills, maybe an opportunity to discuss their feelings..." – Caregiver 6

Further to this, caregivers were able to identify a milieu of discrete social skills that they believed LEGO[®] Therapy was either intended to improve or could improve as part of its teaching. Firstly, caregivers identified that LEGO[®] Therapy may be intended to demonstrate to their children typical skills associated with socially acceptable overtures of games and activities, such as sharing resources, taking turns and being patient with one another; embedded within a framework of 'collaboration' or 'teamworking'.

"I think that it has something to do with children sharing things together..." – Caregiver 4

"They work together as a team to create something so I guess it must be something along those lines... Maybe building something or creating something or problem solving together..." – Caregiver 2

Embedded within this concept of discrete social skills that may form the foundations of what we may consider to be socially acceptable social overtures (i.e., turn taking, patience, sharing), caregivers also identified that this came with developing their child's explicit understanding of the importance of acknowledging the roles that other individuals can play in a teamworking or group scenario. Some caregivers identified how their child may typically prefer to be more self-reliant in their play and unaccommodating of others; often preferring to complete tasks individually. Whereas, within the framework of LEGO[®] Therapy, children may have to consciously recognise and accept that others may have a role to play and a valuable contribution to bring.

"So that would come as sharing and recognising other people's importance in the room, maybe, or status? So, you're not in charge of everything... like not being in charge of things or learning to let someone else have a go or understanding this other people like on that chain." –

Caregiver 1

"I think he'd just want to get the job done. I think he would much prefer just to do it by himself." – Caregiver 6

Further to this, within the concept of LEGO[®] Therapy aiding children's explicit understanding of recognising the agency of others within a group, caregivers identified that, often, their children needed to develop their ability to relinquish control over tasks and allow others to play their part in a shared task. Some caregivers identified that another aspect of LEGO[®] Therapy that may enable their child's social skills to develop is in precisely that: allowing them to recognise, not only the importance of others, but that they do not need to be in control in order for positive experiences to occur.

"He needs to learn to take instructions and understand, in his mind, telling him what to do all the time... it's kind of things so that he doesn't feel he has to be in control." – Caregiver 1

"Maybe it's also about making him listen to other people and listening to their ideas, because sometimes he just wants everything to go his own way and it would be nice if he could listen to other people and actually consider their ideas.... Sometimes other people have good ideas too, but he doesn't always see that..." – Caregiver 4

Parallel to children's development of the social skills discussed above, caregivers also identified that LEGO[®] Therapy might also engender positive personal progress for children in

their views of themselves; their inner working models of how they perceive themselves as people within group or social scenarios. Caregivers outlined that they felt that through LEGO[®] Therapy's framework, it may give their child opportunities to feel successful and, in turn, become a more confident and assertive member of a group; especially if this was of previous difficulty. Some caregivers articulated how they felt that their child may feel that, previously, their contribution may not have value or that they are not confident enough to assert their opinion in social situations but felt that LEGO[®] Therapy might provide them with such an opportunity. This may then manifest as an increased level of confidence in social occasions, and a conscious recognition that they are able to add a valuable contribution to group activities.

"I know he finds lots of his work difficult and then he tends to shut down, so maybe it might make him more confident to take things on and to do things with a partner or as part of a little team in the classroom." – Caregiver 4

"Expressing their opinions on something, maybe... saying 'no, do it like this... not like this...', it just opens up their confidence as well when speaking out... Just trying to be them and feeling comfortable with it.... Yeah, expressing something that he may feel that he never could before..." – Caregiver 3

The result of improvements in all of the above-outlined social skills, caregivers felt, may enable children to develop friendships, and to recognise that they were capable of making and maintaining friendships in school. Some caregivers identified that friendships were difficult for their child to form, but that a LEGO[®] Therapy intervention may provide scope for children not only to build friendships within in intervention, but to develop their understanding of friendships as a whole.

"Well, she finds it very difficult to make clear friends and she doesn't she often doesn't interact with children very well at play time. So, I think if she spent more time with them in a less academic setting, so less classroom based, that could be a benefit in the playground and making further social connections and friendships. It would be really nice if she said, 'I want to go to school today because I want to see my friends'." – Caregiver 2

"I think he needs to learn how to make friends, and maybe have the opportunity to make friends with other children in school." – Caregiver 4

Communication and Language

Caregivers identified that another skillset fostered by LEGO[®] Therapy involvement may be specific communication and language skills, including a number of discrete facets of communication and language. Caregivers often identified that their children had language difficulties, either with communicating appropriately with peers, using vocabulary accurately, or speaking with clarity, and mostly felt that another aspect of LEGO[®] Therapy may help to develop these.

“He was late talking, although he loves to talk to you, we find his language is still quite basic, his sentences are really short, and he tends to repeat words.” – Caregiver 6

“Her speech isn't always terribly clear... So, interaction with her peer group is really difficult for her, she's also showing lots of signs of anxiety... So, the whole communicating with her peer group is hard work.” – Caregiver 2

Some caregivers also felt that, alongside development of their overall language skills, children may develop specific vocabulary, perhaps linked to their emotional literacy, which might help them to identify, label and discuss their emotions, especially in difficult circumstances.

“Maybe an opportunity to discuss their feelings... widen their vocabulary... In the way that they might not be able to communicate... some children don't know why they're angry or they're just unsure of their feelings.” – Caregiver 6

Relationships and Trust

A final interesting facet of LEGO[®] Therapy, as identified by caregivers, was that LEGO[®] Therapy may enable children to develop relationships not only with their peers (as discussed above) but with the adults in school. Some caregivers identified that their children, for a number of reasons, did not necessarily instinctively trust that the adults supporting them in school were there to keep them safe, or have their best interests at heart and that, on occasion, their outward behaviour came from an internal feeling of unease or unsafety. Some caregivers articulated that, through the platform and opportunity that LEGO[®] Therapy provides, children had learned to become more trusting of adults, and had begun to develop relationships with key adults based on care and mutual understanding.

“He needs to learn trust, I think, which is a big thing... Perhaps because of his trauma, he doesn’t really trust adults... I think through the trust, possibly, he’ll feel that he hasn’t got to be in charge of everything....” – Caregiver 1

Factors that Matter Most

In parallel with lots of the factors discussed above, every caregiver also identified that – in many ways – the LEGO[®] Therapy intervention wasn’t necessarily about the LEGO[®] Therapy itself. In fact, some of the real benefits of LEGO[®] Therapy identified by caregivers comes from the very nature of the intervention itself. Many caregivers outlined that, regardless of how positive an impact the intervention itself had, some of the most valuable aspects of their child’s involvement came from less observable or measurable factors.

Firstly, many caregivers identified that their children struggled with the classroom environment as a whole, finding the busyness and the noise levels distressing or disruptive, and finding the constant social pressures of interacting with peers challenging. A LEGO[®] Therapy intervention, as well as offering a structured approach to developing a number of skills, also offered children a calm, quiet alternative environment, with a small number of peers.

“I’m hoping it’s a bit of time out of the classroom. It’s calmer, it just allows that downtime, yeah, to kind of process things... which is what I think she often needs.” – Caregiver 2

This meant that, in the view of most caregivers, children were less stressed and less anxious within a LEGO[®] Therapy intervention, which promoted their overall wellbeing. Furthermore, being in a small group of - often similar ability peers - was less anxiety provoking than trying to negotiate the social environment of the classroom or playground.

“Yeah, I suppose it is. I know he finds the classroom really challenging because it’s too busy and too noisy. So maybe doing it in a smaller group would be helpful. He needs that quiet space and that quiet time with a small group of people.” – Caregiver 4

“He may find it easier to interact with other children because it’s a smaller group. There’s less going on around him, he’s able... he might feel more comfortable.” – Caregiver 6

Further to this, some caregivers expressed that the nature of the LEGO[®] Therapy was more relaxed than a typical classroom setting, which may have a more academic or pressured edge, and that LEGO[®] Therapy offered an environment with less pressure and a slower pace.

“Well, I think it could be a relaxed atmosphere if they get to do what they want and build what they want and interact when they want to interact.” – Caregiver 6

4.3.2 Perceived Impact of LEGO[®] Therapy

All caregivers interviewed were able to identify some factors that they felt LEGO[®] Therapy had improved, or contributed to improving, for their child. However, given the scope and objectives of this thesis, it must be acknowledged that any impacts discussed in this section cannot, and should not, be attributed solely to a child’s participation in LEGO[®] Therapy. Nonetheless, the impact identified by caregivers are still noteworthy contributions to the research. Caregivers identified a range of positive impacts that they felt LEGO[®] Therapy may have contributed to, which have been coded broadly under three subheadings, namely: accepting of mediation, communication skills and play skills; each of which is explored in detail below.

4.3.2.1 Accepting Mediation

The first area of impact, as identified by caregivers, was around children accepting mediation or feedback from adults or peers. Some caregivers identified that, prior to LEGO[®] Therapy, their children struggled with attending to, and accepting, the input of others and that this had, on occasion, led to conflict in groupwork scenarios. Embedded within this, similarly, as discussed above, some caregiver identified that a core component of this was that their children were now more open and trusting of adults and had come to a new explicit understanding that adults in school were there to support. Alongside this newfound recognition came an increased acceptance of adult guidance and mediation.

“He’s actually getting to trust I think his TA... she’s a very big part of his life more than his teacher... The thing she’s doing is building that bond with him.” – Caregiver 1

“Now he’ll find it out [a mistake he’s made] and be able to say ‘Oh, okay - I got that wrong’ or something like that, and I think that’s, that’s a change in itself.” – Caregiver 3

4.3.2.2 Communication Skills

Caregiver also identified another possible impact of LEGO[®] Therapy being improved communication skills. Improvements as communication could be expressed as children's communicative abilities becoming more comparable to those of their peers, or what one may term typically social approved communication; with caregivers identifying that children who, previously, were more outspoken and louder were now calmer and clearer in their communication, and children who were previously withdrawn and passive now being more confident to speak out and express their opinions.

"He used to shout a lot, but now he seems a bit calmer and it's easier for me to approach him and have a conversation with him when he's angry... I've noticed his communication is getting better, definitely..." – Caregiver 3

"I'm happy... he now wants to express his opinion and if LEGO Therapy is helping him to have an opinion and give it so a small group of other people then that's great..." – Caregiver 6

4.3.2.3 Play Skills

A final frequently reported theme to arise from exploration of caregiver's understanding of the impact of LEGO[®] Therapy, however, is the impact upon children's play skills. All caregivers identified improvements in their children's play, across a number of discrete play skills.

"Yeah, I see a bit of improvement with his peers when he's playing." – Caregiver 1

Caregivers identified that their children had displayed an increased awareness and understanding of social norms and overtures and were typically playing in a way which would typically be considered to be age appropriate.

"I think he understands it a little bit more... I wouldn't say he understands it 100%, but he definitely understands it more..." – Caregiver 6

For example, some caregivers identified that children were now more tolerant of accepting and integrating others into their play, and that children were more likely to relinquish direct control over games and activities and be more accommodating of others. For some caregivers,

this included their children reducing incidences of violence or aggression towards others and being more able to resolve conflicts in difficult social situations.

“I do think he's actually listening, so I think that's possibly a step we're getting to... I noticed in his play with other children he was very controlling... he was using his hands a lot and hitting... he's learning that people aren't going to play with him if he does that and that it's not a good choice to make.” – Caregiver 1

Further to this, some caregivers also identified some more discrete social skills, observed across a range of scenarios, such as being patient and listening to others, as well as being more inclined to share resources.

“Probably his patience as well... He never used to have a great deal of it. I mean, he used to be very short tempered with his younger brother... Now he's a lot more reserved, and more patient with it all.” – Caregiver 3

4.4 Research Question Four

What are the experiences of non-ASC children within a LEGO[®] Therapy intervention, and what are the perceived benefits and limitations of a child or young person's involvement from their perspective?

In this section, I present the findings of the thematic analysis (Braun and Clarke, 2006) related to the fourth research question of this thesis. All data gathered in this section of the findings was gathered from the second component of Phase Two data collection: interviews with six non-ASC children who were currently receiving, or had recently received, a school-based LEGO[®] Therapy intervention in school. None of the children interviewed had either a diagnosis of ASC or were at any point along the Local Authority's ASC diagnostic pathway. A thematic map is presented below in Figure 6.

Figure 6

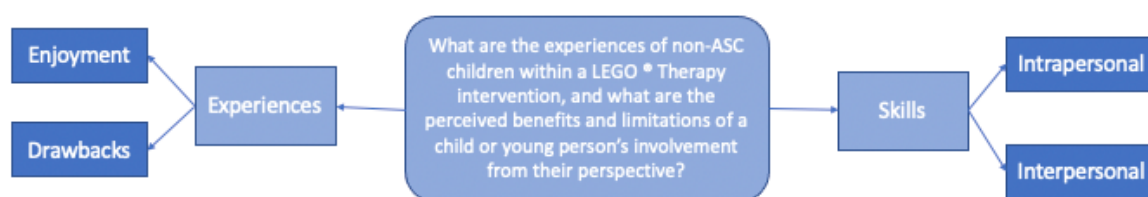


Figure 6: A Thematic Map of themes presented under Research Question Four

4.4.1 Non-ASC Children’s Experiences of LEGO® Therapy

This first section of this section explores themes developed as part of the analysis of interviews with non-ASC children, in which they evaluated their LEGO® Therapy experience – articulating both positives and negatives of their involvement – alongside identifying several important factors which contributed to a positive LEGO® Therapy intervention experience. Every child interviewed was able to identify and explain several different factors which they felt were of particular importance or significance to their enjoyment, engagement, or progress within their LEGO® Therapy group and, often, discussed these in relation to their own experiences, not just as participants within the context of a specific intervention, but as children within wider contexts of classrooms, friendships, and lives. Each of these themes is explored in detail, below.

4.4.1.1 Enjoyment of Intervention

“The part where you’re building the project is fun... It’s fun because we get to build lots of different things.” – Child 3

One of the most significant themes developed as part of the analysis of interviews with children surrounded the concept of enjoyment; with all interviewed children identifying that LEGO® Therapy was an enjoyable experience. All children interviewed, in some capacity, identified that LEGO® Therapy was fun or enjoyable, and that this was a key component of their engagement and motivation to take part. Some children commented that their

enjoyment was couched in an appreciation of the complexity or grandeur of the structures they were making as a team, and other commented that the collective aim of working towards a shared goal of 'play' was an enjoyable process within itself.

"You build structures... like different ones. Like right now we're building a big T-Rex and like, before the T Rex we done an Angler fish. I just think it is cool." – Child 4

"Because when you're building, because I really like LEGO, it's fun at the end when you get to play with it... So, you're building it so that at the end you can have fun..." – Child 2

"When you're finished doing it you can play with it next time you do it..." – Child 5

One child even made an interesting observation which appeared to suggest that the 'enjoyment' of LEGO[®] Therapy is, in itself, one of the crucial factors in promoting ongoing engagement as, without the element of enjoyment, the fabric of the activity (i.e., children enjoying spending time together, enjoying each others' company and working with and for each other) may become strained. In other words, if participants were not enjoying the intervention, then the focus on developing wider skillsets may become challenging, and children having fun within the intervention is a crucial underpinning to its ongoing success.

"Because if you're not excited you would be a bit nervous, and if you're not happy you would be angry to do LEGO[®] and you just want to do LEGO[®] on your own, but that would not be helpful because if there was like a grumpy person doing LEGO[®] all by their own and another person doing LEGO[®] by their own, they could pair together to help each other..." – Child 6

Interestingly, as touched upon in the existing literature, some children did identify that a pre-existing skillset, ability, or interest in LEGO[®] - either at home or elsewhere in school - was an important pre-requisite to drive their engagement. However, this perspective was not universally acknowledged, and some children identified the exact opposite standpoint; where LEGO[®] Therapy was interesting precisely because it was a unique experience that they had not had the opportunity to do elsewhere or had not previously considered as an option.

"Like... at home... I have a lot of LEGO[®] buildings and I just like building structures... and that's why I like... what's good about." – Child 4

“No, I don't have any LEGO[®] at home... I've never really done it before but it's actually quite fun...” – Child 5

Some children enjoyed LEGO[®] Therapy so much that they discussed it forming a significant or pivotal part of their school experience, and that they looked forward to it as part of their timetabled week. This created an interesting conversation amongst some children who identified that one of the most enjoyable aspects of LEGO[®] Therapy was the anticipation, ‘mystery’ or ‘suspense’ of finding out what each session would entail.

“Very excited for when it like hits Wednesday. That's when normally do it... Yeah, we're not quite sure what's gonna (sic.) happen... it's a little bit of mystery.” – Child 4

Alongside the implicit enjoyment of the activity, some children also identified the value they placed on the relationship between themselves and the LEGO[®] Therapy practitioner and outlined how the intervention provided them with an opportunity to develop a relationship with a new adult with a different dynamic; one predicated on a cooperative or supportive edge which, in some instances, directly contradicted some children’s existing perceptions of adults as being punitive or unhelpful.

“[Practitioner] is kind... Helpful... She doesn't get angry usually. Some of my other teachers get angry with me when I can't do something, but [practitioner] doesn't do that to me in LEGO therapy, I know she's there to help...” – Child 3

A final aspect of enjoyment, identified by children, was couched in the idea of a LEGO[®] Therapy intervention providing children with opportunities to be successful and to foster a sense of achievement that may have been absent from other aspects of their life. Some children identified that LEGO[®] Therapy provided an opportunity for them to be successful and that this had helped to foster a sense of enjoyment and motivation.

“I felt confident to make one of those red jets ... because everybody was helping me and most of the time nobody really wants to help me... It made me feel happy...” – Child 3

4.4.1.2 Drawbacks of the Intervention

Most children, generally, spoke positively about their involvement in LEGO[®] Therapy and identified several affirmative experiences about their engagement with the intervention, and

could identify and discuss a wide range of benefits. However, that being said, most children were also able to identify some aspects that they found less helpful and articulated some fewer positive experiences of LEGO[®] Therapy. Firstly, some children articulated that some of the roles within the intervention were less interesting than others and said that some aspects were 'boring'. One could argue that the less interesting roles form a crucial part of the LEGO[®] Therapy intervention, in demonstrating to children that they can't always do what they want to do and that, sometimes, 'boring' roles are just as important as more exciting ones. Nevertheless, some children identified this as a drawback of their involvement.

“Doing the finding bits, when it's just your job to find the bits and it's your job to pass them on... It's really boring and I just want to go somewhere else...” – Child 2

Some children also spoke about the process of LEGO[®] Therapy being frustrating or confusing sometimes due, in part, to the complexity of the communication skills required between all participants of the group, which is discussed later in this chapter. Some children articulated frustration at the collaborative nature of the intervention, when needing to place reliance on other group members with some asserting that they would be much happier completing the model by themselves. Once again, much like the previously identified drawback, this could be acknowledged as the very purpose of the intervention and deliberate pedagogical choice to establish a precedent of group cohesion and interdependence. Nevertheless, some children did articulate their frustration and confusion at some aspects of the intervention.

“Sometimes confusing, too, when you're working with someone and they're the architect and they don't really explain what you need to do, it can make you feel a bit confused...” – Child 2

“Sometimes it makes me feel a bit confused when I don't know what we're doing, but we always figure it out in the end...” – Child 3

A final identified drawback concerns the concept of the intervention being anxiety provoking or a 'nervous' experience for some, where some children – who may have been identified and selected for a LEGO[®] Therapy intervention on the basis of their social reservedness or lack of confidence (as discussed in a later findings chapter) – felt that being thrust in to a group of unknown peers and adults and being immediately asked to participate actively and openly was a jarring social experience.

“[I was nervous] because there were different teachers there and different people that I didn't really know very well... I don't like doing things with new people, and LEGO therapy was scary for me, but now it's ok because we're all friends now...” – Child 3

4.4.2 Skills that LEGO[®] Therapy Develops

This second section of analysis explores themes developed as part of the analysis of interviews with non-ASC children, in which children discussed what they felt a LEGO[®] Therapy intervention had taught them, or what they felt themselves and others had gained through their participation. Children were able to identify a wide range of skills and abilities that they had been able to develop and noticed improve over the duration of their involvement in LEGO[®] Therapy. Broadly, the aspects that children identified could be coded under two broad and diametrically opposing themes, namely: intrapersonal skills and interpersonal skills; including discussions of the extent to which these skills could be generalised to a range of contexts beyond the boundaries on the intervention. Each of these themes is explored in detail, below.

4.4.2.1 Intrapersonal Skills

Intrapersonal skills are intrinsic skills that an individual can hone and operationalise, across different contexts, to direct their behaviour in such a way towards achieving a series of pre-defined goals. Broadly, intrapersonal skills are those skills which could be considered intrinsic and define one's own attitude towards themselves and their own approach towards tasks. Intrapersonal skills may include skills such as self-discipline, focus, application of self or ability to delay gratification. When discussing LEGO[®] Therapy, children identified and considered a number of intrapersonal skills that they felt LEGO[®] Therapy had helped to engender.

Waiting and Patience

The first, and most prominent, intrapersonal skill that emerged through thematic analysis of Phase Two data was children identifying a perceived benefit or outcome of their participation to be in their ability to be patient or to wait for others. Whilst some acknowledged, as explored above, that this was often a source of frustration, many children identified that learning to wait for others was a key underpinning skill to the success of the intervention and felt that their involvement had promoted their ability to be patient and wait for others to complete their role before they could initiate their own. Embedded within this, a meta discussion about how LEGO[®] Therapy had also helped to promote children's awareness of

others, and having to wait for them, also took place; and some children discussed that, prior to a LEGO[®] Therapy intervention, they almost lacked an empathetic awareness of the perspectives of other group members and the explicit structure of LEGO[®] Therapy had helped children to recognise the importance of others' perspectives.

"We're learning that we have to wait for our own turn... When I was the finder the architect and the builder were taking a long time to get it together, so I had to be really patient and wait for them to do their bits first, before it was my turn..." – Child 2

"It helps me to be patient and waiting for my turn, because I always want it to be my go... But in LEGO therapy I have to wait until it's my turn, which is hard, but I'm getting better at it..." – Child 5

Couched within this understanding of the need to be patient and, in some cases, a renewed sense of self-awareness, children were often able to discuss where these skills may be applicable and were largely able to demonstrate a contextual awareness of why their newfound skills were important.

"Because if we don't wait... People will say "How long until it's my turn?" And everyone will just be getting annoyed with each other and then people will get upset and start to shout, and that can disturb the whole entire class..." – Child 6

Perseverance

"Perseverance means keep going, don't give up!" – Child 2

A second prominent theme developed in thematic analysis of Phase Two data surrounded the concept of perseverance, which some children identified as being an essential underpinning skill fostered within a LEGO[®] Therapy intervention. Some children spoke about how one of the key experiences within a LEGO[®] Therapy experience would involve one or more members of the group making a mistake and having to continue to problem solve in the face of adversity or setbacks. Some children were able to articulate specific experiences within which they had identified that the defining skill they had learned was that of perseverance; to keep going and not to give up, even when their efforts had faltered, and best attempts thwarted.

“Sometimes we were building a rocket and the bit broke, and one of the bits kept falling off and we had to put it together again and again and again, but then we realised we'd made a mistake at the start, so we had to go back to the beginning and start again.” – Child 2

“[On recounting an experience] it was like ‘place a black bit with three bumps on the long grey bit with the bumps’... But it was really hard to explain, and it took us a really long time to get it right... But we did it...” – Child 4

Kindness

Another less reported theme identified by children was that LEGO[®] Therapy promoted the concept of kindness and acting in selfless ways for the benefit of others. Some children identified that a core component of LEGO[®] Therapy relied upon children being kind to each other, allowing each other time and space to fulfil their roles, embedded within an overarching framework of collaboration and shared goals. Some children were also able to explain and discuss why kindness was important, and why learning to be kind to others may be of benefit.

“You learn lots... Kindness too... Because you're helping other people to do something... Because otherwise they might not want to be my friend, like sometimes with my sister, if I'm not being kind then she doesn't want to be with me for a little bit... So, learning to be kind is really important...” – Child 2

Promoting Independence

A final theme created within the theme of ‘intrapersonal skills’ is the concept of promoting independence. Some children identified that, whilst LEGO[®] Therapy’s overarching aim surrounded the concept of collaboration, some children identified that, within the framework of cooperation, individuals also had to learn to be self-reliant, and take a level of ownership over their discrete role. Some children also made specific allusions to needing to become more independent so as not to disturb or frustrate their classmates or teachers.

“Because if we don't wait... People will say “How long until it's my turn?” And everyone will just be getting annoyed with each other and then people will get upset and start to shout, and that can disturb the whole entire class... And the teacher will need to come and sort it all out... So, they need to be patient... We need to learn to do it ourself (sic.) ...” – Child 6

4.4.2.2 Interpersonal Skills

Interpersonal skills can be considered the means through which all human relationships are initiated, maintained, considered, and concluded. Essentially, interpersonal skills underpin every experience of connectivity or interaction with another human being and are, arguably, essential to everyday function and overall wellbeing.

As is largely the intended aim of LEGO[®] Therapy (LeGoff, 2004; LeGoff and Sherman, 2006), all children interviewed were able to identify and discuss a wide range of interpersonal skills that they had developed through involvement in the intervention. This section of data analysis created 15 distinct codes, which have been organised under three broad subheadings, namely: Co-Operation and Teamwork, Communication Skills, and Supporting Friendships, which are discussed in more detail below.

Co-Operation and Teamwork

“Teamwork is when you work together, and you have to work in a team to get things done more quickly.” – Child 2

One of the themes in this section surrounded the concept of LEGO[®] Therapy promoting children’s cooperation and teamworking skills; their ability to be an equal part of a cohesive team unit, and to fulfil a role in collaboration with a small number of peers, towards a shared goal. All children were able to identify firstly the importance and significance of developing good teamworking skills, as well as pinpointing a number of smaller, discrete skills that contributed to an overall development of their collaborative skills.

“Because if you don't have any teamwork, in the future you need to work and you're not used to it, you won't be able to do your job...” – Child 4

Firstly, children identified that the very premise of LEGO[®] Therapy promoted their abilities to share and take turns with each other; often having to explicitly share equipment and resources, but also having to take turns with the different roles, some of which they did not always want to do. Embedded within this, as explored briefly in section one of this chapter, was an explicit understanding of sometime having to undertake undesired roles for the greater good of the team.

“You have the group’s project manager, supplier, builder, and like got them three and taking turns... Like maybe one time you're the project manager and maybe another time you're the builder... Like my favourite is the builder but you have to like taking turns with like each one.” –

Child 4

“If we don't share then we'll all just argue and we won't get anywhere, when we could have just shared it...” – Child 6

Further to this, children were able to indicate that they had arrived at a new understanding of the importance of their turn taking and sharing skills and could generally demonstrate an applied understanding of where these skills may come in to use.

“Sharing is really important... And sharing things with people shows them that I like them...” –

Child 3

“Because if I've got one glue stick and there's like five people on the table, then I'll need to learn to take it in turns so everybody gets to use it...” – Child 6

This newfound understanding was also demonstrated in some children’s application of turn taking and sharing in reference to other experiences in life, such as playing games with other children.

“[It is helpful] when you're playing a game in the park, and you're waiting to go down the slide.” – Child 5

Embedded within the concept of teamwork and cooperate arose the construct of helpfulness, and several children identified that – within LEGO[®] Therapy – the concept of ‘being helpful’ was explicitly promoted.

“Helpful means that if someone doesn't know where to put it, you can help them by telling them how to work it out...” – Child 5

Children were largely able to identify that, embedded within the framework of a LEGO[®] Therapy intervention was the implicit lesson of using initiate to recognise when others need help and to intervene when appropriate.

“Because if they don't help finder, he has to do it all by himself and he will have too much to do by himself...” – Child 6

Interestingly, this then led to a number of discussions with children who identified that – through collaboration, teamwork, and goal-oriented task sharing – greater outcomes could be achieved. A number of children articulated how they had come to recognise that, through shared efforts, a team could achieve greater outcomes than combined individual efforts; a ‘the whole is greater than the sum of its parts’ style perspective.

“I like the buildings that I do at my house... But like, at school, they're like advanced, at home I can only do the basic ones... The advanced ones are like pretty complicated... Like really hard... We have to work together to do them...” – Child 4

Communication Skills

A second prominent theme discussed by children was about how LEGO[®] Therapy promoted their communication skills; placing children within a context where their aim could only be achieved through clear, direct communication and reciprocation. In order to be successful, children were able to identify that communication skills needed to explain specific key details, such as explicit descriptive vocabulary of pieces’ qualities (e.g., shape, size and colour) as well as accurate explanations of their placement, relative to existing parts of the model.

“You might be telling them where to put the stuff and what to do with it... Because then the people can tell you where to put the stuff and what pieces you're all looking for...” – Child 5

“[Someone] might be saying “We need that bit” or “can you get me that bit”, [someone] might be talking to the others and telling them how to do it...” – Child 6

Within this concept of precise and direct communication, some children also explicitly identified the concept of ‘clarity’ as being of key importance to success in LEGO[®] Therapy. Some children explained how one of the main sticking points that needed to be overcome collectively was when communication was unclear, as this often led to confusion or frustration.

“Because when you're the builder, the instruction from the architect isn't very clear and you have to ask them "Are you sure you've got the right bit?" And then it all gets confusing, because nobody's really sure what to do...” – Child 2

Children also acknowledged and discussed the need for communication not only to be exact, precise, and explicit, but also identified that communication was a bi-directional and reciprocal process. Children identified that the need, not only to communicate clearly, but also needing to attune and listen to the communication of their peers; explicit recognition that, not only did they have to communicate clearly, but that they also had an active role in listening to them.

“Because you have to listen to people's ideas... you need to listen to the architect, otherwise you won't know what you're doing...” – Child 2

“My listening has got better over the time I've been doing it... because better by every time I do LEGO therapy... like I don't really listen... LEGO therapy just helps me more to listen.” – Child 4

Children were also able to articulate an acknowledged importance of active listening skills and demonstrated a recognition that these skills were important not only to the overall success of the intervention, but in wider contexts also.

“I never really listened in class, sometimes, on the playground I didn't, when I'm playing a game, I didn't really listen to the rules and didn't really know what was going on...” – Child 4

Friendships

A final, smaller theme identified by children surrounded the idea that LEGO[®] Therapy could facilitate the development of friendships between children and could help teach children explicit friendships skills. Some children expanded upon concrete examples of their own experience, where LEGO[®] Therapy had not only enabled them to develop their skills relevant to friendships, but to develop specific friendships themselves. Some children even spoke about how LEGO[®] Therapy was one of the few environments in which they felt that their friendships were successful and, perhaps, provided them with a safe model of healthy friendships that was lacking elsewhere in their lives.

“I'm better at playing with my friends... they used to get annoyed at me when I couldn't share things with them, but now I'm better at that and we play together better...” – Child 3

“If you're not friend with someone who's there, you could be their friend by doing stuff with them. I don't really have many friends, but I have friends in LEGO therapy that I like to play with...” – Child 5

“Because I like playing with LEGO, and when I get to play with LEGO with people, I can be helpful, and it can teach me how to be a really good friend to them... Then maybe we can be friends on the playground too? If I could play LEGO with someone, then I think they would probably be my friend...” – Child 6

5. Discussion

In this section I will discuss and examine each research question individually, presenting a summary of the findings and links to the current literature base. I will then present the main discussion points arising from my research and outline its implications on practice, on theory and upon future research directions, for educational psychologists and more broadly. The limitations of this study will also be identified and discussed.

Phase One

5.1 Research Question One

What are school staff and practitioner perspectives on the perceived purpose, benefits, and limitations of organising and administering a LEGO[®] Therapy intervention in school?

In the study, LEGO[®] Therapy practitioners generally perceived that non-ASC children benefit from involvement in the intervention for a number of reasons. Practitioners interviewed reported that LEGO[®] Therapy helped children to develop their language and communication skills through developing specific vocabulary (e.g., some vocabulary linked specifically to LEGO[®] Therapy, such as positional language, colour, shape, and number) as well as providing children with explicit models of language to follow. Seth-Smith et. al. (2010) discuss the importance of intervention groups – in their research, nurture groups – providing children with rich and explicit models of appropriate social communication and language, and that this may be one of the more important determining factors of intervention success. LEGO[®] Therapy practitioners in this study identified that their intervention appears to do this and concurs with the findings of Seth-Smith et al.'s (2010) study.

Practitioners in this study also perceived that LEGO[®] Therapy can help children to understand the nuances of social relationships; not just relationships with peers but also functioning relationships with adults. Allen et. al. (2021) identify that student and teacher relationships are a vital underpinning of their success in and out of the classroom, and particularly for children with SEND who, as previously discussed, are more likely to have difficulty with establishing and maintaining positive relationships with adults (Dimitrellou & Hurry, 2019) and peers (Banks et. al., 2017) in school. Furthermore, Banks et. al. (2017) concluded that specific interventions were often necessary for providing and modelling positive peer experiences for children with SEND in mainstream schools.

Further to this, practitioners also perceived there to be a key emotional benefit to children's involvement, explaining that they felt children received intrinsic motivational rewards, sometimes within a school structure where children may sometimes feel ostracised or unsuccessful (Dimitrellou & Hurry, 2019). LEGO[®] Therapy helped foster a sense of achievement that children may have not felt previously in school and might help to change narratives for SEND children about school. Canter et. al. (2017) say that to meet the diverse educational needs of learners, all children need to be given regular opportunities within school to feel successful; otherwise, this may be detrimental to their overall progress and wellbeing. Practitioners in this study also identified that children might better develop their emotional support network in schools: having a safe environment away from a main classroom they may find challenging, being treated the same as their peers rather than 'othered' (Milton, 2020; Williams-Brown & Hodkinson, 2020). Although, whilst practitioners identified that removing children from the classroom environment may impact upon their academic attainment, no practitioners in this study identified or discussed children's sense of belonging and connectedness with their classroom, or the school as whole.

Practitioners in this study indicated that these emotional components may be especially important in a classroom where students might experience needs or difficulties across a range of areas (e.g., social, academic, emotional), or where children may not experience a strong sense of belonging or affinity to their classroom or school as a whole (Allen et. al., 2018). Along this thread, Hornby (2015) outlines that inclusive practice for children with SEND is not purely about 'integration', but that there needs to be specific understanding about how school structures can prepare and enable children with SEND to feel included and like they belong in school. Practitioners interviewed did suggest that there was a symbiotic and bidirectional relationship between intervention specific progress and a child's relationship with the classroom itself. Where children find the classroom a challenge, their whole school life might become challenging. But where an intervention can help to improve domain specific skills (e.g., social skills) it can make other aspects of school easier, including the classroom experience.

However, practitioners interviewed in this study identified that there needs to be a cost/benefit analysis (i.e., considering financial, social, emotional implications etc.) of LEGO[®] Therapy in schools, and perhaps future research needs to explore the cost/benefit of the intervention in comparison to other interventions (e.g., Owens et. al.'s 2008 research of LEGO[®] Therapy in comparison to the Sulp), as LEGO[®] Therapy is resource intensive and staff intensive for a very small group of pupils, especially in an era of shrinking relative school

budgets and austerity economic policy (Thompson et. al., 2021). Whilst considering the costs and drawbacks, however, practitioners in this study did not consider there to be any drawbacks to children's involvement in the intervention, apart from the idea that they may miss some classroom content. Retuning to Calder et. al.'s (2013) research, one might suggest that practitioners had not considered there to be any consequences to children's involvement and were acting in what they perceived to be the children's best interests.

Research Question One Conclusion

Practitioners perceived there to be a number of benefits for non-ASC children in a LEGO[®] Therapy intervention and identified that LEGO[®] Therapy can help to foster a number of personal, social and communication skills. Practitioners identified and discussed one of the key benefits of adopting LEGO[®] Therapy as an intervention approach is its flexibility and ability to have a positive impact for a wide range of children. However, some of the key benefits identified by practitioners are not necessarily about the intervention itself, moreover they reflect meeting children's wider social and emotional needs by providing them with things that the broader school environment might, already offer, such as opportunities to feel successful, building relationships with key adults and feeling a sense of belonging and affinity to the school environment.

Moreover, the practitioners interviewed in this study do not necessarily consider any non-academic impact of children being included within the intervention (e.g., impact upon children's self-esteem, self-image, being 'othered') and therefore did not identify any strategies to proactively approach this. LEGO[®] Therapy's current implementation may be an extension of Calder et. al.'s (2013) assertion that, often, interventions in school are executed in a top-down manner; where adults decide what they think is best for children, without considering their views. Whilst practitioners can identify positive factors of children's involvement, wider consideration of the full impact of inclusion within the intervention may need to be considered, along with the perspectives of children and their caregivers, which is discussed later.

5.2 Research Question Two

What are the professional structures and organisational arrangements which influence schools' rationale to run a LEGO[®] Therapy intervention for non-ASC children?

The second research question explored the organisational factors which influenced schools' decisions to run and implement a LEGO[®] Therapy intervention in school as well as providing an exploration of schools' rationales for selecting non-ASC children for the intervention.

The first discussion point arising from this research question concerns schools' referral process for children in accessing a LEGO[®] Therapy intervention in school, and schools' rationale for these decisions. Practitioners identified that the referral process for children to access LEGO[®] Therapy occurred through two avenues, with referrals to the intervention being made solely and directly by the school's SENCo, or decisions made by the school SENCo, in collaboration with other members of key staff (e.g., teachers, teaching assistants). In either case, the SENCo acts as the gatekeeper to intervention access. Maguire et. al. (2003) state that often, in relation to inclusive practice embedded within a school's culture, Headteacher and SENCos are often regarded as the gatekeepers, and this seems to be a component of current UK SEND systems supported by the SEND Code of Practice.

The Special Educational Needs and Disabilities Code of Practice (Department for Education and the Department of Health, 2015) outlines the role of the SENCo as including overseeing the day-to-day operation of school SEN policy; coordinating appropriate provision in school; and advising on deployment of the school's allocated SEND budget (including additional funding for SEN children e.g., Pupil Premium or funding from Education Health and Care Plans). Ekins (2015) further outlines that part of SENCos' role is to consider wider strategies and techniques, staying abreast of current and relevant research, and to play a key part in tracking and monitoring progress and appropriateness of interventions in school. So, one could initially propose that it is indeed the very nature or the role of the SENCo to have autonomy over access to LEGO[®] Therapy in schools, as it arguably falls directly under the remit of their role and responsibilities.

In the literature review of this thesis, I raised the notion of the concept of "social competence" often being a poorly defined term, couched within an implicit, vague shared understanding of what it would mean socio-culturally for us to consider somebody to be 'competent' socially. The authors of the initial research creating LEGO[®] Therapy (LeGoff, 2004; LeGoff & Sherman, 2006) do not expand upon their definition of social competency, and it is largely left open to reader interpretation. The findings of this research suggest that children are selected for LEGO[®] Therapy on the basis of having a wide range of SEND, spanning from mental health needs (e.g., anxiety), speech, language, and communication needs (SLCN) (e.g., developmental

language delay or having EAL), social and emotional needs (e.g., 'volatile' behaviour or 'aggressiveness') to being social withdrawn or shy. This raises the question of how tailored LEGO® Therapy can be as an intervention (Demie, 2021; Foulkes & Stapley, 2022), and whether some schools use it as a "catch-all" intervention for children who they consider as needing additional help to improve any number of discrete skills.

The problem this creates is that it largely leaves interpretation of the intervention's purpose up to schools and school staff – often, in this case, the school SENCo – who is likely to have the children's best interests at heart but may not be equitably including children with SEND in these interventions, or providing robust models of tracking, monitoring and assessment as the very criteria for inclusion in the intervention – from the outset – are poorly defined. The findings of this study suggest that non-ASC children are selected for LEGO® Therapy on the basis of qualitative judgements with little objective focus, which calls in to question the consistency and equitability of the process. Whilst, from the perspectives of those involved, LEGO® Therapy may well have been beneficial to the selected children, and they may well have very positive experiences within the intervention; the way in which their participation was decided upon and agreed might raise questions, as there is no existing research which underpins the intervention's effectiveness for non-ASC children.

This, subsequently, creates a problematic discussion about how schools decide upon the children who should get access to LEGO® Therapy and, therefore, selection becomes a key issue. As many of the SEND identified as being inclusion criteria for the intervention by staff (i.e., anxiety, ADHD, SEMH needs) can be defined as 'high incidence conditions' (Strand & Lindorff, 2021; Kumm et. al., 2021), one could subsequently propose that in any typical mainstream primary setting there would be tens of children theoretically eligible for inclusion in LEGO® Therapy; yet most schools ran groups for less than ten children. Some research may suggest that in situations where limited resources are available for children with SEND, they are allocated on the basis of solving problems in their immediacy and that, on occasion, resources are allocated to those who present the biggest outwardly presenting problems (e.g., most volatile outward behaviour, or having parents who advocate the loudest on their child's behalf and interventions being used to solve or address these issues quickly) (Mann, 2021; Smith-Young et. al., 2022). The processes that schools undertake to decide upon the final grouping for LEGO® Therapy remain unclear and are perhaps subject for future research.

Research Question Two Conclusion

School practitioners interviewed in this study valued the flexibility of the LEGO[®] Therapy approach, and the ease at which it can be implemented in school, but this may come at a cost. At present, there is some suggestion that LEGO[®] Therapy may be being used as a “catch all” intervention for children with a wide range of SEND. This is not to say that LEGO[®] Therapy is not beneficial to all of those children, but the intervention’s specificity and appropriateness for all of these children may need to be considered. In the current socio-economic and political context of real-time reducing school budgets and restricted resources (Andrews & Lawrence, 2018) this may well be a reflection on the reality of school’s abilities to provide tailored provision for individual children, and favour easily implementable broad-brush approaches instead.

This does raise, however, a key question of gatekeeping and intervention access for LEGO[®] Therapy. Who decides which children do what intervention? How is it decided? Especially when practitioners recognised that the financial cost of LEGO[®] Therapy was particularly high, especially in relation to other interventions, and where many practitioners had identified that they had not received the appropriate training in LEGO[®] Therapy in the first place. Outside professionals (e.g., educational psychologists) were not acknowledged by SENCOs as determining the appropriateness or effectiveness of intervention for children, and children or their caregivers were not included within the process either, in the context of this study.

Phase Two

5.3 Research Question Three

What are caregivers’ perceptions of a LEGO[®] Therapy intervention, including the perceived benefits and limitations of a child or young person’s involvement in a LEGO[®] Therapy intervention?

Similar to the findings of the practitioner group questions, this study found that caregivers also spoke generally positively about LEGO[®] Therapy interventions in school. Specific positives discussed by caregivers were similar to that of Griffiths’ (2016) study, where parents reported improved communication and initiation of interactions at home, as well as several specific skills.

Caregivers noted general improvements in their child's social skills at home, including better sharing of resources, turn taking and being more tolerant of others (e.g., siblings). Generally, this circumnavigated the idea of children with a range of needs shifting their social behaviour to a more socially accepted norm and following typical social overtures, i.e., caregivers described how children who were previously volatile and aggressive were now calmer and communicated in a more considered manner, and children who were previously shy and withdrawn were now more confident and assertive, reflecting Andras's (2012) findings. This reflects on many levels, what LeGoff (2004) originally expressed under the umbrella terminology of 'social competence' and appears to echo caregivers' perspectives.

Caregivers also expressed that LEGO[®] Therapy gave their children opportunities to develop their language skills in a smaller, safer environment with strong language models and specific emphasis on vocabulary; equipping children with specific words and phrases that could be applied to other contexts, which helped children to build toolkits of social communication.

Similar to children and practitioners, caregivers interviewed also identified that LEGO[®] Therapy enabled the development of relationships with peers and adults alike. Furthermore, some caregivers felt that LEGO[®] Therapy enabled children to develop trust in the adults supporting them. Trust that might not have developed easily in the past or been associated with maladaptive relationships in the past (Schopler & Mesibov, 1983; Tantam, 2003).

Finally, in this study caregivers identified and acknowledged observable improvements in their child's ability to play with their siblings and peers, including being more accommodating of others and a reduction in violent or aggressive behaviours towards others. Some previous LEGO[®] Therapy research has sought to examine the extent to which the intervention's benefits can be generalised to other contexts (Levy & Dunsmuir, 2020), with mixed results, and the generalisability of social skills interventions has been a topic of longstanding study (Atkinson-Jones & Hewitt, 2019) Caregivers interviewed also mostly felt that LEGO[®] Therapy had enhanced children's understanding of social norms, boundaries, and socially acceptable behaviour.

Similar to previously identified findings (see p. 97), caregivers' most prominent recognition of benefits and impact of LEGO[®] Therapy came not from the intervention itself, but the wider factors that it brought, such as having calm time out of the classroom (which all caregivers reported that their child found challenging), protected time with a key adult with whom them

could build a relationship, and a relaxed non-academic atmosphere where children could develop some skills without overt classroom pressure, where social demands are high (Lane et. al., 2004; Humphries et. al., 2018).

All caregivers were notified of their child's selection for participation in LEGO[®] Therapy, but all identified that they were not included within the decision process or were given much information about the content of the intervention or its intention. Whilst all caregivers were able to articulate an understanding of LEGO[®] Therapy, their understanding was either the result of personal research, or articulated to them by their children. Caregivers' understanding of the rationale for their child's selection, similar to that of practitioners, was deficit-led and focused on the skills or abilities their children lacked and concerned itself with improving children's social skills to a 'socially acceptable' level (Howlin & Goode, 1998; Williams-White et. al., 2007; LeGoff, 2004).

Some research suggests that active parental engagement with school learning and interventions can improve children's self-esteem, motivation, engagement, and improved learning outcomes (Fan & Williams, 2010; Joe & Davis, 2009; Goodall & Vorhaus, 2011). Goodall and Montgomery (2013) coin the term parental engagement and not involvement, as it places parents as active agents within pedagogic discourse and not passive entities who are 'involved'. With this in mind, Harris and Goodall (2008) conclude that, often, it is schools who are hard to reach, rather than parents, and that whilst generally all parties consider enhanced parental engagement to be a positive thing, there's often disparity in views on the purpose of including parents. Schools tend to believe that parents should be involved as a matter of courtesy, and to replicate school-based learning at home, whereas parents articulate that they would like a more active role in their child's education (Goodall and Montgomery, 2013)

Some caregivers articulated, in this research, that they would like to be more involved with their children's LEGO[®] Therapy provision, and more included within the decision-making progress, but had resigned themselves to the conclusion that schools held authority over the pedagogic discourse concerning their children. Furthermore, most caregivers felt that there were no drawbacks to their child's involvement in the intervention and, generally, articulated that they were happy to allow their children to complete a LEGO[®] Therapy intervention, based on the school's decision alone, as all caregivers unanimously felt that the school "had their child's best interests at heart" and "would not do something if they felt it was not appropriate" which, whilst probably true, presents a potential problem – as discussed later.

Research Question Three Conclusion

In the context of this study, caregivers generally speak positively about their child's LEGO[®] Therapy provision in school and feel that their children get a lot from it. Once again, many positive aspects of children's involvement in the intervention – according to caregivers – are factors that are not exclusive to the intervention, such as having time outside of a stressful classroom environment or building a relationship with key adults. Furthermore, parents are rarely consulted as part of the identification process, which is potentially disempowering. Furthermore, caregivers typically accept their child's involvement in LEGO[®] Therapy on the basis that the school know more about their child's education than they do, and they trust that the school have their child's best interests at heart and would not make them undergo an intervention that was inappropriate, which has potential issues, as it may be deliberately excluding caregivers from their right to be informed about their child's educational arrangements, including any additional intervention approaches (Department for Education, 2016).

5.4 Research Question Four

What are the experiences of non-ASC children within a LEGO[®] Therapy intervention, and what are the perceived benefits and limitations of a child or young person's involvement from their perspective?

Generally, non-ASC children's experience of LEGO[®] Therapy, in this study, were positive. Children interviewed recognised and identified that LEGO[®] Therapy enables the development of a wide range of social skills and have a conscious awareness of what the intervention might be teaching them. Children discussed quite complex concepts such as kindness, perseverance, and some recognised that teamwork yields better returns than combined individual work. Children interviewed within this study displayed, at times, a comprehensive and nuanced understanding of the intervention (e.g., being able to articulate the different roles, or discuss why LEGO[®] Therapy might be helping them with things they find challenging), far more than adults supporting them may be giving them credit for.

Children also recognised and identified that enjoyment of the intervention was, in itself, a crucial component to its success; similar to the psychological framework of Constructive Application Theory (Attwood, 1998) as discussed in the literature review (see p.12). This is,

broadly, in line with research which suggests that, for high levels of engagement in academic pursuits and interventions, children need the opportunity to enjoy the approach, and feel a sense of enjoyment throughout (Dishman et. al., 2005; Hyndman et. al., 2014). This is likely an unsurprising finding but what makes this pertinent is the reasons why children identified enjoyment with LEGO[®] Therapy as, by-in-large, children's positive experiences of the intervention had very little to do with the intervention itself (beyond implicit enjoyment of LEGO[®] materials) and children's enjoyment was largely predicted by wider factors (e.g., the relationship with the practitioner, time out of the classroom, making friends with like-minded peers).

Dimitrellou and Male (2020) discuss how children with SEND need their voices heard and included within school practice to help foster more positive school experiences as there is some research to suggest that children with SEND are far more likely to have more negative experiences of school, and more likely to hold negative views of school, as well as negative self-perceptions of themselves as learners within an academic setting (Graham et. al., 2019). Coates et al. (2020) identify and discuss that children with SEND are more likely to have less positive relationships with adults and practitioners in school and Dimitrellou and Hurry (2019) also identify that children with SEND are more likely to have strained social relationships in school and are also less likely to feel a sense of belonging within the school environment.

This is precisely where some children interviewed identified benefits of engaging in a LEGO[®] Therapy intervention, identifying the most important factors to them as being varied and multi-faceted. Firstly, children identified that they valued the opportunity to do something outside of their classroom, often, where they may experience difficulties in managing the environmental and academic demands, as well as with navigating relationships with peers and adults. Secondly, children identified that they valued the opportunity to do something where they can be successful and experience an explicit sense of achievement, which may be otherwise absent from their school life. Thirdly, children spoke about have the opportunity to build a relationship with a key adult that they feel truly has their best interests at heart. Finally, children identified the value of building relationships with peers with a shared interest, without the nuanced social expectations of unregulated environments (e.g., the classroom or the playground), and within the structured environment of the intervention (Safer-Lichtenstein et. al., 2019; Karkhaneh et. al., 2010).

In other words, what children identified as being an important benefit to their involvement in LEGO[®] Therapy was different from what practitioners felt. This raises a question about how

intervention approaches are pitched to children, and how they are involved in the process of selection and inclusion. Kvist Lindholm and Zetterqvist Nelson (2014) discuss, in relation to a mental health intervention, that not involving children actively in the process of pedagogic dialogue about their involvement in interventions meant that children tended to construct their own narrative about their involvement; often predicated on self-deprecating or damaging personal views (i.e., 'I do this intervention because I am not very good at X').

Children interviewed had constructed their own understandings and narratives about what they felt the purpose of LEGO[®] Therapy was, predicated on their intrinsic understanding of their own deficits (e.g., children told me that they felt they did LEGO[®] Therapy because they found sharing difficult, they were impatient, or that they did not have any friends in school), and in most cases their voice had not been considered in planning for and administering a LEGO[®] Therapy intervention with them (O'Neill, 2014; Stern, 2015).

Solvastron and Proctor (2021) identify that when planning for, and supporting, learners with SEND in the mainstream school environment, there is a consistent need for explicit communication and honesty with learners. Jerome and Starkey (2022) discuss the importance of being open and honest with children about the interventions they are receiving in school, as well as involving children in the pedagogic discourse about their education and allowing them a level of agency over the process. LEGO[®] Therapy, according to the children interviewed in this thesis, may suffer from similar difficulties to other intervention approaches (Koegel et. al., 2016; Reichow et. al., 2012; Lasuhley & Heflin, 2000), as outlined by Calder et. al. (2013), in that adults plan for, and include, children within the intervention because it is what they think is best for children; not because it is what children think is best for themselves. Forde et. al. (2018) conclude that, in planning intervention approaches, children with SEND are often not considered valid agents or given an opportunity to discuss what they are taught and how they are taught it and are often regarded as passive recipients of an education, as opposed to active participants within it. However, given the power dynamics present in school systems and pedagogic discourse this is, perhaps, an unavoidable consequence of any approach.

Research Question Four Conclusion

The findings of this study suggest that non-ASC children's experiences of LEGO[®] Therapy are generally positive and, on the whole, children consider there to be a range of benefits to their involvement. However, the most significant benefits identified by children might not necessarily be exclusive to the LEGO[®] Therapy intervention, or as a direct result of it. Similar

to points raised by practitioners and caregivers, many of the positive predictors of the intervention's success – as identified by the children interviewed in this study – are factors which are commonly found in other social skills interventive approaches (e.g., social skills groups, SLP, Pivotal Response Treatment, etc.). This is discussed in more detail, below.

Calder et. al. (2013) suggested that, sometimes, interventions are predicated on the best interests of adults in school and are inconsiderate of the child's voice, as, often children with SEND are not given autonomy and agency over their education (Forde et. al., 2018). Where children are not included within these processes, they may begin to form often self-deprecating narratives about the reason for their inclusion (Kvist Lindholm & Zetterqvist Nelson, 2014) which can lead to increasingly negative self-perceptions and have unintended consequences on children's overall wellbeing.

5.5 Contribution to Knowledge

A deeper understanding of LEGO[®] Therapy and how it is used

Firstly, this thesis has established that LEGO[®] Therapy is being utilised by school practitioners to meet a wide range of personal, social, academic, and emotional needs for children who do not have diagnoses of ASC, building upon the original praxis of LeGoff's (2004) research, and suggestions from LeGoff et. al.'s (2014) follow-up research, which indicated that LEGO[®] Therapy's utility could, in theory, be applied for a wider population of children than just those with ASC. Furthermore, this thesis has shed some light on the organisational arrangements and structural factors which influence schools' decision to select and administer a LEGO[®] Therapy intervention in school, such as practitioners' understanding of the intervention and their rationales for administering LEGO[®] Therapy for children beyond the population of children for which it was originally intended. This thesis has also begun to explore and identify some drawbacks and points for further consideration, regarding schools' implementation and administration of LEGO[®] Therapy, such as practitioners' consideration of the consequences of children's involvement or the degree to which LEGO[®] Therapy can be considered a tailored approach, whilst considering the current socio-economic climate.

In summary, the findings of this thesis suggest that non-ASC children participating in LEGO[®] Therapy generally felt positive about it and that they are learning valuable skills within it. Practitioners delivering the intervention to these children considered there to be a number of positive outcomes for all children involved in the intervention and generally considered their

involvement to be of overall benefit, regardless of their underlying SEND or additional needs. Caregivers of non-ASC children involved in LEGO[®] Therapy also felt that the intervention could only be of positive benefit to their children and had identified that the process of the intervention would – in theory – help to promote their children’s abilities in areas they found difficult. This sentiment was echoed by non-ASC children, who participated in the intervention, and all children interviewed were able to identify and discuss a range of positive factors that contributed to the intervention’s success, and all children had felt that the intervention had been of benefit to them.

Some children identified, in this research, that LEGO[®] Therapy was their only positive in school. One caregiver outlined that, for their daughter, LEGO[®] Therapy was often the only motivating factor to get their child in to school in the first place; and that it was the only thing they looked forward to in their entire school experience. Why is that? Is this because LEGO[®] Therapy is actually meeting a wider need for personal, social, emotional, or academic success that has been lacking in the classroom? For some, LEGO[®] Therapy, as identified by children, is the only time they feel successful, or feel like people listen to them, or feel that they have something valuable to add, or feel that they can actually make a meaningful contribution or feel that people like them and that they can have friendships.

Many of the factors that children identified as being of importance to them in a LEGO[®] Therapy intervention are factors that are not unique to the intervention approach itself, moreover, they are factors that are common to the vast majority of school-based intervention approaches (e.g., social skills groups, SLP, Pivotal Response Treatment, etc.). What children value, as part of a LEGO[®] Therapy intervention, is having time outside of a classroom environment they find challenging or stressful, they value having time to build a relationship with a key member of staff that they think likes them and values their contributions, they value the opportunity to be good at something, and experience a sensation of being successful which they may rarely experience in the classroom; and these are experiences that, as educators, we would want to be universal to all children’s experiences of school.

This finding can be linked to research by Imel and Wampold (2008) concluded that between 30% and 70% of the variance of all outcomes from specific and targeted therapeutic approaches could be explained through commonly occurring factors between them; only 5-15% of all variances in outcomes could be explained through differences in individual approaches taken. This is known more widely as the ‘dodo bird verdict’, initially proposed by Rozenweig in 1936 (Elliot et. al., 2015) which suggests that all therapeutic approaches can

achieve broadly comparable outcomes, purely by merit of the commonly occurring factors between them. In the case of LEGO[®] Therapy and other approaches to improving social skills (e.g., social skills groups), there may be commonly occurring factors (e.g., such as having protected time with a key adult, having time away from the classroom or the opportunity to practice skills in a less threatening or more structured environment) that help drive its success.

Such is the nature of complex interventions (i.e., interventions that are comprised of multiple interacting and interrelated components; Petticrew, 2011; Moore et. al., 2015) that they are often difficult to evaluate in isolation, as they tend to occur in real-life, dynamic contexts and contain a multitude of factors that cannot be controlled or accounted for. Interventive approaches may have limited impact because of flaws in their design or weaknesses in their implementation. On the other hand, approaches may achieve positive outcomes regardless of their delivery, even if delivered differently from how they were initially designed (Moore et. al., 2015). Therefore, understanding the process and underlying mechanisms by which an intervention is delivered (Grant et. al., 2013) and considering the contexts in which the intervention is implemented (Shiell et. al., 2008) may be key to isolating the factors that contribute to an intervention's success, which is an implication for future research, discussed later.

Implications for Inclusive Practice

As previously identified, Hornby (2015) outlines that inclusive practice for children with SEND is not purely about 'integration', but that there needs to be specific understanding about how school structures can prepare and enable children with SEND to feel included and like they belong in school. This thesis also introduces discussion around what the considerations are for LEGO[®] Therapy as an inclusive practice. Florian and Spratt (2012) identify how education for children with SEND may have become about "simply schooling all children in the same building, while continuing to provide those identified with special needs with an educational experience that is different from or additional to that which is available to others of similar age" (Florian & Spratt, 2012, p.133). Within an inclusive pedagogical paradigm, diversity amongst children is viewed as a strength, and is the very praxis which underpins an inclusive classroom experience; everyone working together, sharing ideas, finding solutions, and learning from each other (Florian, 2010).

Whilst there is plenty of evidence to suggest that social skills interventions can be an effective mediator of 'social competence' (Ozerk et. al., 2021) there is a growing body of research which

questions the appropriateness of social skills interventions for neurodiverse children and children with SEND (Davis & Crompton, 2021; Fitzpatrick, 2008; Sasson et. al., 2017) as they frame the ownership of the 'problem' within the child, i.e., their social skills are problematic, therefore they require interventive procedures to 'correct'.

Arguably, a LEGO[®] Therapy approach attempts to compartmentalise children's social skills in to a short, weekly session and may, in fact, be reinforcing to children the notion that they can not be sociable in the classroom or the playground, and that is why they attend an intervention. Monahan et. al. (2021) discuss how, in planning intervention approaches in schools, children deserve to be included within the conversations and, at least, deserve honest explanations as to their involvement; so as to negate the possible effect of children creating their own self-deprecating narratives (e.g., "I do LEGO[®] Therapy because I am a bad friend") (Kvist Lindholm & Zetterqvist Nelson, 2015; Foulkes & Stapley, 2022). Dimitrellrou and Male (2020) also assert that, as children with SEND are more likely to self-report negative school experiences, incorporating their voices into educational planning is essential. This is not to say that social skills intervention should have no place within a child with SEND's education, but it needs to be carefully considered and balanced with key emphasis on inclusive practice within mainstream environments (e.g., doing LEGO[®] Therapy and receiving targeted social support in the classroom and on the playground, as part of holistic planning). Whilst it is also acknowledged that simply considering children's views and giving children a level of agency over their school experience will not entirely resolve difficulties with inclusion, the findings of this thesis suggest that this may at least be a reasonable next step.

The original conception of this research was framed around an alternative perspective, as discussed in the literature review, which outlines how I considered there to be an 'ideological midpoint' between interventive approaches placing problem ownership on children in a medical model style approach, and a purist social model approach of framing social skills difficulties as a societal issue. This thesis was conceived around this idea of the bio-psychosocial model (Engel, 1977), which outlines how it may be beneficial for children to learn these skills in a safe, controlled environment which they could then apply to more dynamic, nuanced social situations (e.g., the playground or the classroom; Safer-Lichtenstein et. al., 2019; Karkhaneh et. al., 2010).

A further issue of actively including parental voice and engaging parents meaningfully in decisions around their children's education arises, (Harris & Goodall, 2008; Goodall & Montgomery, 2013). Caregivers consistently identified, in this research, that they felt that they

did not know much about the intervention or felt that it was not their place to be involved in the decision-making processes around their child's education; perhaps indicating a level of disempowerment within the system. Further to this, most caregivers identified that they felt that they need not be involved more actively as they placed unmitigated faith in the school's judgement, as they felt that the school only had their child's best interests at heart and would only select them for intervention if there were good reasons.

5.6 Implications for Educational Psychologists' Practice

The findings and conclusions from this thesis can be used to outline a number of suggestions for the ongoing development of educational psychologists' practice, in relation to LEGO[®] Therapy approaches. In this section I will outline some of the practical suggestions derived from the findings of this thesis and discuss how these could be interwoven into the role of the educational psychologist.

Firstly, it may be beneficial for educational psychologists to increase their awareness of the implementation of a LEGO[®] Therapy approach for non-ASC children (e.g., through training or through the publication and distribution of this thesis). The findings of this thesis suggest that a LEGO[®] Therapy intervention can be utilised flexibly by schools and is well received by children and parents; leading to perceived positive outcomes for those involved. Furthermore, educational psychologists may benefit from an enhanced understanding of the nuances of a LEGO[®] Therapy intervention and an increased awareness of when the intervention may be an appropriate pedagogical selection.

Secondly, the findings of this thesis suggests that, in respect to the delivery of LEGO[®] Therapy (and, indeed, all interventions) caregivers and children should be more actively involve within the process. This presents an opportunity for educational psychologists in advising schools about their approach to LEGO[®] Therapy delivery, and when recommending the intervention in psychological advice. The findings of this thesis suggest that often children and caregivers are not explicitly included within the decision-making process in accessing a LEGO[®] Therapy intervention and are often unsure why they are participating.

Finally, the findings of this thesis reinforce the role for educational psychologists within whole school systemic planning and being actively involved with curriculum mapping and intervention planning across whole school systems (Pitriantini & Permana, 2021; Debnam et al., 2021) as this could lead to more effective outcomes and ensure a greater level of

equitability in school intervention delivery. LEGO[®] Therapy, as discussed above, may be being utilised as a 'catch-all' intervention for children with a wide range of SEND and additional needs and, whilst it may well be an effective approach, may not always be selected on the basis of it being the most appropriate approach. Educational psychologists may also have a role here in helping schools to plan resources systemically and ensuring specific intervention approaches (especially those which are more costly, e.g., LEGO[®] Therapy) are implemented effectively and appropriately. Educational psychologists may also be able to perform a role as part of their researcher skillsets and helping schools to implement simple approaches to evaluate their own practice (e.g., scaling, questionnaires etc.).

5.7 Implications for Future Research

The findings and conclusions from this thesis can also be used to outline a number of suggestions for future research topics and has laid the foundations for further exploration of some areas. In this section I will outline some possible avenues for future research and suggest why they may be helpful to the development of the LEGO[®] Therapy literature base.

Following on from the earlier discussion point regarding the nature of complex interventions (Petticrew, 2011; Moore et. al., 2015) being difficult to evaluate in isolation, as they occur within dynamic, real-life contexts, understanding the exact mechanisms behind the effectiveness and efficacy of LEGO[®] Therapy may be useful to its ongoing development as an intervention approach for non-ASD children (Grant et. al., 2013). Moore et. al. (2015) outline a framework for 'process evaluations', a methodological approach to evaluating and understanding these mechanisms in action; whilst considering the wider contextual factors that may influence an intervention's effectiveness.

Whilst large variances in intervention's effectiveness can be attributed to commonly occurring factors (i.e., the dodo bird verdict; Imel & Wampold, 2008; Elliot et. al., 2015), there does exist a further small amount of variance between the outcomes of similar approaches. This is precisely where a process evaluation approach (Moore et. al., 2015) may be able to provide additional understanding of a LEGO[®] Therapy intervention and help to explore factors that contribute to LEGO[®] Therapy's positive outcomes within particular contexts.

Furthermore, whilst this thesis has laid some new foundations in providing an exploration of the experiences of non-ASC children within the intervention, it may be a useful approach for future research to underpin this using an experimental research design. Some potential

approaches were discussed in the literature review of this thesis, and some future research may wish to expand upon the praxis of this thesis by utilising an experimental design to evaluate the impact of a LEGO[®] Therapy intervention for non-ASC children, in school contexts and beyond.

Also, as this study focused on a small age range of children (Key Stage 2; ages 7-11), there may also be scope for future research to consider a similar approach to the exploration of LEGO[®] Therapy with both older and younger children. The initial literature base (LeGoff, 2004; LeGoff & Sherman, 2006) acknowledged that the approach may be beneficial for children of all ages. Furthermore, in my professional experience as a teacher and as a trainee educational psychologist, I have witnessed the approach being used with children in Key Stage One (ages 5-7) and in Key Stage Three (ages 11-14) and there is some research that looks at non-primary ages (Levy & Dunsmuir, 2020). However, much like with non-ASC children, little research exists exploring either LEGO[®] Therapy's effectiveness with these groups of children (e.g., Early Years or Secondary-aged children doing LEGO[®] Therapy) or, indeed, their experiences of the intervention, which may be another useful angle of future research.

5.8 Limitations of Study

The final section of this thesis is concerned with acknowledging and discussing the limitations of the research. This thesis was planned, carried out and written throughout the COVID-19 pandemic, which had a significant impact on factors such as schools' availability, methods of data collection having to be moved online and participants withdrawing through illness. This significantly impacted my ability to collect and analyse data and set back the timeline of this research on several different occasions. Other limitations are acknowledged and discussed below.

The first limitation of this study is its relatively small sample size. Whilst it was felt that the sample size was enough to reach the point at which specific codes are regularly reoccurring and no new themes are being discovered (Braun & Clarke, 2013, 2021; Glaser & Strauss, 2017), one could suggest that with a much wider sample newer themes could emerge. Furthermore, as the sample of this thesis is small and relatively homogenised (i.e., all schools located in the same local authority area, all children in KS2), it could be suggested that the results of this study may be unique to this small sample and may not reflect the experiences of a wider population.

The Photo Elicitation Methodology (PEI) utilised in this study originally intended to utilise photographs of the sample children participating in a LEGO[®] Therapy intervention in their own school setting; so as to add particular meaning and relatability to their responses. However, due to ethical constraints, this methodology was not possible, and it was instead decided to utilise stock photographs of non-familiar children and adults participating in LEGO[®]-style activities in groups; similar to the approach adopted by Yan et. al. (2005). Whilst this undoubtedly affects the validity of children's responses and removes the opportunity for children to reflect on pictures of themselves participating in research, it was a largely unavoidable methodological consideration.

Within any study that involves single-researcher thematic analysis, researcher bias is hard to avoid (Braun & Clarke; 2013, 2021), and this research is no different. Therefore, as a limitation of this research, it must be acknowledged that there may be a level of researcher bias which may have affected the way in which interviews were conducted and the way in which transcripts were analysed and the findings of this study do appear to challenge the initial framing of this thesis, as set out in the literature review.

Further to this, there may also exist another element of researcher bias. Despite deliberately portraying myself to staff, children, and caregivers as a neutral researcher, interested in their opinions about LEGO[®] Therapy, my presence in conducting interviews may have affected responses. Participants may have answered in ways which were either partially or wholly untruthful or felt like they needed to answer in a certain way, due to my presence as a researcher (Chenail, 2011; Doody & Noonan, 2013). Participants may have interpreted my interest in LEGO[®] Therapy as positive endorsement and answered in ways which they considered to be positive or invented more positive aspects of the intervention in order to please me, as the researcher – as they assumed that that is what I wanted to hear.

There may also be an unintended implicit bias within the sampling of this study. As all participants' participation in this study was voluntary, one could subsequently suggest that their agreement to take part was predicated on positive views about LEGO[®] Therapy. Schools are unlikely to run, and continue to run, an intervention approach that they feel has no value, or that they feel is unhelpful so, by its very nature, this research only captures the views of schools - and subsequently, their pupils and their caregivers – who are perhaps more likely to think positively about the intervention. This, theoretically, misses a portion of the population who have either run LEGO[®] Therapy previously and chose to discontinue it, those that

decided never to run it, or those that have never considered it, which may have affected the findings of this research.

A final limitation to acknowledge is the method of data collection. As explained above, this research was conducted during the COVID-19 global pandemic, which impacted upon my ability to collect data in person – as originally intended. This meant that interviews with practitioners and parents had to be completed over Microsoft Teams and over the phone, respectively. Whilst there is research to suggest that both of these methods remain reliable approaches (Oates, 2015; Dimond et. al., 2012), where good rapport can still be made and, often, responses can be gathered more conveniently from participants, it may still have impacted upon the validity of responses gathered and the extent to which interviews can be allowed to ‘flow’ properly, as a natural dyadic conversation (Farooq, 2015).

Transferability

Transferability refers to “the degree to which the results of qualitative research can be transferred to other contexts or settings with other respondents” (Korstjens & Moser, 2018, p121). As part of the qualitative research process, it is recommended that researchers involve themselves in deep descriptive prose regarding the participants and processes involved in the research journey, thereby allowing the study’s readership (and future researchers who may utilise a study for their own research in future) can be informed judgements as to whether one study’s results can be considered transferrable to their own context (Lincoln & Guba, 1985; Korstjens & Moser, 2018). Within this study, as outlined above throughout the descriptors of all participants in the body of text as outlined in Chapter 3 (Methodology), in tables 1, 2 and 3, as well as the visualisation of sampling processes in Appendixes 1 and 2, it was the ambition of this study that this has provided a sufficient level of detail to allow future researchers to decide whether this study may be considered transferrable to their own, and for school practitioners to be able to utilise the findings of this research to make informed decisions about their own practice. Furthermore, by basing this study within a broad, generic lens of mainstream UK primary schools and considering a broad recruiting process to all children regardless of their SEND (excluding ASC), this may also provide further scope for transferability for future research, and for school practitioners.

6. Conclusion

I will begin this section by providing brief summaries of the key findings of each phase of this study, before providing some concluding remarks.

Summary of Key Findings

Phase One

This study found that, in many ways, schools' rationales and selection policy for including children in LEGO Therapy is reminiscent to the original research's conceptualisation of 'social competence', that is that it's often vague and ill-defined, characterised by a number of informal judgements about perceived deficits of social skills. As a result, it can lead us to question how specific, targeted, and purposeful the intervention is (i.e., if we don't really know what we're measuring and can't properly define why children are there in the first place and have no robust ways of measuring progress). At present, LEGO[®] Therapy may be being used as a 'catch-all' intervention for any child struggling with socialisation for any number of reasons (e.g., SEMH needs, medical needs, SLCN needs [including speech clarity] or ADHD).

Another contribution of this research is that it recognises that LEGO[®] Therapy is being used with children with a wide range of SEND and additional needs and, whilst some research hints at the possibility of this, my research is the first to formally recognise and identify the children for whom this intervention is actually being used. Furthermore, staff don't consider the drawbacks of children's involvement (beyond them missing a lesson a week) and did not discuss that children needed to be involved in the process or that they may feel negatively about being involved.

Phase Two

This study is the only LEGO[®] Therapy study that includes children's voices and their perspectives; some research suggests that children's voices are not seen as being a valuable research tool, as there may be a historical proclivity for research to be quantitative focused. Educational psychologists have the skillset to explore these things sensitively (e.g., experience of working with vulnerable children and adults), which other researchers may not have. This is a contribution because what this thesis found is that children often understand their involvement to reflect perceived deficits and they create some self-deprecating narratives

about their involvement; to my knowledge, no other research contends with the idea that there might be drawbacks to children's involvement.

Furthermore, this study found that caregivers are also not as involved in the process as they could or, arguably, should be and articulate that they would like to be more involved or more clued up, but almost feel that it is not their place. Caregivers articulated, often, that they allow schools control over these pedagogical decisions because they think schools have their children's best interests at heart, which they likely do.

Concluding Remarks

This study set out to explore the experiences of non-ASC children engaging in a school-based LEGO[®] Therapy intervention in school, by collecting the views of practitioners, caregivers, and the children themselves – which no previous LEGO[®] Therapy had done. This thesis found that all LEGO[®] Therapy stakeholders experience the intervention positively and perceived that their involvement had been beneficial. However, many of the factors identified by practitioners, children and caregivers were not unique to the intervention, and could be attributed to some commonly occurring factors between similar intervention approaches. Furthermore, questions were raised about the rationale that schools had for the intervention, and the impact that this had on children's overall inclusion within their school environment. Further research exploring LEGO[®] Therapy could seek to address these gaps and evaluate LEGO[®] Therapy's efficacy for social skills development for non-ASC children. It might also begin to explore alternative frameworks that could embed the intervention within an equitable, inclusive school curriculum.

7. Bibliography

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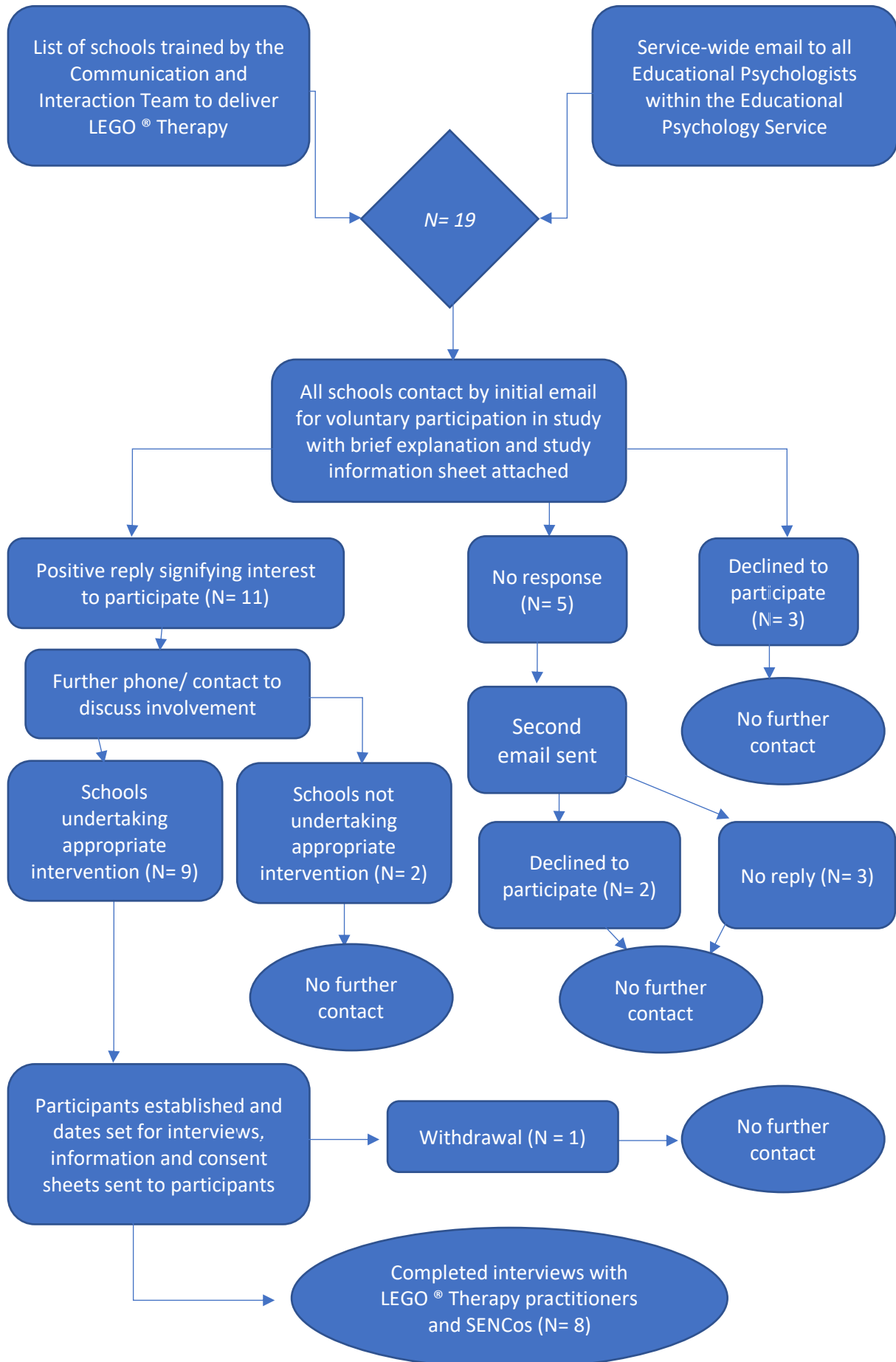
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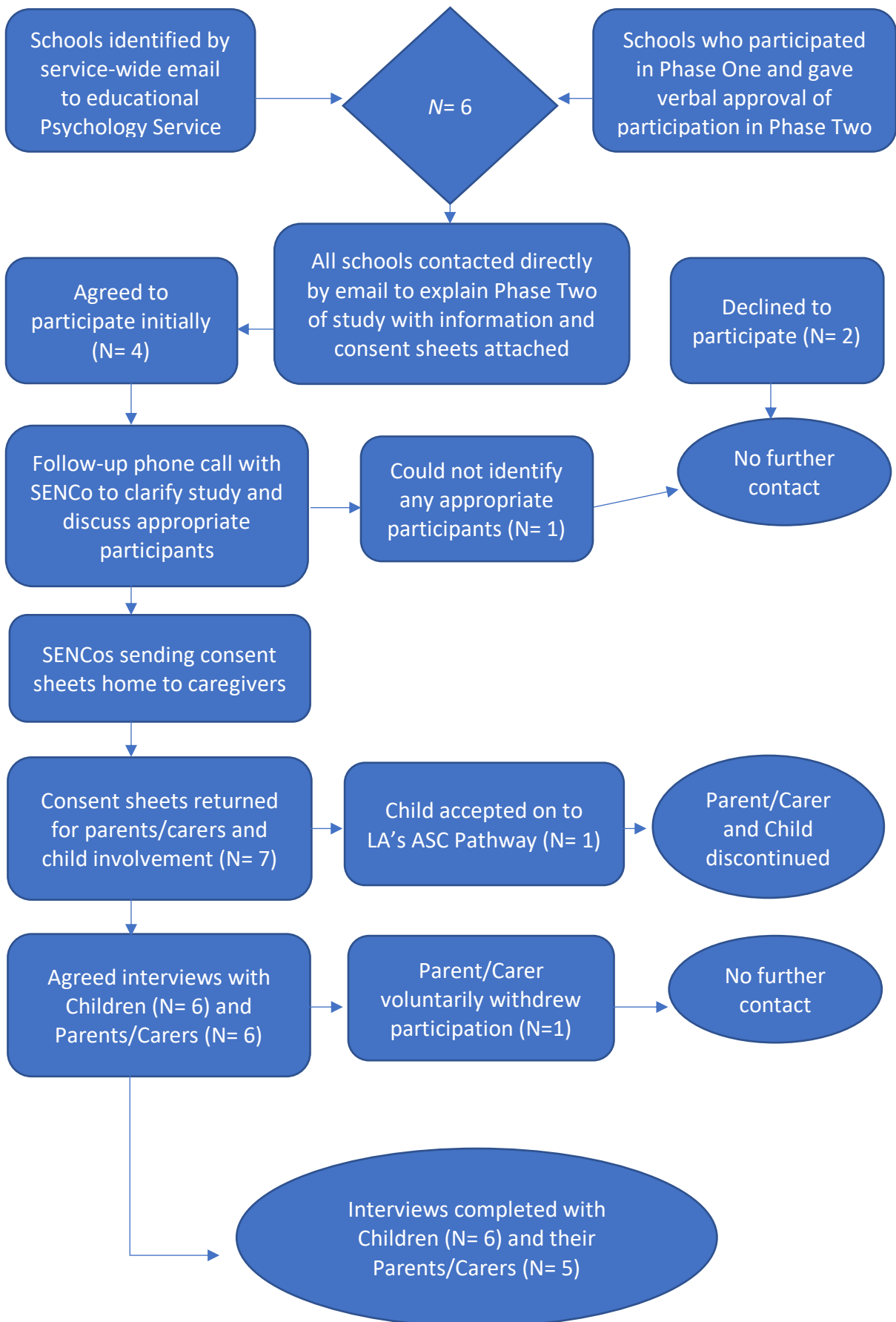
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8. Appendices

Appendix 1: Visualisation of Recruitment Process of Phase One



Appendix 2: Visualisation of Recruitment Process of Phase Two



Appendix 3: Information & Consent Sheet for Practitioners (Phase One)

School Staff: Participant Information Sheet – Phase 1.

Title of Project: *“What are the experiences of non-ASC, primary aged children participating in a school-based LEGO © Therapy intervention?”*

Researcher name: Jake Fox

Thank you for expressing an interest in this research and for volunteering your time to participate. Please consider the information below carefully and discuss it with anyone if you wish to do so. The researcher is happy to be contacted using the details below to answer any questions you may have.

This research is being completed as part of the Educational, Child and Community Psychology doctorate at the University of Exeter and is being carried out to gain a better understanding of how LEGO © Therapy interventions are conducted in Primary Schools, which children are involved and the benefits that they gain from their involvement. It is hoped this research will allow for a better understanding of the implementation of LEGO © Therapy interventions within Primary School settings and an analysis of the benefits of children’s participation.

The study has two phases: the first will explore the views of LEGO © Therapy practitioners in school and the second will explore the views of parents and children.

You are being invited to take part in Phase 1.

You have been approached as you are a member of school staff working in a school the is currently administering a LEGO © Therapy intervention to at least one group of children. The research aims to explore and understand the experiences of children without diagnoses of Autism Spectrum Condition (ASC) in LEGO © Therapy groups.

Taking part will involve undergoing an interview with the researcher exploring your views, understand and experiences of delivering a LEGO © Therapy intervention within school. The interview should take no more than 45 minutes and will be undertaken via a video link, or over the phone if you wish.

Participation is voluntary and you may answer as many or as few questions as you like. All information collected will be anonymous.

If you do decide to participate, please be open and honest in your answers as this will be very helpful for the research.

You have the right to withdraw at any point during the completion of the interview without providing a reason.

It is not foreseen that there are any likely risks from taking part in this research. However, you will be asked to reflect on some of your practice and past experience and this could potentially cause distress to some people.

If you become distressed at any stage during the research, you may decide to stop the interview.

Once the interview has been completed, audio and video recording will be exported and stored securely on the university One Drive. All information will be kept in accordance with GDPR guidelines. The data will be confidential and kept securely until the research project has been completed and written-up (this could be up to 2 years).

The findings of this research will be written up as part of the researcher's doctoral thesis. It is possible the results may also be published in chapters or journals or presented at relevant conferences. If you would like to receive a brief report with findings from the study once it is completed, please contact the lead researcher via the details below to request this.

The research adheres to the BERA ethical guidelines for educational research and BPS Code of Human Research Ethics. This project has been approved by the Graduate School of Education Research Ethics Committee at the University of Exeter.

For further information, any questions or to request a copy of this information sheet, please contact the lead researcher:

Jake Fox – jf583@exeter.ac.uk

If you have any concerns about this project, please contact one of the research supervisors:

Dr Chris Boyle - C.Boyle2@exeter.ac.uk

Dr Andrew Richards - a.richards@exeter.ac.uk

You may also contact the College of Social Sciences and International Studies Research Ethics Committee: ssis-ethics@exeter.ac.uk

Thank you for your interest in this project

School Staff Interviews Consent Form – Phase 1

Title of Project: *“What are the experiences of non-ASC, primary aged children participating in a school-based LEGO © Therapy intervention?”*

Name of Researcher: Jake Fox

Please initial boxes below

1. I confirm that I have read the information sheet dated..... for the above project. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without my legal rights being affected.

3. I understand that relevant sections of the data collected during the study, may be looked at by members of the research team, individuals from the University of Exeter, and/ or a professional transcriber, where it is relevant to my taking part in this research.

I give permission for these individuals to have access to my records.

4. I understand that taking part involves anonymised interview transcripts/audio recordings to be used for the purposes of

- a) A doctoral research thesis
- b) Possible publication of research articles or chapters in academic books
- c) Possible presentations at professional conferences
- d) Archiving of questionnaire responses until the research is completed
- e) Transcription by a professional transcribing service

5. I agree to take part in the above project.

Parents (on behalf of children): Participant Information Sheet – Phase 2.

Title of Project: *“What are the experiences of primary aged children participating in a school-based LEGO © Therapy intervention?”*

Researcher name: Jake Fox

Thank you for expressing an interest in this research and for volunteering your time to participate. Please consider the information below carefully and discuss it with anyone if you wish to do so. The researcher is happy to be contacted using the details below to answer any questions you may have.

This research is being completed as part of the Educational, Child and Community Psychology Doctorate at the University of Exeter and is being carried out to gain a better understanding of how LEGO © Therapy interventions are conducted in Primary Schools, which children are involved and the benefits that they gain from their involvement. It is hoped this research will allow for a better understanding of the implementation of LEGO © Therapy interventions within Primary School settings and an analysis of the benefits of children’s participation.

The study has two phases: the first explored the views of LEGO © Therapy practitioners in school and the second will explore the views of parents and children.

Your child is being invited to take part in Phase 2.

Your child has been selected for participation in this study as they are a primary-aged child currently receiving a LEGO © Therapy intervention (sometimes called ‘LEGO Club’) in school. This research aims to explore and understand the experiences, perceived benefits, and drawbacks of their involvement in LEGO © Therapy groups.

For your child, taking part will involve looking at some photos of LEGO and LEGO club, with myself, and asking your child about what they consider to be the benefits of attending a LEGO club, what they feel that LEGO club teaches them and thinking about if they feel that LEGO club has helped them in any way. This could also involve conversation about the things they don’t like about LEGO club, or the ways they think it could be changed or improved. This conversation will be recorded on an audio-recording device (e.g., such as a Dictaphone).

Participation is voluntary and your child may answer as many or as few questions as they like. All information collected will be anonymous. If you do decide for your child to participate, it will be encouraged that their responses are as open and honest as possible, as this will be very helpful for the research. You have the right to withdraw your child (or they have the right to withdraw themselves) at any point during the completion of the conversation without providing a reason, and this decision will not be questioned.

It is not foreseen that there are any likely risks from taking part in this research. However, your child will be asked to reflect on their experience of LEGO club with myself – the researcher – who may be an unfamiliar adult to them, which may potentially cause distress to some people.

If your child becomes distressed or upset at any point throughout the conversation, the study will be discontinued, and your child will be escorted back to class.

Once the interview has been completed, audio recordings will be exported and stored securely on the university One Drive and on an encrypted password protected hard-drive. All information will be kept in accordance with GDPR guidelines. The data will be confidential and kept securely until the research project has been completed and written-up (this could be up to 2 years).

The findings of this research will be written up as part of the researcher's doctoral thesis. It is possible the results may also be published in chapters or journals or presented at relevant conferences. If you would like to receive a brief report with findings from the study once it is completed, please contact the lead researcher via the details below to request this.

The research adheres to the BERA ethical guidelines for educational research and BPS Code of Human Research Ethics. This project has been approved by the Graduate School of Education Research Ethics Committee at the University of Exeter.

For further information, any questions or to request a copy of this information sheet, please contact the lead researcher:

Jake Fox – jf583@exeter.ac.uk

If you have any concerns about this project, please contact one of the research supervisors:

Dr George Koutsouris - g.koutsouris@exeter.ac.uk

Dr Lata Ramoutar - l.ramoutar@exeter.ac.uk

You may also contact the College of Social Sciences and International Studies Research Ethics Committee: ssis-ethics@exeter.ac.uk

Thank you for your interest in this project

Appendix 5: Consent Sheet for Children (Phase Two)

Child Participation Consent Form – Phase 2

Title of Project: *“What are the experiences of primary aged children participating in a school-based LEGO © Therapy intervention?”*

Name of Researcher: Jake Fox

Child's name: _____

Parent's name: _____

Please initial boxes below

1. I confirm that I have read the information sheet dated..... for the above project. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my child's participation is voluntary and that I am free to withdraw my child at any time without giving any reason and without my legal rights being affected.

3. I understand that relevant sections of the data collected during the study, may be looked at by members of the research team, individuals from the University of Exeter, and/ or a professional transcriber, where it is relevant to my taking part in this research.

I give permission for these individuals to read transcripts of my child's contributions to the above-named research project.

4. I understand that taking part involves anonymised interview transcripts/audio recordings to be used for the purposes of

- a) A doctoral research thesis
- b) Possible publication of research articles or chapters in academic books
- c) Possible presentations at professional conferences
- d) Archiving of questionnaire responses until the research is completed

5. I agree that my child may take part in the above project.

Thank you for your interest in this project

Appendix 6: Information Sheet for Caregivers (Phase Two)

Parents: Participant Information Sheet – Phase 2.

Title of Project: *“What are the experiences of primary aged children participating in a school-based LEGO © Therapy intervention?”*

Researcher name: Jake Fox

Thank you for expressing an interest in this research and for volunteering your time to participate. Please consider the information below carefully and discuss it with anyone if you wish to do so. The researcher is happy to be contacted using the details below to answer any questions you may have.

This research is being completed as part of the Educational, Child and Community Psychology Doctorate at the University of Exeter and is being carried out to gain a better understanding of how LEGO © Therapy interventions are conducted in Primary Schools, which children are involved and the benefits that they gain from their involvement. It is hoped this research will allow for a better understanding of the implementation of LEGO © Therapy interventions within Primary School settings and an analysis of the benefits of children’s participation.

The study has two phases: the first explored the views of LEGO © Therapy practitioners in school and the second will explore the views of parents and children.

You are being invited to take part in Phase 2.

You have been approached as you are a parent or carer of a primary-aged child currently receiving a LEGO © Therapy intervention (sometimes called ‘LEGO Club’) in school. This research aims to explore and understand the experiences, perceived benefits and drawbacks of children’s involvement in LEGO © Therapy groups.

Taking part will involve undergoing an interview with the researcher exploring your views and understanding of your child’s involvement in a LEGO © Therapy intervention within school. The interview should take no more than 30 minutes and will be undertaken via a video link, or over the phone if you wish.

Participation is voluntary and you may answer as many or as few questions as you like. All information collected will be anonymous. If you do decide to participate, please be open and honest in your answers as this will be very helpful for the research. You have the right to withdraw your contribution at any point during the completion of the interview without providing a reason, and this decision will not be questioned.

It is not foreseen that there are any likely risks from taking part in this research. However, you will be asked to reflect on your child's needs and/or difficulties, as well as your perception of the support their school provides, and this could potentially cause distress to some people.

If you become distressed at any stage during the research, you may decide to stop the interview.

Once the interview has been completed, audio and video recordings will be exported and stored securely on the university One Drive and on an encrypted password protected hard-drive. All information will be kept in accordance with GDPR guidelines. The data will be confidential and kept securely until the research project has been completed and written-up (this could be up to 2 years).

The findings of this research will be written up as part of the researcher's doctoral thesis. It is possible the results may also be published in chapters or journals or presented at relevant conferences. If you would like to receive a brief report with findings from the study once it is completed, please contact the lead researcher via the details below to request this.

The research adheres to the BERA ethical guidelines for educational research and BPS Code of Human Research Ethics. This project has been approved by the Graduate School of Education Research Ethics Committee at the University of Exeter.

For further information, any questions or to request a copy of this information sheet, please contact the lead researcher:

Jake Fox – jf583@exeter.ac.uk

If you have any concerns about this project, please contact one of the research supervisors:

Dr George Koutsouris - g.koutsouris@exeter.ac.uk

Dr Lata Ramoutar - l.ramoutar@exeter.ac.uk

You may also contact the College of Social Sciences and International Studies Research Ethics Committee: ssis-ethics@exeter.ac.uk

Thank you for your interest in this project

Appendix 7: Consent Sheet for Caregivers (Phase Two)

Parent/Carer Interviews Consent Form – Phase 2

Title of Project: *“What are the experiences of primary aged children participating in a school-based LEGO © Therapy intervention?”*

Name of Researcher: Jake Fox

Please initial boxes below

1. I confirm that I have read the information sheet dated..... for the above project. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without my legal rights being affected.

3. I understand that relevant sections of the data collected during the study, may be looked at by members of the research team, individuals from the University of Exeter, and/ or a professional transcriber, where it is relevant to my taking part in this research.

I give permission for these individuals to read transcripts of my contributions to the above-named research project.

4. I understand that taking part involves anonymised interview transcripts/audio recordings to be used for the purposes of

- a) A doctoral research thesis
- b) Possible publication of research articles or chapters in academic books
- c) Possible presentations at professional conferences
- d) Archiving of questionnaire responses until the research is completed

5. I agree to take part in the above project.

Thank you for your interest in this project

Appendix 8: Copy of Ethical Approval Letter

CERTIFICATE OF ETHICAL APPROVAL

Title of Project:

“What are the experiences of non-ASC, primary aged children participating in a school-based LEGO © Therapy intervention?”

Researcher(s) name: Jake Fox

Co-Investigators:

Supervisor(s): Christopher Boyle, Andrew Richards

This project has been approved for the period

From: 22/02/2021

To: 31/08/2022

Ethics Committee approval reference: D2021-108

Signature:



Date: 19/02/2021

(Professor Justin Dillon, Professor of Science and Environmental Education, Ethics Officer)

Appendix 9: Skeleton Interview Structure (Practitioners - Phase One)

Tell me about your experience of LEGO therapy.... (P)

How does your school structure their LEGO therapy sessions? (P)

How many sessions do you run per week? (P) or (S)
 How many children in total do you deliver this to? (P) or (S)
 What is the average duration of your sessions? (P) or (S)
 What is the average structure of your sessions? (P) or (S)

As you see it, what is the purpose of LEGO therapy? (P)

What it is trying to do for the CYP involved? (P) or (S)
 What skills are the CYP learning? (P) or (S)
 Why can't they learn these skills elsewhere? (P) or (S)

How is 'progress' defined in the intervention? (P)

How do you track and monitor progress? (P) or (S)
 Is this approach ever reviewed? (P) or (S)
 At what point at children 'discharged'? and by whom? (P) or (S)

How many children in your groups have a diagnosis of (or are in the process of receiving) a diagnosis of ASC? (P)

For children who do not have diagnoses of ASC; on what basis was the decision to include them in a LEGO © Therapy intervention made? And by whom? (P)

For those that do not have a diagnosis of ASC, what do you consider (if any) their SEND or additional need to be? (P) or (S)
 Are these children currently (or have they ever previously) attended any other interventions to help meet their identified needs? (P) or (S)
 What was the effect of previous interventions (if any)? (P) or (S)

For children without diagnoses of ASC, what do you notice about their behaviour in the group intervention? (P)

Do you notice any differences between themselves and their peers with ASC? (P) or (S)
 What roles do non-ASC children play in the group? (P) or (S)

Please comment on the progress that non-ASC children have made over the duration of the intervention. (P)

How do you know they have made progress? (P) or (S)
 In what particular areas have they made progress? (P) or (S)

Are there any children for whom LEGO © Therapy has been unsuccessful, or have been particularly difficult to include within the group intervention? (P)

Why? (P) or (S)
 What changes would have helped them to benefit from the intervention? (P) or (S)

For whom do you think LEGO © Therapy is the most successful intervention? (P)

Why? (P) or (S)
 What factors contribute to a successful LEGO therapy intervention? (P) or (S)
 What skills do CYP already need to take part? (P) or (S)

What are the strengths and drawback of the LEGO © Therapy intervention? (P)

What would you change, if anything? (P) or (S)
 What makes a LEGO Therapy approach the optimum choice? (P) or (S)
 Why does your school run it above other intervention choices? (P) or (S)

(P) Denotes a response that was directly prompted by the interviewer through direct questioning

(S) Denotes a response that was received spontaneously, i.e., without any direct and specific questioning from the interviewer

Appendix 10: Skeleton Interview Structure (Children - Phase Two)

Interview Schedule for PEI Interviews with Children

Can you tell me about LEGO[®] Therapy? *[Prompts]*

- What is it like?
- What does it involve?
- What do you do?

I've got some pictures here of some children doing LEGO[®] Therapy – which of these pictures would you like to look at first? *[Prompts]*

- What are the children doing in this picture?
- What is happening in this picture?
- What do you think each child is doing? [Point to individual children, if necessary]
- What do you think they are learning?

What do you think you LEGO[®] Therapy helps you with? [Use picture prompts if necessary]

Each identified answer by child, prompt with any combination of:

- Why do you think that?
- When do you learn that?
- Can you give me an example of that?

With each identified skill, prompt with any combination of:

- Why is that helpful?
- Where does that help you? *[Prompt]* In school, at home, on the playground?
- Why might that be a good thing to learn?

Has LEGO[®] Therapy helped you?

(If yes)

- Why?
- What has LEGO[®] Therapy helped you to do?
- What did you find difficult before?
- How is that better now?

(if no)

- Why not?
- How could LEGO[®] Therapy be different to help you?
- What would you change?
- What don't you like about it?

Is there anything that's bad about LEGO[®] Therapy, or anything you don't like?

Appendix 11: Skeleton Interview Structure (Caregivers - Phase Two)

Classification: UNCLASSIFIED

Can you tell me very generally about your understanding of LEGO Therapy? [P]

- What does LEGO Therapy entail? [P] or [S]
- What do children do in LEGO Therapy? [P] or [S]

In your view, what is the purpose of LEGO Therapy? [P]

- What does it teach children? [P] or [S]
- How is it trying to help them? [P] or [S]

Why do you think your child was selected for LEGO Therapy? [P]

- What are their SEND or additional needs? [P] or [S]
- What skills do they need to learn? [P] or [S]

How is your child benefitting from LEGO Therapy? [P]

- What skills have they learned in LEGO Therapy? [P] or [S]
- How else is LEGO Therapy helping them? [P] or [S]
- What progress are they making? [P] or [S]

Have you observed a difference since your child has started attending LEGO Therapy? [P]

- What does this look like? [P] or [S]
- Where do you see these differences? [P] or [S]

What drawbacks do you consider there to be about your child's involvement? [P]

- Are there any consequences to them going to a group intervention outside of the main class? [P] or [S]

Appendix 12: Sample Transcript of Interview with Practitioner (Phase One)

SAMPLE TRANSCRIPT – PHASE ONE – INTERVIEW WITH PRACTITIONER

Researcher

So starting off can you tell me about your experience of LEGO therapy?

Practitioner

So at the beginning, to be fair, to be completely honest I haven't had any training... I have got training next month... So I've had literally about an hour, one on one with that our SENCo here just to describe so I've kind of learned as I've gone on and each time I think I could do that better I could do this better, but I feel it's really good for the children... At the moment we can work in groups, but with the dynamics of the children I've got the moment so far by just doing one on one, which is good because it's teaching them patience waiting for me... you know, we both make mistakes, which is fine because we can learn from that and we get better each time... but yeah, I've really enjoyed it. It's fun. The children love coming in to do it, and it's the whole mystery of what are we making today kind of thing. We don't always get to finish, which is fine because we leave it to one side, we name it so the, especially with the autistic children they're like, you're not going to break it up, where you're going to put it so they need to know where it is so we name it and it's left securely in my room, so they know then come back in and that's where they start off, but it's just the fun of guessing like all it's like a race car, it could be a truck and, and what have you so it's the unknown unknown of what it's going to end up to be and, but yes, it's the mystery, the mystery about is really going to children love it come in, and it gives us good... makes good connections with the children, but myself instead of like that rushing through I have all day. All day on Wednesdays, I have seven children, so because there's that time we're not in a time limit, we can just take our time over it. But what I've learned so far... over the summer holidays I have really trailed through all the information, because I was literally pushed into it, which is fine, I'm up for that. But I've learned so much more. I could have started 'this way' I could start 'that way'. Hence, there's a game here, described with four pieces that I didn't know about that but that's so useful for when we're coming in the child gets quite frustrated like how am I to describe this piece. Well now, this is describing game. Okay, so we can take it in turns... have in all different shapes, sizes of different Lego pieces that the child has to pick a number, try and describe that piece as best they can with the colour the shape curve, thick, thin, the dots and so once they're like really confident with that then I know now to start at the first level, get them building something very small hitting those targets, feeling confident, and, you know, proud that they've done something, so then we can move on to the more trickier which again includes a bit more patience... Frustration is going to come into it but it's coming over that and, you know, teaching them for the classroom teaching them to help with their friends and their peers on the playground.

Researcher

How does your school structure, the LEGO therapy intervention?

Practitioner

So we do one LEGO session a week, on a Wednesday, and we base it on children with social... not disabilities... but maybe shy or they haven't got the confidence to go up and,

you know, meet new friends, or are socially awkward, that they don't know like when a child's talking and they just come in and might make a noise or go and push someone... So doing this is you start off one to one and then you introduce a second and a third person, so that's introducing as 'working together as a team', taking in turns listening to each other, eye contact. Okay, so with that, with them learning within the session, they could take it back to the classroom they can take it during PE lessons, definitely, and into play times as well... lunchtimes. So, using this and when not only one LEGO therapy I do other social groups - I know I'm going off track - , but with all that together these children do all of it, it does help with their social skills.

Researcher

And from your point of view, what do you say is the purpose of LEGO therapy?

Practitioner

Okay, I think the purpose of Lego therapy is not only to build confidence - Confidence is a big thing - Okay? Some children that aren't always academically, this is just my personal opinion, always aren't academically successful or they come across a hard English or Maths lesson. They freak, they panic, I can't do this, I can't do this in a small setting with Lego therapy, you say okay we're going to build something, they're like, oh I can't read instructions I don't know what I'm doing. But with step by step, and they can see they're building something and they don't know what it is, so is the anticipation, what's it going to be, and then see that finished product is, they are beaming they're happy, they're like, did I really build this and then the teachers presume they followed step by step instructions from a leaflet and when I explained to them what Lego therapy is where they're listening to my instructions, and then we take turns; they have to describe what, what I need to build what piece of Lego I need where to place it... They're shocked, everyone is shocked they're like "so you didn't follow like step by step instructions, by looking at both looking and doing it together?". It's like no, we're blind to it, and then we swap over and I'm blind to it and they're telling me the instructions and this is the finished piece, they think they've done... they've conquered the world kind of thing and it's quite good with... I've got a little girl who just gone in to year four and she's, she struggles in class, but when she comes here and she's like "I really made this", she wanted a picture to take home to show mum, she wants to go show her teacher, the TA, her support TA that she was chuffed and everyone was chuffed and they like "oh, she followed the instructions". No, she listened to me. We took turns, and they were like wow this amazing... just shows that they're proud, and they think well if I could do that, then, what, what can I do next.

Researcher

So it seems like within the Lego therapy dimension you feel like they're learning lots of different skills, why can't they learn those skills elsewhere?

Practitioner

I think in this setting, like I said, maximum of four to three children and myself, small setting, small room. I've got clear rules in here, obviously I'm not strict but there is Lego rules to follow, you have to listen to each other, take turns, you want to say something, put your hand that you don't talk over others. Yes, those rules are put in place at lunch times, at break times and in the class, but they're up against 29 other children and themselves plus

adults coming and going, talking, and maybe they're not confident, feel they're not heard, so they just sit back and be like, "I don't know why I'm doing", "I can't compete with that competent child who's like 'I know Miss'" and, you know, so, here there's one adult, sometimes one on one, they know they've got my full attention... I've given them time to speak to express what they want to say, and express how they're feeling and where sometimes maybe in class they haven't got that confidence to do so, on the playground, they haven't got that confidence... the confidence to do so or even the vocabulary sort of thing to say that, hence with the positional vocabulary, but it gives them structure sentences. Okay, so "can you find me", "Can you place it next to above, below...", I'm given that child, time to think about what they want to say, and then they say, where again where their peers and friends, it's just like they don't get the job, so then they think, Well, no one's listening I'm not gonna say anything, so it doesn't get a chance to express themselves.

Researcher

How would you define progress in the LEGO therapy intervention? What would that look like to you?

Practitioner

Okay, so I did... like a lad last year, and progress is where they move on quickly, which is like when we start off at the basis where you say, "Can you find me a red block, a red square, four square with four dots?..." Yeah I've got that straight away, where they're finding them quickly, and they are really listening to where I'm telling them to place it so they've got the listening skills, okay and they got the coordination, they know what that from their left and right, because if the children come and they're not sure what does 'below' mean... because some children don't know what you mean by 'side by side', or even their left or their right and the little girl who's now in year four, she didn't know her two times table. So, when you looking at the basic blocks, you're looking from a front point of view, not a bird's eye view, so when you see seeing those two dots so, she's seeing two bumps, so she's like, "oh it's two bumps", but some children who know, really, au-fait with Lego, they're saying, I can only see two but I know that's a four piece because there's going to be two behind, so they're like two, four or others there's three there, so three, six. So they're saying can you find me a red block with six bumps, she wasn't very good with numbers so we had to really start the beginning to work for her to remember, each time. If you're seeing two we know there's four. Okay, so she's like, "but I don't know what comes after two times table", so I was kind of teaching her two times table, as well as Lego therapy... As in teaching the basics, but once she's conquered that, and when I know they've succeeded, and can be ready to move on, is when she's given me those clear instructions as when she's looking and going, okay, there's two buttons I know that's four. So she's give me the correct instructions, I've felt what she's asking me to build. So then I know she's got it. Okay so once we've done the basics, then we can move on to a small Lego set of basic of like 20 pieces of Lego when making a little tree or like a tiny bus or whatever else I had in there. Once we've conquered that and she can give me those instructions... So when we are giving each other clear instructions and we are both building what each of us is describing, I know that's progress, then we can move on to a trickier set... When a child's like, "Oh, I'm not sure how to describe that" or "I don't know what that means" or "what are those shapes again", I know we have to take it back a step to think, okay, they're still not great with a square or a rectangle, because some of these children aren't academically where they should be. So

we've got all that against them, but this is helping. It does cover Maths, so it does help for the classroom as well, and even with English with the positional vocabulary. So it's all helping academically as well as building their confidence and working in a small group.

Researcher

And how do you kind of track and monitor that progress?

Practitioner

Uuum... I do it just as my view, to be fair, like I said I was kind of thrown into at the beginning, and, and I kind of, I've learned myself, as I've gone, yes I have got training next month, which is great, but there was tonnes of it and it's kind of my fault that I haven't gone for it... working in school it's difficult getting that time. So, I have found a sheet, but the sheets are like, "do they follow the rules?", yes or no, kind of thing... "do they wait their turn?", yes or no, which is basic, but each time, I've just took this on personally my setup is each time I've had that child and they're ready to go back to class. I've said, what they are struggling with, or what's improved, so then I can go back and go, 'four weeks ago where were they four weeks' so, they were stuck with like knowing what square or rectangle was now they know what square rectangle is they can point out to me. Before we get started anything so I know they've improved and moved on from there. So I'm always double checking that the beginning of term what they didn't know what they didn't know to what at the end of the half-time, what they've liked how far they've come in if they've moved on, or if they haven't really...

Researcher

And at what point would a child be discharged from intervention?

Practitioner

I started this all in April and so with COVID we had quite a lot children that I worked with being off because of isolating and so it's gotten so has been a tricky year to be fair, and there was one boy who just for social skills really came to me, just to keep calm, so we could work together and he flew through it, so he has now left because he was coming into Year six but because we come to the end of summer time... I did try one session with a very tricky boy but I was fire... not firefighting as such... he was always like "my turn, my turn!" so I knew he needed time to wait to be patient, taking turns... The other lad; he was waiting his turn, he was trying to help him with the other boys, saying "I could do it", "I don't need your help"... So that's something I will work on is once I know they are confident, one on one, they are good with describing the instructions, then they're not getting frustrated, and they're at a point where I think they're ready to add another child and so then they can work out who is the supplier and who is the builder, and once that's gone well I can then maybe add push it and add in a third, to see as a friendship group, what would that look like in the playground too... We can use this here to in the playground, can they work, taking turns, be patient with each other, you know, resolve... If someone's stuck and they're not sure - could they work together as a team without saying "I'll find it for you", it's prompting them to listen to what others are saying and "can you remember the colour?", "Can you remember what shapes you said it was?", you know, prompting the job of actually saying, "Oh, I'm going to do it for you". Okay, So once we get to that, then I know I personally I think then they are ready to leave, but I haven't got as far as like that yet because it's still

new to me. I would like helped to get me to that point where I'm working together with groups and finding that children are ready to move on and leave, kind of thing... But when I know they are confident they are following the rules, they are working together as a team, they're not interrupting, they're being supportive to each other, general social skills, then I could say I think this child's ready...

Researcher

Yeah. Okay, and then how many children your groups have a diagnosis of or in the process of receiving a diagnosis of autism or ASC?

Practitioner

Four children have been diagnosed out of my seven children. Okay, one is new, I'm not sure... there's something there, but I don't think there's been a diagnosis which I could find out and I would say two haven't got to haven't got an autism, but the other four haven't... one I'm unsure about...

Researcher

So for the children who do not have diagnosis of ASC, on what basis was the decision to include them in LEGO therapy made, and by whom?

Practitioner

Okay, one, I have not worked with. The [SENCo] suggested "could you work with these children?", because I think the girl that I've been working with and then this new boy that I haven't worked with from what I've heard, though, it's in the playground, it's 'my game my way'. 'Right, you're not gonna listen to me you're not gonna play' and 'you want to be my best friend, you're not going to be their best friend anymore'... it's all, I think it's all about learning to, you know, to make friends, keep those friends and understand like social boundaries of how to speak to people and because... she's a little firecracker, bless her... and it's always like, 'I'm in charge', right, 'you're not gonna play with me'. But then, she's the victim as in like, "Oh, no one wants to play with me" and stuff, very bossy. So here it's, you know, you've got to wait your time because when I had her with another child - she knows that the other child that I actually work with in Lego therapy when I had him in a different group - and he's actually got mosaic downs, and he's autistic, very very very very bright, it's just, he's got to think about what he needs to say fast. So, when he, he's like, "Uuum.., Uuum..", when he starts to go, the little girl would be like, "yeah, anyway..." on purpose, so that will frustrate him and she was thinking about it. So this is gonna help. You know, like sometimes I'm a bit naughty because I will interrupt and then they say, "You're interrupting me", so they know when I'm doing it. So which I do on purpose for them to see if they pick it up, and then they say "Well why are you being rude? You're interrupting me" and I will say "so how do you think your friend feels?" so then they're like, "Oh yeah", kind of thing. So yeah, all that helps teach like said, or socially in the playground, within the class... don't talk over the teacher and be patient with their friends, and if they talk nicely, they're going to get a good response back.

Researcher

Okay, so for those children that don't have an autism or diagnosis of autism, what would you consider, if any, their special educational need or disability?

Practitioner

Okay, one boy, I'm totally unsure about, I think he's just very bossy as in just mainly the playground. I don't know a lot about him... but from what I have had, you know, it's very bossy, the playground, "I'm in charge", "This is my game" or "You're not playing"... and with the little girl, she's, again, she's bossy- doesn't take on board any of her friends- "it's my way or no way", "I'm in charge", "you follow me", then "you're not playing"... One minute she's friends with people then she's like, I've got no friends because they're like, "I'm not going to play if you're going to be bossy", "you're not listening to my ideas", or "I want to play my game", and it's like no it's my game or nothing, and they're very like hands on, if we don't get our own way. So I'm hoping this, like I said, small group, learning, taking in turns, and hopefully learning and implementing those skills and taking them elsewhere.

Researcher

For those children again that don't have diagnosis of autism, to your knowledge if they ever previously attended or currently attend any other intervention that tries to meet the same needs?

Practitioner

Oh yes, the little girl she comes with me, and she does a friendship circle group for me. So, so yeah we do that with her, but again with the boy, I don't know unfortunately I don't know a lot about him. He's new on my radar, kind of thing, but yes I know the little girl has a thing. Last year she did a little social group with some peers in a class, like on a Friday afternoon she would go out with a TA they all play a game, again, learn to take turns and things like that, but yes she does work on friendship circles with me on a different day.

Researcher

Okay, and what's the effect of that intervention?

Practitioner

Okay so that's again, to help her be a better person to be patient and wait her turn. You know, be able to work with friends and not just because she's very like shouty and physical with the other children, so she needs to learn 'you need to listen to your friends' and if they say, "We don't agree with what you're saying"... I know they were year three that now they're four or four or five now, but she, I think is quite young for her age, and likes to get her own way quite a lot... so this is going to teach her with the friends... and also, like, if something had happened she blames her best friend and she doesn't take responsibility for her own actions. Okay, so this is to... either don't do those actions, or if you do, you can't blame other people it's not fair, you know... it's to also build relationships with someone she may not get on with quite a lot. So we, you know, we teach her the skills, and then have that child come in - (because this is what I'm going to be doing with a couple of year five boys that don't get on) - but it's to finally build that relationship, and, and to work in a small group, to show them, they can have fun, they can listen and take in turns, and then hopefully that carries on for the rest of the year. Hopefully.

Researcher

For those without diagnosis of autism, what do you notice about how they behave in the intervention, and is it different from their peers?

Practitioner

Yes she... I have to get firm with her, she is tricky...When I'm working with her in a small group with the boys with autism, they need, like said patience and time to get their words out - You can see he's processing it before it gets out - and no sooner does he start to talk, she purposely interrupts him, as I said, likes to sit back and laugh and I've had to be harsh at times about sending her back to class, a couple of times, but I said if you want to speak, put your thumbs up, you know, if you put your thumbs up, I know I can come to you after I have spoken to these children, because I know you've got something to say. I said, "you can't interrupt in class", I'm like, "do interrupt your teacher?", she say "No, I get told off". So what's the difference in classroom my group? Okay, so, we're teaching her a lot, but hopefully come the end of, like Christmas, it's really embedded.

Researcher

Can you comment on the progress that non autistic children make over the course of the intervention?

Practitioner

Yes, we really struggled at the beginning with her, and I think it was because it was like, "Oh, I'm just gonna say this is boring" or "I don't want to build this" and she had that kind of attitude. But I just kept going and going and I think she knew 'I've got to do this' and she said like, "Oh, why can't I build something?". I said if you work hard and listen to me I can help you and we can get to building a Lego set, because obviously she would go back and speak to her peers who come with me and they said, "ooh, I built a plane today" or "I'm in the middle of building something but I don't know what it looks like it could look like a truck but I didn't know if it's an Army tank", and you know, you can see because I'm listening, and telling her TA, how I found them during the lesson and what have you. She'll ask if we're building something today and I'll say we need to go back to the basics... as soon as you listen, use your listening ears, you take in turns, and you give it your best shot we can move on and she let me sit and talk to her. I think then she's like, 'I'm not going to get anywhere unless I do listen', so that's really important that she did. So we took two times tables to help her start off with the basics and I think sometimes she did pull the wool a little bit because she'll be like, "That's what you said" and I said "red, yellow, red", she'll be like "red, yellow, green" and I'm like, "you can't mistake red from green" and she'll go "You did say you did that", but try not to smirk... so I'm like, "That's okay" because I said, "the longer we have to do this, we can't build something amazing. Can we?" and so I think she thought 'yeah true, all my friends are builders like now, I'm not...' so yeah she listened, and listened to what I've asked asked of her, and then we finally come in and she said "oh what's this?" I said "We've moved on now we can start making something" and she had the biggest smile... and just because it was only small she managed to complete it within that first session, and yeah she was buzzing... So I think now she's realised, actually, if I listen, pay attention, listen to what I'm being told, and following the rules then there's something great that comes out of it... She was buzzing at the end of it and wanted to show everyone in the whole wide world, and it was a small little tree but to her it was the world, and she's conquered

something... she got to where she wanted to be. So yeah I just let them know, like whisper in their ear, if you're going to listen follow the rules we can move on quicker. So I think she wanted to play and mess around at the beginning, but now sees things and thinks 'I've got to listen, and we've got to where she wanted to be', so hopefully this term we can then I will take them back to their basics and see who moves on quicker to then move on to the next step, if that makes sense?

Researcher

Thank you. Yeah. Are there any children for whom LEGO therapy has been unsuccessful, or have been particularly difficult to include within the group?

Practitioner

Again, one child... He's very high functioning autism... He comes and you can see he comes in, he's like, 'Eurgh...' I find it really... I've even spoke to the class teacher she's had a word with him, because he wants to come and build like the biggest Legos structure ever created... but he's not following the rules, and he'll sit there and I'll say as simple as "it's a black square, four bumps", and he'll say "no no no I can't find it, I don't know what I'm looking for, I can't find it"... I'm like listen, square, you know, repeat it very slowly and then I'm like okay well maybe it's not there, maybe he's knocked it... So as I go to help he'll say "I found it, I found it" each time so that's quite frustrating for me, obviously I don't show him I'm frustrated, but I feel he's testing me...

And because it's as soon as I get to say 'I'll help you', thinking maybe he's lost it, or I've got up because he can't find them because I'm thinking right how can I simplify this for him... So he understands he's got the other pieces of Lego he's building something else! So the piece I've asked him to find, he's used on putting bits together there without me knowing... and obviously we put like a big box across so we can't see each other but we can hear, well we can - eye contact - so he can't see my instructions. He's just got to listen. So without me knowing he's building something, so I'm thinking I need to check, double check, triple check all the pieces that are there. So I follow up with him' I'm like well we're building this and the pieces I'm looking for could be there. This is what you should be building, you need to be listening ... "but it's boring!"... But he wants to get to the end before doing the beginning, but it's with that child, you've got to explain, you can't get into a car, the very first time and drive off, you need those lessons to get you to driving, so it's just getting him to understand that, which is, I find tricky... he finds tricky, but I'm not going to give up.

Researcher

Okay, so in a sentence, what is it about him that means that the intervention is really difficult for him?

Practitioner

He's an autistic child and is very very very intelligent, and he says things to me that I'm like "I don't know" kind of thing, and so, for him to be started the basis to have "Can you find me Red Square?", "Can you find me yellow square?". He's like 'Are you serious?', kind of thing... I want to start at the beginning, I can't jump to the end and also I think it's him being patient and waiting. He can't wait, be patient, but when I'm thinking how am I going to describe this for him he wants to basically to come around and get the book and do it himself, and he

doesn't want me to explain that to him, because that's not quick enough for him in my eyes. But he doesn't show frustration and he's just like "oh this is boring", you can see it... And when I say to him, "what is it, why do you find it boring?", he's like "I'm listening to your instructions, I just want to get on and build it!" but I'm like, "But if the teacher gave you a piece of English and said right, do this work and you don't know what it is you have to do..." I said that's why, but he finds even that's boring. He will zone out because he's like I just want to get on, like, he wants to run before he can walk in a nutshell...

Researcher

For whom do you think like a therapy is the most successful, for who does it work really well?

Practitioner

Okay, I, to be totally honest, I think every child could do with it. Okay, because it just teaches them patience... it gives them that time to put a sentence together and without feeling pressured, because if I was in the class and I have 30 other children looking at me, I'll be like "Uuuhhh..." that kind of thing... So in this setting, it gives that child confidence to speak freely, and it helps of all aspects. I think it will help every single child autistic or non autistic. It's teaching them like to turn taking, eye contact, listening skills, all those are good within the classroom within their peers, anywhere in life and all social emotional skills I think this is brilliant for every child, but we haven't got all the time in the world to do every child. But also, like I said there's, like, not a gift I don't know what word I'm trying to look for but when they've created something, they're like, 'I had to listen to your instructions, I didn't just copy that and I had to take instructions and listen, and I built this by that'... and they're amazed by it because I think in, like, some of the children are like "Well, how am I to build this when I can't see the instructions?" and like, this is where the listening comes in, and us describing to each other and they're like "Well I can't describe it to you, I'll get it wrong!". But no, one step at a time. Okay, so it's teaching them patience, and to be slow, not to go "Oh my god, I've only got this and I've got to get to there so I've got to get that done but how I want to cut out all the middle...". You know so but, but it's take those little steps and you will succeed in a nutshell.

Researcher

Yeah so it seems like you're describing, when they got to do something when they start, they said well you know I can't do that it's impossible, and then they do it, do you think they've always like a lightbulb moment they go actually. If I, if I listen I'm patient I follow the instructions, actually I can do this. If you think there is like a, like a lightbulb moment for some of them?

Practitioner

Definitely, they can think "So, if I start off small and tackle this bit today", they know and hopefully think, "Oh, I was on step three last week so I know I could do four five and maybe six this week, and so by the end of the third week, I've accomplished it... I've made something". So hopefully you're teaching those skills and patience in this setting to take back into the classroom as well.

Researcher

Okay. What factors do you think contribute to successful LEGO therapy intervention?

Practitioner

Okay, so patience. Okay, reassure them "You don't need to stress, you know, we, we've got time, take a breath"... like with one autistic boy sometimes he has a cup of water because thinking and doing lots of talking, he gets so like really dry, bless him, but I just said there's no rush, even if it takes a whole time for you to accomplish something, we will get there, step by step and because they think, oh my god, I have all these pieces of Lego and I've got build something out of this and then it's like they're checking the time and I said, it doesn't matter even if we just have the whole discussion this first session. Okay, so it's given them my patience, my time and reassuring them, it's fine. It doesn't matter how long it takes, we will get there eventually and they seem to relax more, they don't think I've got I've only got half an hour to do this and I've got to get it done, no that's not what I want in this session, I need them to, you know, learn those skills, keep those skills to move on in class, as well as doing it in my, in my sessions.

Researcher

Okay. What skills do children young people that take part in intervention, what do they already need to be able to do, to be able to take part in LEGO therapy?

Practitioner

A good skill that they need to come here with I would say to make it a little bit easier is listening. Okay, because some of the children is like no, no, I'm going to do it, I'm gonna do it, hence why I said this high functioning autistic boy, he can't, he doesn't want to he thinks he can do it. I don't need you to tell me to do it. So, most of all I think listening will be a great one. Yes, not all of them can do that, but hopefully he'll need to realise, actually maybe I do need to listen if I want to move on, I do need to listen to her, and maybe I can't do it without saying - because I don't want to say well no you can't do it until you've listened to me, I'm not saying that - but I just need him to listen to think I am trying to help you, you might think it's boring, but good listening skills can help you achieve something at the end of it. So I think just listening really, but again, they don't always come and... not to be shy... because once it's one on one and we've introduced it - I don't start off straight away; we play games, I explain to them... like specially with one of the lads, he doesn't know me, he doesn't know my room, so I don't want to come and go "right okay we're we're doing Lego therapy, you need to listen to me". It's getting them used in this room... what are we doing, what could we get out of this, it's going to be fun, I want it to be relaxed, so then they feel relaxed and can go ahead and do it. And, of course, I'll be saying to them the main priority is the listening. So if they come with that, great, but if not I will teach them when they're here and they won't be able to move on unless they do listen.

Researcher

So then it's not necessarily anything they already need to be able to do to be able to take part in LEGO therapy? Listening would be helpful, but actually they don't necessarily need to be able to do that because that's something that they could pick up in the intervention...?

Practitioner
Definitely.

Researcher

And then the last question is, in your view, what are the strengths and drawbacks that the LEGO therapy approach?

Practitioner

Well first of all I say the drawbacks... I wouldn't say there's any drawbacks... There's no... because I'm constantly learning myself, which is good because it's always good to learn something new... but no I wouldn't say there's any drawbacks... Well, okay one drawback is when you know they've come, and they've gone as far as they can go when it's like, sorry, it's telling them, 'we're no longer picking you up, you've got where you need to be, you've learned all these new skills'. So, it's just, that's the only drawback I would say is, you know, finishing with them. I don't like doing that, but they've got to make them feel like they've achieved something, you've got to where they are, they know they can take those skills back... But the strengths is teaching those social emotional skills within this setting, it's being patient, taking turns, learning to work as a team, one on one to start with then building them up to work in a small group, because when they say - science for instance - and say right get into groups of five, obviously you've got that child is quite bossy, and then say "Right okay we're going to do this, this is how we're going to do it, you're going to do this part, you're going to do that part" some children who haven't got the confidence in a social setting will be like 'okay', whether they want to do that or not.

If it happens that a child gets put into that group they've come to me, they could be saying, "Well actually Miss taught us to work together as a team, you know, we should listen to each other, you say your part what you think, you say your part, and then maybe we could vote". So this is what I'm teaching altogether so they're not saying like 'I was told to do this, I was totally unhappy' or walking off saying that 'I'm not gonna be part of your team now'. They can then say well actually we voted on, say, Becky's idea, because we all sat listening to each other's idea as a team, we thought Becky's idea was better because, da da da, so yeah, we went with them". Okay, so being with me, like I said it's the turn taking the work together as a team, being patient, again all helps within the playground setting, the classroom setting, and any work setting.

Researcher

Okay, excellent. And then, yeah, I suppose, that was the last kind of formal question. And then last, last thing is, is there anything else you'd like to tell me about LEGO therapy?

Practitioner

Now just a little bit I would add is, obviously, I don't know all these children so when they come, like, the little lad I'm seeing next week, and that's good, gives me a chance to build a relationship with him, as in, if I'm around school, he knows I'm a trusted adult, he comes to me and say, "Oh, Miss, could you help me?" or you know anything so it's good to build relationships with every child but not always you get to do that... But in this small group setting, even one on one, I get to know them, they get to know me... Like I say to a child

"You know so and so in your class?" and they're like "No, not really", and I'm like "But you've been with them all year" and I'm like, "Well, can you introduce yourself?"... So I'm building those relationships between the peers as well, because they haven't got the confidence to speak and talk, or they've got a grudge against someone they think, "Oh, someone's so bossy, they never let me do anything". So I think right okay, all right, by the end of the year I will have that child in [my group], we will work together in a small group, whether it's Lego whether it's another social game, whether it's, you know, introducing yourself telling each of a bit about you, what your interests are. Nine out of ten times it's like "I didn't know you liked that, I do too!", and then hopefully you can build a new friendship. Okay, so that's what I do find with these groups... if sometimes obviously working on the playground you think "those two just don't get on", so I know that once I worked with one child, I will have that other child in and say "We're gonna have a couple of biscuits, and we're gonna play a few games to relax" have that other child come in, you can see their faces like, "Oh my God" but by the end of it they're laughing and joking, and they're probably like kicking themselves that they've not spoke to each other throughout the year, or, you know... When they get to know each other, in a relaxed, social environment, they've made a new friend. Obviously I'm not saying that works all the time, which is fine - I've tried - but, you know, nine out of ten times it's like... yeah, it's amazing.

Researcher

Okay.

Appendix 13: Sample Transcript (Children - Phase Two)

SAMPLE TRANSCRIPT – PHASE TWO – INTERVIEW WITH CHILDREN

Researcher

Do you think you could just tell me a little bit about LEGO therapy, what's it like?

Child

It's fun...?

Researcher

Good Okay, tell me what's fun about it?

Child

The part where you're building the project is fun.

Researcher

Ok tell me, what do you do in LEGO therapy?...

Child

So you go in there, put hand sanitiser on, sit down, speak about something and then we build things...

Researcher

Ok, so let's have a look at some of these pictures... Which picture do you want to look at? What's happening in this picture?

Child

The boy is making a car... This boy is looking at it, and this boy is building a LEGO house...

Researcher

What do you think they're doing together? I wonder what what they're learning in LEGO therapy... What do you think they're learning?

Child

To help each other...

Researcher

Yeah, that's nice. All right. How are they helping each other?

Child

By helping them to build the stuff when they're stuck

Researcher

Yeah, that's a nice idea. So I've got some cards here that might help us along. So these are some things that - can you read those things - that they might be learning. What do you think these boys might be learning?

Child
Taking in turns...

Researcher
Okay, tell me about that. How might LEGO therapy be helping them to take turns? Might that be helpful? Might that be helpful in the classroom? Or on the playground? Or at home?

Child
Uum...

Researcher
Is there anything else these children might be learning?

Child
To share?

Researcher
Lovely, ok - can you tell me about that?

Child
Sharing is when - well it's the same thing as taking in turns - they're sharing the LEGO...

Researcher
And what do you think that's teaching them? Why might that be important?

Child
Because sharing is really important... And sharing things with people shows them that I like them...

Researcher
what kind of things would you like to share in your normal day?

Child
My pencil?

Researcher
Anything else?.... Might be that you're playing a game on the playground. Do you play football or anything like that?

Child
No.

Researcher
What kind of games do you play to play?

Child

Games like 'It'...

Researcher

Do you think being able to share and being able to take turns is helpful in the game of It?

Child

Yeah, because you do need to take turns with being It - and sometimes you don't want to be it, but you have to because that's the rules of the game...

Researcher

Ok so taking turns is important. Do you think LEGO therapy helps you with that?

Child

Yeah.

Researcher

Is it anything else? Any other of these do you think Lego therapy might be helping you or these children with? *Picks card* Why do you think you might be helping with their listening?... Who do they need to listen to?

Child

The, um, the builder...?

Researcher

Yeah, the builder fine. Anybody else?

Child

The teacher...?

Researcher

Anybody else?

Child

The person reading the instructions... Yeah.

Researcher

So they kind of need to listen to each other, don't they? Why is listening really important for them in LEGO therapy?

Child

Because otherwise they'd mess up the building...

Researcher

So why is listening really important?

Child

So you don't mess up anything

Researcher

Yeah. So, you can you get it all right, any to listen to each other as you can get get all the right bits in the right place. I think that's that might be quite helpful. And where else do you think listening is really important. Where else do you need to listen to people?

Child

In the classroom...

Researcher

Yeah. What things do you need to listen to in your classroom?

Child

English...

Researcher

English? Who do you listen to in English?

Child

Teacher's Name

Researcher

Why is that important?

Child

Listening to people helps you get get things right.

Researcher

And you think LEGO therapy helps you to listen?

Child

Yeah.

Researcher

And do you think doing LEGO therapy has made you a better listener? Why is that? Any of these last things? Do you think LEGO therapy might be helpful? To help you with? Playing? Great - and how does LEGO Therapy help you with playing...

Child

It helps people to play with each other...

Researcher

Interesting. That's helpful. Yeah. Why might that be helpful? Do you think learning to play with each other?

Child

Because they might not have any friends, and it might help them to make friends...

Researcher

Yeah. So do you think LEGO therapy helps you to make friends?

Child

Yeah

Researcher

So LEGO therapy can teach you to play with other people. And then you can make friends with other people? Do you think that's really important?

Child

Because if you don't have any friends, you'll be always alone.

Researcher

And what would that be like?

Child

Sad and lonely

Researcher

So do you think Lego therapy helped stop that from happening?

Child

Yeah.

Researcher

Do you think have you made friends by doing LEGO therapy?

Child

Yeah.

Researcher

What friends have you made by doing LEGO therapy?

Child

Lists friends

Child

So you've made friends by doing LEGO therapy and then are they now your friends outside of LEGO therapy, in the classroom and on the playground?

Child

Yeah...

Researcher

Lovely. And they weren't your friends before? So you've made new friends by doing it? And you think LEGO therapy helped you with those friends and helped you to play with those friends; make you better at playing?

Child

Yeah I'm better at playing with my friends. They used to get annoyed at me when I couldn't share things with them, but now I'm better at that and we play together better...

Researcher

Yeah, great. Okay, that's really helpful. And then this last one, do you think LEGO therapy helps you with this? You can say no, no, okay. Lovely. Okay, thanks. That's really helpful. I've got some more little prompt cards and I want you just have a look at these ones. Just have a look at these ones. Is that any of these that you think you feel about LEGO therapy?... Excited? So why does LEGO Therapy make you feel excited?

Child

I like to play with Legos.

Researcher

Yeah. Do you do LEGO at home?

Child

No, not really.

Researcher

So getting into school and getting to do Lego - that's really exciting? So do you enjoy doing Lego therapy? Great. Okay, so excited. That's good. Any other of these? Do you think yeah, that's that's me and like your therapy. Happy? Why does lego therapy make you happy?

Child

Because I get to see [Teaching Assistant]

Researcher

Tell me about [Teaching Assistant]

Child

She's kind... Helpful... She doesn't get angry usually. Some of my other teachers get angry with me when I can't do something, but [teaching assistant] doesn't do that to me in LEGO therapy, I know she's there to help...

Researcher

So you like getting to spend time with [teaching assistant] That's really nice as well, isn't it? I think that's really important. Any other any other ones of these that you look at and go 'yeah', that's me in LEGO therapy or or sometimes I feel like that and they get therapy? Helpful. Good. Tell me about that...

Child

In LEGO therapy if someone is stuck, we help them.... It's nice to help people... And when I get stuck, someone helps me...

Researcher

Do you think LEGO therapy helps you to learn how to help people?

Child

Yeah.

Researcher

And why might that be useful?

Child

If anyone gets hurt, you can help them to go to the teacher...

Researcher

Yeah. And do you think lego therapy has helped you with that? Has it made you be more helpful person? Yeah, that's really nice. I think that's really lovely. Okay, okay. Any other things do you look at and go? Oh, yeah, that's how I feel about LEGO therapy?

Child

It's fun?

Researcher

Ok great, and what's fun about it?

Child

It's fun because we get to build lots of different things.

Researcher

So getting to do lots of different things. That's exciting, isn't it?

Child

We're building a shark!

Researcher

A shark? That sounds great. Sounds cool. So you get to build lots of exciting things. That's nice. It's fun. And then any of these words, say does Lego therapy ever make you feel angry? Does it ever make you feel bored? Does ever make you feel frustrated? Does it ever make you feel nervous?

Child

Well it did the first time

Researcher

Ok, tell me about that... Why were you nervous the first time?

Child

Because there were different teachers there and different people that I didn't really know very well... I don't like doing things with new people, and LEGO therapy was scary for me, but now it's ok because we're all friends now...

Researcher

Okay, so the first time it made you feel a bit nervous and then be do feel nervous anymore. No, that's good. So what helped with that?

Child

Having my friends there.. and [teaching assistant] did...

Researcher

Ok great, has LEGO therapy ever made you feel confused?

Child

Sometimes...

Researcher

Sometimes?

Child

Sometimes it makes me feel a bit confused when I don't know what we're doing, but we always figure it out in the end...

Researcher

Ok, great - does LEGO therapy ever make you feel successful?

Child

I felt confident to make one of those red jets, I can't remember what it's called, because everybody was helping me and most of the time nobody really wants to help me... It made me feel happy...

Appendix 14: Sample Transcript (Caregivers - Phase Two)

SAMPLE TRANSCRIPT – PHASE TWO – INTERVIEW WITH CAREGIVER/ PARENT

Researcher

Could you tell me very generally about your understanding of Lego therapy?

Caregiver/ Parent

Well, I'm not really sure. But I think that it has something to do with children sharing things together. Maybe they use the Lego to help each other to build something. Maybe they might even do it as a team. But as I say, I'm not really sure exactly what Lego therapy is. I rely on what my child tells me, but sometimes they don't really say that much about it.

Researcher

Okay, great. Thank you. And what do you think a typical Lego therapy session would entail?

Caregiver/ Parent

Maybe they might be playing together with some Lego. Maybe they might be building a model together. Maybe they just get a chance to play with each other. Maybe with some people they don't normally play with. I don't really know.

Researcher

Okay, great. Thank you. What do you think children do in Lego therapy?

Caregiver/ Parent

Well, I'm not really sure. Apart from the playing, and maybe using the Lego to teach them something, but I don't really know.

Researcher

And in your view, what do you think is the purpose of Lego therapy?

Caregiver/ Parent

I think it's trying to teach them maybe to work as a team and to work together on something. I know, child has real difficulty with working with his peers and his classmates. And maybe it's about him, sharing stuff with his friends. Maybe it's also about making him listen to other people and listening to their ideas. Because sometimes he just wants everything to go his own way. And it would be nice if he could listen to other people and actually consider their ideas. Because sometimes other people have good ideas too. But he doesn't always see that...

Researcher

okay, great. What do you think Lego therapy is trying to teach children?

Caregiver/ Parent

Maybe sharing maybe friendships maybe I'm not really sure. Maybe it's about help helping them to do things together. Like sometimes in the classroom, when they have to do things together... Maybe it's about practising that.

Researcher

Okay, great. And why do you think your child was selected for Lego therapy?

Caregiver/ Parent

He has always found friendships really difficult. He can be quite argumentative and quite volatile when he doesn't get his own way. And he really struggles to make friendships outside of school as well. I'm not sure he has many friends in school, either. So maybe it's because he finds making friends hard. He's also not very good at sharing with his brother and sister. Sometimes they can fight a lot over small things. And it's really draining. To have to constantly intervene with their fights. He's not able to sort that out himself.

Researcher

Okay. And what are his special educational needs or additional needs, if any?

Caregiver/ Parent

He has a diagnosis of Anxiety and I think he finds the school environment really difficult for lots of reasons. He doesn't like how noisy everything is. And he struggles on the playground as well, because there's lots of children and lots going on. And I think he finds all of that really overwhelming. So yeah, maybe that's why.

Researcher

Okay, and what skills do you think your child needs? To learn?

Caregiver/ Parent

I think he needs to learn how to make friends, and maybe have the opportunity to make friends with other children in school. He finds that really difficult, and gets into lots of arguments, which he can't resolve by himself. Maybe he needs to learn to share, and to work in a team with other children. Because that is something I notice a lot at home. Like when we go to the playground and stuff. He just can't seem to share any equipment. It's like he always wants to be first and cannot let somebody else take his turn. Like on the slide or something, he will always push in and I have to step in and tell him off sometimes. At but he doesn't seem to understand why that might be wrong.

Researcher

Okay, and how is your child benefiting from LEGO therapy? Do you think? What skills have they learned?

Caregiver/ Parent

Well I hope it would be teaching him maybe to be more patient and to wait for other people. He needs to learn to listen to other people's ideas and to take them on board and maybe to be a better friend. I think maybe Lego therapy is helping him to learn how to listen to others and to integrate them as part of his play because it's not something he does naturally. I don't know what else...

Researcher

Okay, and have you... Where have you seen this progress? Do you notice this kind of progress at home?

Caregiver/ Parent

Yes, I think so. I noticed this progress. When he's playing with his brother and sister. Don't get me wrong. They still argue all of the time. And there's still lots of fights. But they are not as common as they used to be. I think he's getting better at sharing games with his siblings. And I think he's getting better at not always needing to win, and not always needing to be the best at everything. Because that's another thing he really struggles with. He always has to win. And it's really frustrating for me and his brother and sister sometimes, because we have huge meltdowns when he can't cope with losing...

Researcher

Okay. Interesting. And have you observed a difference since your child started attending Lego therapy?

Caregiver/ Parent

I can't say that I've noticed a massive difference. I don't know how long it's been going on for. But there are certain things where he is improving, like I say about sharing a game with his brother and sister. There seem to be less arguments now. Because that used to happen all the time. And I can't remember it happening for the last few weeks, which is good. We haven't been to the playground in a little while, but it might be interesting to see whether or not that's different, or the same. I wonder? I'm not really sure to be honest. I haven't noticed him get into fights or arguments. At school recently. But that doesn't mean it hasn't happened. I will have to ask him and ask the school.

Researcher

Okay, and where might you see the progress that he makes in Lego therapy? What Where might you notice him improving?

Caregiver/ Parent

I suppose I might see it at home. When he's playing a game with his brother. They like to go on the Xbox and play he play games with each other. And sometimes there's fights over the controller and I have to step in. If he can learn to share. That might be brilliant. I also might see it on the playground when we go out because he gets into lots of fights with other children. Because he always pushes in and always wants to win and wants to be first. And he needs to learn that he can't do that. Because that causes problems. So maybe I'd see it there as well. I know he finds the classroom difficult. And he might struggle with working with a partner in the classroom. And I know he finds lots of his work difficult and then he tends to shut down. So maybe it might make him more confident to take things on and to do things with a partner or as part of a little team in the classroom. I don't know

Researcher

Okay, great. Thank you. And for {CHILD}, what would that progress look like? Do you think if I were to see {CHILD} making progress, what would I see?

Caregiver/ Parent

I think you would see {CHILD} being karma at home and calmer in school. I think sometimes his anxiety means that he behaves quite naughty and lashes out at some people because I know he can be quite physical, even when he doesn't really mean to be say maybe it would mean that he looked calmer and quieter in the classroom and was able to get on with his work calmly and confidently without kicking off. And I suppose it would be him looking like he can do things in a small group with some friends or a small group of friends. Because that would be really valuable for {CHILD}, I think.

Researcher

Okay, great. Thank you and do you consider there to be any drawbacks to your child's involvement in Lego therapy?

Caregiver/ Parent

I don't think so. Like because sometimes to do Lego therapy, they have to be taken out of their main classroom environment and go to a smaller room as a small group to do Lego therapy. Might that be a problem? As long as he doesn't miss anything super important in the classroom, I suppose. But everything the school has done for {CHILD} so far has been brilliant. They are a really, really brilliant school. And I really trust them to do what they think is right. I suppose {CHILD} might miss out on things in the classroom. But I know he doesn't really like being there anyway. So it's not that much of a problem. I don't think.

Researcher

Okay. You mentioned there about the small group. I wonder if you think that's important?

Caregiver/ Parent

Yeah, I suppose it is. I know he finds the classroom really challenging, because it's too busy and too noisy. So maybe doing it in a smaller group would be helpful. He needs that quiet space and that quiet time with a small group of people and maybe like one adults, because then he can, like drown out the noise and can focus much better. I think sometimes when it's too noisy, his head gets muddled and he can't think straight. And that's when he gets really anxious and everything goes wrong.

Appendix 15: Example of Coding Through Thematic Analysis (in Nvivo)

Unknown
 Okay, so first of all just to start, can you tell me very generally about your experience of LEGO therapy in school?

Unknown
 So I think when I had the training, it was very much sold to us as a group intervention with the focus being on, in my mind, interactions around a common theme - I suppose the Lego - turn taking, waiting, conversations listening to instructions from others, retaining information. But as we've kind of done more and more of the Lego therapy, we've realised that actually, it's something that can be done to support children with all sorts of different needs, so we used it in our lunchtime club. Again, we use a lot of it for nurture. We use a lot of it in some of the fine motor skill interventions... Attachment based mentoring... Some of our children that need breaks throughout the day will quite often come out and get the Lego, and that's enough to provide them with a break. So I've kind of the more we've used it in school it's taken on various different roles for us.

Unknown
 Okay, and typically, how would your school structure, they're kind of the LEGO therapy intervention in school?

Unknown
 So we do it with identify those children that need the interaction - I mean I'm going back to how it first happened now - it's something that is used quite regularly for a range of different things but if we were doing it as an actual Lego therapy session it is the adult modelling it, and then we just have the cards that say builder and part-finder and we set it out like that... the children with the communication and interaction needs would be primarily those that do it first, at the top of the list, and we encourage on that first session is the stop and listen.

Unknown
 How many sessions do you run per week?

Unknown
 For individual groups or do you mean just generally across the school?

Unknown
 Either or, or both. If you can distinguish between the two...

Unknown
 Four groups, and in an ideal world you'd try and see them twice a week.

Unknown
 Would you be able to see them twice a week when it was running at its peak pre-COVID?

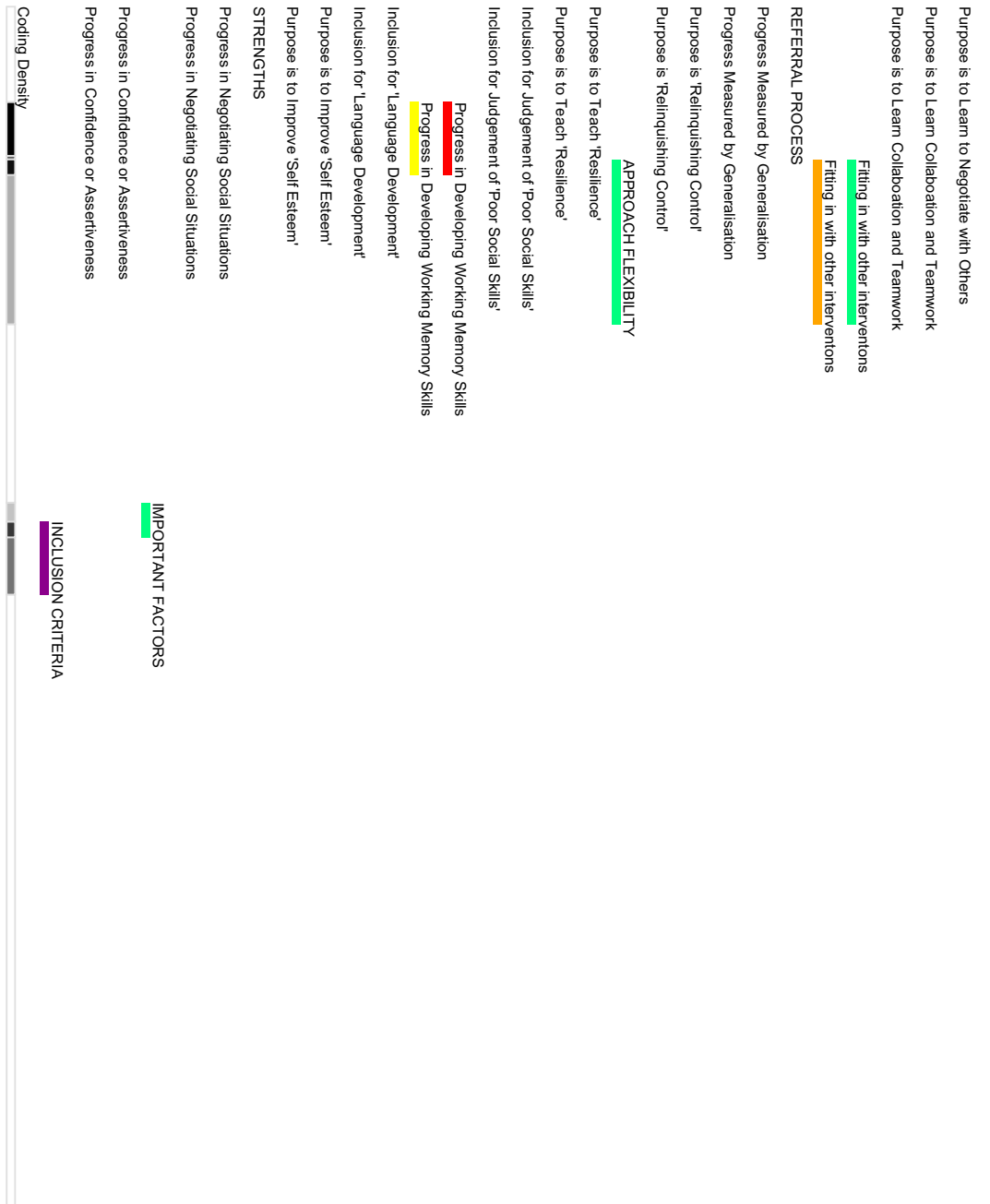
Unknown
 Yes, and that's where we'd like to get back to as well.

Unknown
 And how many children in total, do you think, LEGO Therapy is delivered to your school?

Unknown
 12 including the emotional, social group.

Unknown
 And what's the average duration that these sessions?

Unknown
 20 minutes roughly, okay about 20 minutes.



Purpose is to Learn to Negotiate with Others
 Purpose is to Learn Collaboration and Teamwork
 Purpose is to Learn Collaboration and Teamwork
 Fitting in with other interventions
 Fitting in with other interventions
 REFERRAL PROCESS

Progress Measured by Generalisation
 Progress Measured by Generalisation

Purpose is 'Reinquishing Control'
 Purpose is 'Reinquishing Control'

APPROACH FLEXIBILITY

Purpose is to 'Teach 'Resilience'
 Purpose is to 'Teach 'Resilience'
 Inclusion for 'Judgement of 'Poor' Social Skills'
 Inclusion for 'Judgement of 'Poor' Social Skills'
 Progress in Developing Working Memory Skills
 Progress in Developing Working Memory Skills
 Progress in Developing Working Memory Skills
 Inclusion for 'Language Development'
 Inclusion for 'Language Development'
 Inclusion for 'Language Development'

Purpose is to Improve 'Self Esteem'
 Purpose is to Improve 'Self Esteem'
 Purpose is to Improve 'Self Esteem'

STRENGTHS

Progress in Negotiating Social Situations
 Progress in Negotiating Social Situations
 Progress in Negotiating Social Situations

IMPORTANT FACTORS

Progress in Confidence or Assertiveness
 Progress in Confidence or Assertiveness

INCLUSION CRITERIA

Coding Density

Unknown
 Okay. And, as you as you see it. What do you consider to be the purpose of LEGO therapy?

Unknown
 I think my mind's changed, obviously at the very start, it was communication and interaction, but it's kind of evolved evolved into social interactions. A lot of it for the children that... resilience - that's a good one. When it's not going quite how you planned, and we use it for quite a lot of our children that struggle to retain information.

Unknown
 And what, what skills do you think that your new young people are learning within the intervention?

Unknown
 Umm... cooperation, resilience... you're developing your fine motor skills all the time... speaking and listening skills. Yes, problem solving, and so we've said resilience and confidence, talking in a group with confidence, and being able to correct another child, I think is a big thing isn't it if, if one of the children has picked up the wrong piece having the confidence to self correct and correct others without the arguments or the follow on

Unknown
 Why is it that these children can't learn these skills elsewhere?

Unknown
 I don't think they're getting these kinds of skills at home, necessarily, I think, play opportunities aren't always available. I think these other children that possibly need that quieter, small group work because they're overwhelmed in doing work like this in larger groups.

Unknown
 How would you both define progress within the intervention?

Unknown
 We would record it by a lot of note taking and observations of the children but I think the biggest one is, is not necessarily saying that they've actually created it at the end, which, yes that is one of the goals but I think you'd be looking at... are they stopping and listening to the others? Are they cooperating? Are they waiting their turns? With us, it's within the graduated response, and teacher feedback to see whether or not the skills they've learned in Lego therapy, transfer over into great work in the classroom.

Unknown
 So that's how you track and monitor your progress?

Unknown
 Lots of teacher feedback as well...

Unknown
 Okay, brilliant, and at what point would a child be discharged, say for the intervention and who would make that decision?

Unknown
 I suppose we would make that decision based on whether they have achieved what we set out for them to achieve so there will be individual goals for each child which we would have identify on their "My Plan", which the areas come from using the graduated response tool. So they have specific targets on their "My Plan", and the strategies to support the meeting those targets could be Lego therapy. So for each of the children, you'll be looking at, have they achieved the goals that they've been set. If so, we don't tend to... as soon as they've achieved that goal we don't tend to go right that's it we almost give another few sessions just to make sure that they've maintained that that achievement of the

Purpose is to Learn to Negotiate with Others
Purpose is to Learn Collaboration and Teamwork
Purpose is to Learn Collaboration and Teamwork

REFERRAL PROCESS

Progress Measured by Generalisation
Progress Measured by Generalisation
Purpose is 'Relinquishing Control'
Purpose is 'Relinquishing Control'

Purpose is to Teach 'Resilience'
Purpose is to Teach 'Resilience'

Progress in Developing Working Memory Skills
Progress in Developing Working Memory Skills

Inclusion for 'Judgement of 'Poor Social Skills'
Inclusion for 'Judgement of 'Poor Social Skills'
Inclusion for 'Language Development'
Inclusion for 'Language Development'

Fitting in with other interventions
Fitting in with other interventions

APPROACH FLEXIBILITY

STRENGTHS

Progress in Negotiating Social Situations
Progress in Negotiating Social Situations

Purpose is to Improve 'Self Esteem'
Purpose is to Improve 'Self Esteem'

IMPORTANT FACTORS

Progress in Confidence or Assertiveness
Progress in Confidence or Assertiveness

Coding Density

INCLUSION CRITERIA

goal.

Unknown
Who defines the those targets, those outcomes that they're working towards? How are they created?

Unknown
They're created with the teachers, but they also liaise with us as a SENCO team.

Unknown
Okay. How many children that receive LEGO therapy, how many of those children have a diagnosis or in a process of receiving a diagnosis of autism spectrum condition (ASC)?

Unknown
Five... Yeah, and I would imagine that that will be bigger, next year.

Unknown
Okay. And for those children who do not have diagnosis of ASC. On what basis was the decision to include them in the leg of therapy has been made, and by whom?

Unknown
Umm... that would be teacher conversations teacher-TA conversations with us as sencos, and that could be down to social interaction problems, communication interaction problems, and where possible we would then put them with peers that they know so it might be I mean, back in the day, we had the luxury of mixing years for interventions. So it would be through the teachers identifying that these children might be socially struggling, their communication or speech and language might be below where it needs to be and we look at Lego therapy as an intervention

Unknown
For those children that don't have diagnoses of ASC. What would you consider to be their SEND or additional needs, if any?

Unknown
I would say communication and interaction is the main one, and then looking at social and emotional.

Unknown
Tell me more about that about the social, emotional... what kind of what specific social emotional needs, the children have or what kind of behaviours, do you see the big Lego therapy would make a good fit?

Unknown
Yeah, that's a biggest one is friendship issues, esteem, self esteem, inability to work in a big group... needing that small group intervention... Self esteem... confidence. Mainly self esteem and confidence for those particular children.

Unknown
Okay, thank you. Why for those non-ASC children made you think that LEGO therapy's an appropriate choice, and have they attended any other interventions to meet their identified needs?

Unknown
We run FunFit here... We also have nurture, which can either be one on one with a nurse coordinator or in group... Nurture sessions, and then they would have possibly the teacher led interventions for maths and numeracy.

Unknown
And what was the effect of those previous interventions, if any?

Unknown

I think it helps with friendships, yeah, friendships... Yeah with those particular children... we're also firm believers of Maslow's hierarchy and that you need to feel safe, secure and settled before the learning takes place so we do argue the fact that sometimes, the more social interventions need to take priority over the more academic ones. Sometimes, fighting against a brick wall sometimes but, you know, ultimately they're not going to learn unless they're in a place to learn. We find with the Lego Therapy, having knowledge of doing that is some a bit of confidence when they're doing a group activity they don't feel the need to control it all the time. Like the therapy teaches them that they don't need to be in control all the time that they can still enjoy the session.

Unknown
 Okay. So, for children without the diagnosis, what do you notice about their behaviour in particular in the leg of therapy intervention?

Unknown
 It ranges really... you can get some that you want to get past initial excitement, if that's what they're doing and really I think with some of them you have to go over and over the rules of what you're doing, I think, yes, I think I think the children that are there for various reasons some of it is the descriptive language... some of it's the descriptive language that needs a lot of work, because their interaction... their vocab is poor... So it's a good way of helping them to learn that because obviously we use quite a lot of barrier games, perhaps to start, if we're finding that they're struggling with naming and describing... Well, they, they will use the tactics they use in class which they will use delaying... avoidance... and different ways of changing the game because they feel the need to be in control, and obviously we want them to enjoy the game for what the Lego therapy for what it is so that's helping them to feel confident and secure in taking turns, allowing somebody else to be in charge, and things like that so I think it's the same as in a way for them, as the other children, because a lot of these problems are social... So giving them those boundaries within the Lego therapy helps them helps in quite a lot... and I think also that they within the Lego therapy in the way that it's set up children that seek to be in control, do have an element of control but within a controlled activity...

Unknown
 Do you notice any differences between the children that don't have diagnoses of autism and those that do, within like a therapy intervention?

Unknown
 I think the only differences that I noticed... the only difference I've noticed is obviously some of the ASC children would much prefer that the other children weren't there. I think they would rather they would rather just have the Lego and do it without the other participants... But I think that's, I think it's, it's been very good for some of our children, especially those ones with a diagnosis, because it has helped them to do teamwork and hard work within a group. I think.. uum... for some of our children that do not have a diagnosis or may have 'undefined' needs because they're showing a range of behaviours, it helps us to see some of it helps us to see what some of their issues are, especially if it is when it comes to when we move on to more imaginative things and where they have to describe or build their own things that they normally struggle with that that is where we start to have to put more support in to get that going. But I think more diagnosed children find Lego a lot easier than perhaps some of the ones that don't have a diagnosis.

Unknown
 Can you comment on the progress that non-ASC children make over the course of the intervention?

Unknown
 I think the biggest thing that I've noticed is the social interaction and the resilience and I think the turn taking, listening to others and working as part of a team, which again I think is going to be huge. Once the world goes back to



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INCLUSION CRITERIA

normal I think will be massive.

Unknown
How do you know if children have made progress?

Unknown
Again, that'd be talking to teachers, finding out whether or not that I think for me it would be seeing that they've transferred their skills into the classroom.

Unknown
Do you notice that with children who take part in intervention, do you notice that transferability?

Unknown
Yeah, no, we have. Yeah, definitely.

Unknown
Okay.

Unknown
Are there any children for whom LEGO therapy intervention has been unsuccessful, or who have been particularly difficult to include within it?

Unknown
Um, I can think of one child that is on the spectrum that had a real aversion to Lego so it never really took off with him. Yeah, I think, I think, if the children aren't engaged with Lego. It's a struggle to get them hooked from the beginning...

Unknown
So, were there any changes you think could have been made to an intervention to help include them, or, or not?

Unknown
Not for this particular child - but we did carry on and do other things based around his interest but it wasn't like it wasn't the Lego therapy.

Unknown
Okay, and then kind of opposite question something do you think like a therapy is the most successful?

Unknown
Those children struggling with navigating friendships in social situations... I think particularly those children that don't necessarily have those experiences at home and for those children that need self esteem, boosting... I think as well, it's because Lego is a concrete thing, and this part fits that part, and this goes on there, even though it's an imaginative play it's very concrete in what it does, so it's, it, you can achieve... There's always a sense of achievement and once you know what it does, it doesn't throw up anything.. You might not have a piece and you may not be able to do exactly what you want, but the Lego stays the same, which I think is always good for that. Yeah.

Unknown
And what factors do you think, contribute to a successful Lego intervention?

Unknown
I think that it's a physical concrete resource. So, even if you know there's always a sense that they've done something... they've built something. And I think also having it in the small groups, and I think what's been really good, is the way that it's giving everyone a role, a specific role and you actually build up a very good vocab around it. Yeah, it's is learning different words - you've got your positional language and it just extends some children's vocab range.

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 What skills do you think children and young people already need to be able to take part in LEGO therapy?

Unknown
 Listening skills...

Unknown
 Anything else?

Unknown
 So you could do it visually so you could do it with a child that doesn't talk. Yeah. So, I think, I think.. helps if they know their colours! Yes. The only thing is the colour barrier can be a bit tricky sometimes if you've got... that's the only thing that can come up, that I've had come up, is if you have a child with colour blindness. This child managed because he could tell he could tell the difference, even though he couldn't see them... If he wanted to do it... I think you need to be able to tolerate working with other children, so that need work needs to be in place before that...

Unknown
 And then kind of final big question, really, what would you consider to be the strengths and the drawbacks of the LEGO therapy approach?

Unknown
 Strengths... just it... I think is so versatile, and you can it's an intervention that could support children for a variety of different things. It ticks the boxes for so many different elements of difficulty that children have, I think it's a really fun, relevant... you know, most people are familiar with Lego... it's generic it's not, boy, girl associated. I think it's brilliant. I think you can attribute it to so many different things. I think one of the drawbacks is probably buying all the Lego, making sure you don't lose any bits... I think we had a really brilliant box and we made up the packs and everything and Lockdown, they went off to various bubbles and so we're now very depleted in our resources, again, and it's not very, it's not very cheap.

Unknown
 Are there any other particular strengths or drawbacks?

Unknown
 I think the strength is that they, they can take those skills to relate them to play with other children... when they're relaxed, you know, if they have any social time in within the class or then anything.. their knowledge of play and their description of things, helps them move on to other games and playing within a group in the playground and that having their define their role, etc. And I think also it's, again, which I think is really important for schools, it doesn't require lots of space, it doesn't require lots of pre-planning, and it's not time. You know, you can have some interventions that take just as long to set up as they do to run so I think it, so another success is that it's really easily accessible.

Unknown
 Okay, brilliant. And what would you change if anything, about the approach?

Unknown
 It's quite a nice intervention to run, isn't it?

Unknown
 There's no particular changes you think you'd make?

Unknown
 Not at the moment so we haven't done it in a while, I have actually been thinking... trying to think what I would say. I think that was our only issue

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was, when you're in quite a big school to have different areas and I know we're running groups but we also use it for, you know, obviously, other things it was, it's quite an expensive resource now, whereas Lego was never that expensive and now it is quite expensive...

Unknown
Is there anything else that you'd like to tell me about LEGO Therapy or anything else you'd like to say about it, in general, or that we haven't already covered?

Unknown
I just think it helps us to put importance back on play, and having games and having that sort of interaction which we all know gives children confidence... that interaction, that positive attitude to doing something with others... Yeah, and I think one of the things that I really like is the older children get, the harder it is to hook them in to something that isn't a computer game or a video game so I think the Lego is a really nice intervention to run for particularly those older children as well and those, those children lacking those basic skills of "if they haven't done that sort of thing that isn't going to fit on there" or "that is going to fit that"... that awareness of spatial awareness that awareness of what might work and might not work. It helps them with that. There's so many children that don't have that, yeah, you know, how that simple thing of throwing the ball in a bucket, you know that they don't, if they don't do sports, then they don't have those simple skills and the same with the Lego. When we're doing LEGO therapy that thing of some children will automatically know that when they're handed the brick it's the wrong one, because they know that's not going to fit. Whereas a lot of children that we've worked with - not so much [ASC] diagnosed children because they're very precise... more precise... but will often have no idea how to fit things together... which is quite sad. I think it's that problem solving through play that I think sadly is lacking in today's society...